

ANALYTICAL REPORT

PREPARED FOR

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JOB DESCRIPTION

RED-HILL
525.2, 533, 537.1

JOB NUMBER

380-92750-1

Eurofins Eaton Analytical Pomona

Job Notes

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

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

Compliance Statement

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

Authorization



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Definitions/Glossary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
*+	LCS and/or LCSD is outside acceptance limits, high biased.
^+	Continuing Calibration Verification (CCV) is outside acceptance limits, high biased.
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
F1	MS and/or MSD recovery exceeds control limits.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

GC/MS Semi VOA TICs

Qualifier	Qualifier Description
J	Indicates an Estimated Value for TICs
N	Presumptive evidence of material.
T	Result is a tentatively identified compound (TIC) and an estimated value.

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.
α	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: 380-92750-1

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Job Narrative 380-92750-1

Analytical test results meet all requirements of the associated regulatory program listed on the Accreditation/Certification Summary Page unless otherwise noted under the individual analysis. Data qualifiers are applied to indicate exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD may be performed, unless otherwise specified in the method.
- Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.

Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Receipt

The samples were received on 4/24/2024 10:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 1.8°C and 3.2°C.

GC/MS Semi VOA

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

PFAS

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

Detection Summary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-92750-1

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-92750-2

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-3

No Detections.

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-4

Analyte	Result	Qualifier	RL	Unit	Dil Fac	D	Method	Prep Type
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.2		2.0	ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.1		2.0	ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.2		2.0	ng/L	1		537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L	1		537.1	Total/NA

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-92750-5

No Detections.

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-92750-6

No Detections.

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-7

No Detections.

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-8

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: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-92750-1

Date Collected: 04/22/24 09:44

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
2,4'-DDD	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
2,4'-DDE	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
2,4'-DDT	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
2,4-Dinitrotoluene	<0.099	*+ ^+	0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
2-Methylnaphthalene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
4,4'-DDD	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
4,4'-DDE	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
4,4'-DDT	<0.099	^3+	0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Acenaphthene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Acenaphthylene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Acetochlor	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Alachlor	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
alpha-BHC	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
alpha-Chlordane	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Anthracene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 13:57	1
Atrazine	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Benz(a)anthracene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Benzo[a]pyrene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 13:57	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 13:57	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 13:57	1
beta-BHC	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		04/26/24 12:00	04/27/24 13:57	1
Bromacil	<0.099	*+ ^+	0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Butachlor	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Butylbenzylphthalate	<0.50		0.50	ug/L		04/26/24 12:00	04/27/24 13:57	1
Chlorobenzilate	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Chloroneb	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Chlorpyrifos	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Chrysene	<0.020	^3+	0.020	ug/L		04/26/24 12:00	04/27/24 13:57	1
delta-BHC	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		04/26/24 12:00	04/27/24 13:57	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Dieldrin	<0.20		0.20	ug/L		04/26/24 12:00	04/27/24 13:57	1
Diethylphthalate	<0.50		0.50	ug/L		04/26/24 12:00	04/27/24 13:57	1
Dimethylphthalate	<0.50		0.50	ug/L		04/26/24 12:00	04/27/24 13:57	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		04/26/24 12:00	04/27/24 13:57	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Endosulfan sulfate	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Endrin	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Endrin aldehyde	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
EPTC	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Fluoranthene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1

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Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-92750-1

Date Collected: 04/22/24 09:44

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
gamma-Chlordane	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Heptachlor	<0.040		0.040	ug/L		04/26/24 12:00	04/27/24 13:57	1
Heptachlor epoxide (isomer B)	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Hexachlorobenzene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Isophorone	<0.50		0.50	ug/L		04/26/24 12:00	04/27/24 13:57	1
Lindane	<0.040		0.040	ug/L		04/26/24 12:00	04/27/24 13:57	1
Malathion	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Methoxychlor	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Metolachlor	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Molinate	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Naphthalene	<0.30		0.30	ug/L		04/26/24 12:00	04/27/24 13:57	1
Parathion	<0.099	*+ ^+	0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Phenanthrene	<0.040		0.040	ug/L		04/26/24 12:00	04/27/24 13:57	1
Propachlor	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Pyrene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Simazine	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Terbacil	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Terbutylazine	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1
Thiobencarb	<0.20		0.20	ug/L		04/26/24 12:00	04/27/24 13:57	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		04/26/24 12:00	04/27/24 13:57	1
trans-Nonachlor	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 13:57	1
Trifluralin	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 13:57	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	04/26/24 12:00	04/27/24 13:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	102		70 - 130	04/26/24 12:00	04/27/24 13:57	1
Perylene-d12	84		70 - 130	04/26/24 12:00	04/27/24 13:57	1
Triphenylphosphate	97		70 - 130	04/26/24 12:00	04/27/24 13:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1

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Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-92750-1

Date Collected: 04/22/24 09:44

Matrix: Drinking Water

Date Received: 04/24/24 10:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 12:56	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	70		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C6 PFDA	79		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C5 PFHxA	79		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C4 PFHpA	80		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C8 PFOA	78		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C9 PFNA	77		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C7 PFUnA	81		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C2 PFDoA	80		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C4 PFBA	84		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C5 PFPeA	86		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C3 PFBS	101		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C3 PFHxS	104		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C8 PFOS	94		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C2-4:2-FTS	124		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C2-6:2-FTS	119		50 - 200			04/25/24 15:45	04/26/24 12:56	1
13C2-8:2-FTS	101		50 - 200			04/25/24 15:45	04/26/24 12:56	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-92750-1

Date Collected: 04/22/24 09:44

Matrix: Drinking Water

Date Received: 04/24/24 10:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:47	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	115		70 - 130			04/25/24 07:24	04/25/24 21:47	1
13C2 PFHxA	108		70 - 130			04/25/24 07:24	04/25/24 21:47	1
13C2 PFDA	105		70 - 130			04/25/24 07:24	04/25/24 21:47	1
13C3-GenX	103		70 - 130			04/25/24 07:24	04/25/24 21:47	1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-92750-2

Date Collected: 04/22/24 10:35

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
2,4'-DDD	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
2,4'-DDE	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
2,4'-DDT	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
2,4-Dinitrotoluene	<0.097	*+ ^+	0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
2-Methylnaphthalene	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
4,4'-DDD	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
4,4'-DDE	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
4,4'-DDT	<0.097	^3+	0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Acenaphthene	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Acenaphthylene	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Acetochlor	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Alachlor	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
alpha-BHC	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
alpha-Chlordane	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Anthracene	<0.019		0.019	ug/L		04/26/24 12:00	04/27/24 14:17	1
Atrazine	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Benz(a)anthracene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Benzo[a]pyrene	<0.019		0.019	ug/L		04/26/24 12:00	04/27/24 14:17	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		04/26/24 12:00	04/27/24 14:17	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1

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Client Sample Results

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

Job ID: 380-92750-1
 SDG: 525.2, 533, 537.1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-92750-2

Date Collected: 04/22/24 10:35

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	<0.019		0.019	ug/L		04/26/24 12:00	04/27/24 14:17	1
beta-BHC	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		04/26/24 12:00	04/27/24 14:17	1
Bromacil	<0.097	*+ ^+	0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Butachlor	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Butylbenzylphthalate	<0.49		0.49	ug/L		04/26/24 12:00	04/27/24 14:17	1
Chlorobenzilate	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Chloroneb	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Chlorpyrifos	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Chrysene	<0.019	^3+	0.019	ug/L		04/26/24 12:00	04/27/24 14:17	1
delta-BHC	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		04/26/24 12:00	04/27/24 14:17	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Dieldrin	<0.19		0.19	ug/L		04/26/24 12:00	04/27/24 14:17	1
Diethylphthalate	<0.49		0.49	ug/L		04/26/24 12:00	04/27/24 14:17	1
Dimethylphthalate	<0.49		0.49	ug/L		04/26/24 12:00	04/27/24 14:17	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		04/26/24 12:00	04/27/24 14:17	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Endosulfan sulfate	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Endrin	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Endrin aldehyde	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
EPTC	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Fluoranthene	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Fluorene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
gamma-Chlordane	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Heptachlor	<0.039		0.039	ug/L		04/26/24 12:00	04/27/24 14:17	1
Heptachlor epoxide (isomer B)	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Hexachlorobenzene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Isophorone	<0.49		0.49	ug/L		04/26/24 12:00	04/27/24 14:17	1
Lindane	<0.039		0.039	ug/L		04/26/24 12:00	04/27/24 14:17	1
Malathion	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Methoxychlor	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Metolachlor	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Molinate	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Naphthalene	<0.29		0.29	ug/L		04/26/24 12:00	04/27/24 14:17	1
Parathion	<0.097	*+ ^+	0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Phenanthrene	<0.039		0.039	ug/L		04/26/24 12:00	04/27/24 14:17	1
Propachlor	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Pyrene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Simazine	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Terbacil	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1
Terbutylazine	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-92750-2

Date Collected: 04/22/24 10:35

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thiobencarb	<0.19		0.19	ug/L		04/26/24 12:00	04/27/24 14:17	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		04/26/24 12:00	04/27/24 14:17	1
trans-Nonachlor	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:17	1
Trifluralin	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:17	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	04/26/24 12:00	04/27/24 14:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	99		70 - 130	04/26/24 12:00	04/27/24 14:17	1
Perylene-d12	92		70 - 130	04/26/24 12:00	04/27/24 14:17	1
Triphenylphosphate	93		70 - 130	04/26/24 12:00	04/27/24 14:17	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosfluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:06	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-92750-2

Date Collected: 04/22/24 10:35

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	79		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C6 PFDA	91		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C5 PFHxA	89		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C4 PFHpA	93		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C8 PFOA	93		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C9 PFNA	91		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C7 PFUnA	88		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C2 PFDoA	87		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C4 PFBA	94		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C5 PFPeA	95		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C3 PFBS	99		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C3 PFHxS	102		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C8 PFOS	96		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C2-4:2-FTS	137		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C2-6:2-FTS	118		50 - 200	04/25/24 15:45	04/26/24 13:06	1
13C2-8:2-FTS	102		50 - 200	04/25/24 15:45	04/26/24 13:06	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
N-methylperfluorooctanesulfonamide acetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
N-ethylperfluorooctanesulfonamide acetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 21:58	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	114		70 - 130	04/25/24 07:24	04/25/24 21:58	1
13C2 PFHxA	114		70 - 130	04/25/24 07:24	04/25/24 21:58	1
13C2 PFDA	111		70 - 130	04/25/24 07:24	04/25/24 21:58	1
13C3-GenX	109		70 - 130	04/25/24 07:24	04/25/24 21:58	1

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-3

Date Collected: 04/22/24 11:13

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
2,4'-DDD	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
2,4'-DDE	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
2,4'-DDT	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
2,4-Dinitrotoluene	<0.097	*+ ^+	0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
2,6-Dinitrotoluene	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
2-Methylnaphthalene	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
4,4'-DDD	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
4,4'-DDE	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
4,4'-DDT	<0.097	^3+	0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Acenaphthene	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Acenaphthylene	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Acetochlor	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Alachlor	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
alpha-BHC	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
alpha-Chlordane	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Anthracene	<0.019		0.019	ug/L		04/26/24 12:00	04/27/24 14:37	1
Atrazine	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Benz(a)anthracene	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Benzo[a]pyrene	<0.019		0.019	ug/L		04/26/24 12:00	04/27/24 14:37	1
Benzo[b]fluoranthene	<0.019		0.019	ug/L		04/26/24 12:00	04/27/24 14:37	1
Benzo[g,h,i]perylene	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Benzo[k]fluoranthene	<0.019		0.019	ug/L		04/26/24 12:00	04/27/24 14:37	1
beta-BHC	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58	ug/L		04/26/24 12:00	04/27/24 14:37	1
Bromacil	<0.097	*+ ^+	0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Butachlor	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Butylbenzylphthalate	<0.48		0.48	ug/L		04/26/24 12:00	04/27/24 14:37	1
Chlorobenzilate	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Chloroneb	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Chlorpyrifos	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Chrysene	<0.019	^3+	0.019	ug/L		04/26/24 12:00	04/27/24 14:37	1
delta-BHC	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Di(2-ethylhexyl)adipate	<0.58		0.58	ug/L		04/26/24 12:00	04/27/24 14:37	1
Dibenz(a,h)anthracene	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Diclorvos (DDVP)	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Dieldrin	<0.19		0.19	ug/L		04/26/24 12:00	04/27/24 14:37	1
Diethylphthalate	<0.48		0.48	ug/L		04/26/24 12:00	04/27/24 14:37	1
Dimethylphthalate	<0.48		0.48	ug/L		04/26/24 12:00	04/27/24 14:37	1
Di-n-butyl phthalate	<0.97		0.97	ug/L		04/26/24 12:00	04/27/24 14:37	1
Di-n-octyl phthalate	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Endosulfan I (Alpha)	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Endosulfan II (Beta)	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Endosulfan sulfate	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Endrin	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Endrin aldehyde	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
EPTC	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Fluoranthene	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-3

Date Collected: 04/22/24 11:13

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
gamma-Chlordane	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Heptachlor	<0.039		0.039	ug/L		04/26/24 12:00	04/27/24 14:37	1
Heptachlor epoxide (isomer B)	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Hexachlorobenzene	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Hexachlorocyclopentadiene	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Isophorone	<0.48		0.48	ug/L		04/26/24 12:00	04/27/24 14:37	1
Lindane	<0.039		0.039	ug/L		04/26/24 12:00	04/27/24 14:37	1
Malathion	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Methoxychlor	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Metolachlor	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Molinate	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Naphthalene	<0.29		0.29	ug/L		04/26/24 12:00	04/27/24 14:37	1
Parathion	<0.097	*+ ^+	0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Pendimethalin (Penoxaline)	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Phenanthrene	<0.039		0.039	ug/L		04/26/24 12:00	04/27/24 14:37	1
Propachlor	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Pyrene	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Simazine	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Terbacil	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Terbutylazine	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1
Thiobencarb	<0.19		0.19	ug/L		04/26/24 12:00	04/27/24 14:37	1
Total Permethrin (mixed isomers)	<0.19		0.19	ug/L		04/26/24 12:00	04/27/24 14:37	1
trans-Nonachlor	<0.048		0.048	ug/L		04/26/24 12:00	04/27/24 14:37	1
Trifluralin	<0.097		0.097	ug/L		04/26/24 12:00	04/27/24 14:37	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	04/26/24 12:00	04/27/24 14:37	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	99		70 - 130	04/26/24 12:00	04/27/24 14:37	1
Perylene-d12	95		70 - 130	04/26/24 12:00	04/27/24 14:37	1
Triphenylphosphate	91		70 - 130	04/26/24 12:00	04/27/24 14:37	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-3

Date Collected: 04/22/24 11:13

Matrix: Drinking Water

Date Received: 04/24/24 10:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:15	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	81		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C6 PFDA	89		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C5 PFHxA	89		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C4 PFHpA	92		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C8 PFOA	92		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C9 PFNA	89		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C7 PFUnA	86		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C2 PFDoA	86		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C4 PFBA	93		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C5 PFPeA	96		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C3 PFBS	98		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C3 PFHxS	101		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C8 PFOS	94		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C2-4:2-FTS	130		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C2-6:2-FTS	126		50 - 200			04/25/24 15:45	04/26/24 13:15	1
13C2-8:2-FTS	98		50 - 200			04/25/24 15:45	04/26/24 13:15	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-3

Date Collected: 04/22/24 11:13

Matrix: Drinking Water

Date Received: 04/24/24 10:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:09	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	114		70 - 130			04/25/24 07:24	04/25/24 22:09	1
13C2 PFHxA	116		70 - 130			04/25/24 07:24	04/25/24 22:09	1
13C2 PFDA	109		70 - 130			04/25/24 07:24	04/25/24 22:09	1
13C3-GenX	109		70 - 130			04/25/24 07:24	04/25/24 22:09	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-4

Date Collected: 04/22/24 10:09

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
2,4'-DDD	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
2,4'-DDE	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
2,4'-DDT	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
2,4-Dinitrotoluene	<0.098	*+ ^+	0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
2-Methylnaphthalene	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
4,4'-DDD	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
4,4'-DDE	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
4,4'-DDT	<0.098	^3+	0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Acenaphthene	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Acenaphthylene	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Acetochlor	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Alachlor	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
alpha-BHC	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
alpha-Chlordane	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Anthracene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 14:57	1
Atrazine	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Benz(a)anthracene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Benzo[a]pyrene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 14:57	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 14:57	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-4

Date Collected: 04/22/24 10:09

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[k]fluoranthene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 14:57	1
beta-BHC	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		04/26/24 12:00	04/27/24 14:57	1
Bromacil	<0.098	*+ ^+	0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Butachlor	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Butylbenzylphthalate	<0.49		0.49	ug/L		04/26/24 12:00	04/27/24 14:57	1
Chlorobenzilate	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Chloroneb	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Chlorpyrifos	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Chrysene	<0.020	^3+	0.020	ug/L		04/26/24 12:00	04/27/24 14:57	1
delta-BHC	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		04/26/24 12:00	04/27/24 14:57	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Dieldrin	<0.20		0.20	ug/L		04/26/24 12:00	04/27/24 14:57	1
Diethylphthalate	<0.49		0.49	ug/L		04/26/24 12:00	04/27/24 14:57	1
Dimethylphthalate	<0.49		0.49	ug/L		04/26/24 12:00	04/27/24 14:57	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		04/26/24 12:00	04/27/24 14:57	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Endosulfan sulfate	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Endrin	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Endrin aldehyde	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
EPTC	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Fluoranthene	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Fluorene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
gamma-Chlordane	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Heptachlor	<0.039		0.039	ug/L		04/26/24 12:00	04/27/24 14:57	1
Heptachlor epoxide (isomer B)	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Hexachlorobenzene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Isophorone	<0.49		0.49	ug/L		04/26/24 12:00	04/27/24 14:57	1
Lindane	<0.039		0.039	ug/L		04/26/24 12:00	04/27/24 14:57	1
Malathion	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Methoxychlor	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Metolachlor	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Molinate	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Naphthalene	<0.29		0.29	ug/L		04/26/24 12:00	04/27/24 14:57	1
Parathion	<0.098	*+ ^+	0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Phenanthrene	<0.039		0.039	ug/L		04/26/24 12:00	04/27/24 14:57	1
Propachlor	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Pyrene	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Simazine	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Terbacil	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1
Terbutylazine	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-4

Date Collected: 04/22/24 10:09

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Method: EPA 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Thiobencarb	<0.20		0.20	ug/L		04/26/24 12:00	04/27/24 14:57	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		04/26/24 12:00	04/27/24 14:57	1
trans-Nonachlor	<0.049		0.049	ug/L		04/26/24 12:00	04/27/24 14:57	1
Trifluralin	<0.098		0.098	ug/L		04/26/24 12:00	04/27/24 14:57	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	04/26/24 12:00	04/27/24 14:57	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	102		70 - 130	04/26/24 12:00	04/27/24 14:57	1
Perylene-d12	94		70 - 130	04/26/24 12:00	04/27/24 14:57	1
Triphenylphosphate	91		70 - 130	04/26/24 12:00	04/27/24 14:57	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosfluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluorooctanesulfonic acid (PFOS)	2.2		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluoropentanoic acid (PFPeA)	2.1		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-4

Date Collected: 04/22/24 10:09

Matrix: Drinking Water

Date Received: 04/24/24 10:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:25	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	80		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C6 PFDA	84		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C5 PFHxA	84		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C4 PFHpA	87		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C8 PFOA	85		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C9 PFNA	87		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C7 PFUnA	82		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C2 PFDoA	81		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C4 PFBA	93		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C5 PFPeA	101		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C3 PFBS	101		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C3 PFHxS	97		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C8 PFOS	92		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C2-4:2-FTS	138		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C2-6:2-FTS	116		50 - 200			04/25/24 15:45	04/26/24 13:25	1
13C2-8:2-FTS	100		50 - 200			04/25/24 15:45	04/26/24 13:25	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Perfluorooctanesulfonic acid (PFOS)	2.2		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Perfluorohexanesulfonic acid (PFHxS)	2.5		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9CI-PF3ONS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:19	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	126		70 - 130			04/25/24 07:24	04/25/24 22:19	1
13C2 PFHxA	120		70 - 130			04/25/24 07:24	04/25/24 22:19	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-4

Date Collected: 04/22/24 10:09

Matrix: Drinking Water

Date Received: 04/24/24 10:40

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

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2 PFDA	116		70 - 130	04/25/24 07:24	04/25/24 22:19	1
13C3-GenX	115		70 - 130	04/25/24 07:24	04/25/24 22:19	1

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-92750-5

Date Collected: 04/22/24 09:44

Matrix: Water

Date Received: 04/24/24 10:40

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		04/25/24 15:45	04/26/24 13:34	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:34	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	71		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C6 PFDA	88		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C5 PFHxA	89		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C4 PFHpA	92		50 - 200	04/25/24 15:45	04/26/24 13:34	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-92750-5

Date Collected: 04/22/24 09:44

Matrix: Water

Date Received: 04/24/24 10:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	91		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C9 PFNA	86		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C7 PFUnA	84		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C2 PFDoA	86		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C4 PFBA	90		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C5 PFPeA	92		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C3 PFBS	95		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C3 PFHxS	99		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C8 PFOS	91		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C2-4:2-FTS	114		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C2-6:2-FTS	118		50 - 200	04/25/24 15:45	04/26/24 13:34	1
13C2-8:2-FTS	95		50 - 200	04/25/24 15:45	04/26/24 13:34	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:30	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	116		70 - 130	04/25/24 07:24	04/25/24 22:30	1
13C2 PFHxA	107		70 - 130	04/25/24 07:24	04/25/24 22:30	1
13C2 PFDA	105		70 - 130	04/25/24 07:24	04/25/24 22:30	1
13C3-GenX	103		70 - 130	04/25/24 07:24	04/25/24 22:30	1

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-92750-6

Date Collected: 04/22/24 10:35

Matrix: Water

Date Received: 04/24/24 10:40

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		04/25/24 15:45	04/26/24 13:44	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:44	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	72		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C6 PFDA	92		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C5 PFHxA	89		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C4 PFHpA	94		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C8 PFOA	93		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C9 PFNA	91		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C7 PFUnA	88		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C2 PFDoA	91		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C4 PFBA	95		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C5 PFPeA	100		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C3 PFBS	100		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C3 PFHxS	105		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C8 PFOS	96		50 - 200	04/25/24 15:45	04/26/24 13:44	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-92750-6

Date Collected: 04/22/24 10:35

Matrix: Water

Date Received: 04/24/24 10:40

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

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C2-4:2-FTS	124		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C2-6:2-FTS	122		50 - 200	04/25/24 15:45	04/26/24 13:44	1
13C2-8:2-FTS	98		50 - 200	04/25/24 15:45	04/26/24 13:44	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 22:51	1
Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac		
d5-NEtFOSAA	119		70 - 130	04/25/24 07:24	04/25/24 22:51	1		
13C2 PFHxA	112		70 - 130	04/25/24 07:24	04/25/24 22:51	1		
13C2 PFDA	108		70 - 130	04/25/24 07:24	04/25/24 22:51	1		
13C3-GenX	107		70 - 130	04/25/24 07:24	04/25/24 22:51	1		

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-7

Date Collected: 04/22/24 11:13

Matrix: Water

Date Received: 04/24/24 10:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-7

Date Collected: 04/22/24 11:13

Matrix: Water

Date Received: 04/24/24 10:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 13:53	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	76		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C6 PFDA	91		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C5 PFHxA	91		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C4 PFHpA	96		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C8 PFOA	95		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C9 PFNA	91		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C7 PFUnA	87		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C2 PFDoA	88		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C4 PFBA	91		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C5 PFPeA	94		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C3 PFBS	94		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C3 PFHxS	100		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C8 PFOS	91		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C2-4:2-FTS	126		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C2-6:2-FTS	115		50 - 200	04/25/24 15:45	04/26/24 13:53	1
13C2-8:2-FTS	97		50 - 200	04/25/24 15:45	04/26/24 13:53	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-7

Date Collected: 04/22/24 11:13

Matrix: Water

Date Received: 04/24/24 10:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:02	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	118		70 - 130			04/25/24 07:24	04/25/24 23:02	1
13C2 PFHxA	115		70 - 130			04/25/24 07:24	04/25/24 23:02	1
13C2 PFDA	111		70 - 130			04/25/24 07:24	04/25/24 23:02	1
13C3-GenX	109		70 - 130			04/25/24 07:24	04/25/24 23:02	1

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-8

Date Collected: 04/22/24 10:09

Matrix: Water

Date Received: 04/24/24 10:40

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		04/25/24 15:45	04/26/24 14:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-8

Date Collected: 04/22/24 10:09

Matrix: Water

Date Received: 04/24/24 10:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		04/25/24 15:45	04/26/24 14:03	1

Isotope Dilution	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	77		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C6 PFDA	91		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C5 PFHxA	95		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C4 PFHpA	97		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C8 PFOA	96		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C9 PFNA	93		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C7 PFUnA	91		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C2 PFDoA	89		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C4 PFBA	96		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C5 PFPeA	98		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C3 PFBS	103		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C3 PFHxS	104		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C8 PFOS	95		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C2-4:2-FTS	128		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C2-6:2-FTS	124		50 - 200	04/25/24 15:45	04/26/24 14:03	1
13C2-8:2-FTS	98		50 - 200	04/25/24 15:45	04/26/24 14:03	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-92750-1
 SDG: 525.2, 533, 537.1

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-8

Date Collected: 04/22/24 10:09

Matrix: Water

Date Received: 04/24/24 10:40

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		04/25/24 07:24	04/25/24 23:13	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	119		70 - 130			04/25/24 07:24	04/25/24 23:13	1
13C2 PFHxA	117		70 - 130			04/25/24 07:24	04/25/24 23:13	1
13C2 PFDA	111		70 - 130			04/25/24 07:24	04/25/24 23:13	1
13C3-GenX	109		70 - 130			04/25/24 07:24	04/25/24 23:13	1

Action Limit Summary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-92750-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	<0.050		ug/L	2	0.050	525.2	Total/NA
Atrazine	<0.050		ug/L	3	0.050	525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.60		ug/L	6	0.60	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.60		ug/L	400	0.60	525.2	Total/NA
Endrin	<0.099		ug/L	2	0.099	525.2	Total/NA
Heptachlor	<0.040		ug/L	0.4	0.040	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.050		ug/L	0.2	0.050	525.2	Total/NA
Hexachlorobenzene	<0.050		ug/L	1	0.050	525.2	Total/NA
Hexachlorocyclopentadiene	<0.050		ug/L	50	0.050	525.2	Total/NA
Lindane	<0.040		ug/L	0.2	0.040	525.2	Total/NA
Methoxychlor	<0.099		ug/L	40	0.099	525.2	Total/NA
Simazine	<0.050		ug/L	4	0.050	525.2	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-92750-2

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	RL	Method	Prep Type
				Limit			
Alachlor	<0.049		ug/L	2	0.049	525.2	Total/NA
Atrazine	<0.049		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400	0.58	525.2	Total/NA
Endrin	<0.097		ug/L	2	0.097	525.2	Total/NA
Heptachlor	<0.039		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.049		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L	50	0.049	525.2	Total/NA
Lindane	<0.039		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	<0.097		ug/L	40	0.097	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA GULCH WELLS PUMP 2 (Continued)

Lab Sample ID: 380-92750-2

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

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-3

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	<0.048		ug/L	2	0.048	525.2	Total/NA
Atrazine	<0.048		ug/L	3	0.048	525.2	Total/NA
Benzo[a]pyrene	<0.019		ug/L	0.2	0.019	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.58		ug/L	6	0.58	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.58		ug/L	400	0.58	525.2	Total/NA
Endrin	<0.097		ug/L	2	0.097	525.2	Total/NA
Heptachlor	<0.039		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.048		ug/L	0.2	0.048	525.2	Total/NA
Hexachlorobenzene	<0.048		ug/L	1	0.048	525.2	Total/NA
Hexachlorocyclopentadiene	<0.048		ug/L	50	0.048	525.2	Total/NA
Lindane	<0.039		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	<0.097		ug/L	40	0.097	525.2	Total/NA
Simazine	<0.048		ug/L	4	0.048	525.2	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Action Limit Summary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-4

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	<0.049		ug/L	2	0.049	525.2	Total/NA
Atrazine	<0.049		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		ug/L	6	0.59	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.59		ug/L	400	0.59	525.2	Total/NA
Endrin	<0.098		ug/L	2	0.098	525.2	Total/NA
Heptachlor	<0.039		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.049		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L	50	0.049	525.2	Total/NA
Lindane	<0.039		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	<0.098		ug/L	40	0.098	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.5		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.2		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.2		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.5		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-92750-5

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Action Limit Summary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-92750-6

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-7

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	537.1	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	537.1	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	537.1	Total/NA

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-8

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	<2.0		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		ng/L	10	2.0	537.1	Total/NA

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Action Limit Summary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

**Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 P1
(Continued)**

Lab Sample ID: 380-92750-8

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

Surrogate Summary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-92750-1	MOANALUA WELLS	102	84	97
380-92750-2	AIEA GULCH WELLS PUMP 2	99	92	93
380-92750-3	AIEA WELLS PUMPS 1&2 (260) P2	99	95	91
380-92750-4	HALAWA WELLS UNITS 1 & 2 P1	102	94	91

Surrogate Legend
 2NMX = 2-Nitro-m-xylene
 PRY = Perylene-d12
 TPP = Triphenylphosphate

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-92521-Q-1-A MS	Matrix Spike	98	85	95
380-92521-Q-2-A DU	Duplicate	101	90	94
LCS 380-87807/23-A	Lab Control Sample	97	90	91
LCSD 380-87807/24-A	Lab Control Sample Dup	99	89	101
MB 380-87807/21-A	Method Blank	100	95	94
MRL 380-87807/22-A	Lab Control Sample	99	87	95

Surrogate Legend
 2NMX = 2-Nitro-m-xylene
 PRY = Perylene-d12
 TPP = Triphenylphosphate

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

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)
380-92750-1	MOANALUA WELLS	115	108	105	103
380-92750-2	AIEA GULCH WELLS PUMP 2	114	114	111	109
380-92750-3	AIEA WELLS PUMPS 1&2 (260) P2	114	116	109	109
380-92750-4	HALAWA WELLS UNITS 1 & 2 P1	126	120	116	115

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

Surrogate Summary

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

Job ID: 380-92750-1
 SDG: 525.2, 533, 537.1

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

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)
380-92705-B-1-A MS	Matrix Spike	110	110	103	102
380-92705-C-1-A MSD	Matrix Spike Duplicate	108	114	105	108
380-92750-5	FB MOANALUA WELLS	116	107	105	103
380-92750-6	FB AIEA GULCH WELLS PUMP 2	119	112	108	107
380-92750-7	FB AIEA WELLS PUMPS 1&2 (260) P2	118	115	111	109
380-92750-8	FB HALAWA WELLS UNITS 1 & 2 P1	119	117	111	109
LCS 380-87602/24-A	Lab Control Sample	118	118	117	115
MBL 380-87602/22-A	Method Blank	123	120	120	115
MRL 380-87602/23-A	Lab Control Sample	116	112	115	112

Surrogate Legend

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



Isotope Dilution Summary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

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)
380-92750-1	MOANALUA WELLS	70	79	79	80	78	77	81	80
380-92750-2	AIEA GULCH WELLS PUMP 2	79	91	89	93	93	91	88	87
380-92750-3	AIEA WELLS PUMPS 1&2 (260) P2	81	89	89	92	92	89	86	86
380-92750-4	HALAWA WELLS UNITS 1 & 2 P1	80	84	84	87	85	87	82	81

		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)
380-92750-1	MOANALUA WELLS	84	86	101	104	94	124	119	101
380-92750-2	AIEA GULCH WELLS PUMP 2	94	95	99	102	96	137	118	102
380-92750-3	AIEA WELLS PUMPS 1&2 (260) P2	93	96	98	101	94	130	126	98
380-92750-4	HALAWA WELLS UNITS 1 & 2 P1	93	101	101	97	92	138	116	100

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)
380-92750-5	FB MOANALUA WELLS	71	88	89	92	91	86	84	86
380-92750-6	FB AIEA GULCH WELLS PUMP 2	72	92	89	94	93	91	88	91
380-92750-7	FB AIEA WELLS PUMPS 1&2 (260) P2	76	91	91	96	95	91	87	88
380-92750-8	FB HALAWA WELLS UNITS 1 & 2 P1	77	91	95	97	96	93	91	89
380-92886-E-1-A LMS	Matrix Spike	75	90	86	91	90	88	84	85
380-92886-G-1-A LMSD	Matrix Spike Duplicate	71	85	86	91	90	87	82	83
LCS 380-87677/22-A	Lab Control Sample	73	89	83	89	89	90	84	86
MBL 380-87677/20-A	Method Blank	73	86	87	94	92	87	85	85
MRL 380-87677/21-A	Lab Control Sample	73	92	91	95	93	93	90	89

Eurofins Eaton Analytical Pomona

Isotope Dilution Summary

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

Job ID: 380-92750-1
 SDG: 525.2, 533, 537.1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-92750-5	FB MOANALUA WELLS	90	92	95	99	91	114	118	95
380-92750-6	FB AIEA GULCH WELLS PUMP 2	95	100	100	105	96	124	122	98
380-92750-7	FB AIEA WELLS PUMPS 1&2 (260) P2	91	94	94	100	91	126	115	97
380-92750-8	FB HALAWA WELLS UNITS 1 & 2 P1	96	98	103	104	95	128	124	98
380-92886-E-1-A LMS	Matrix Spike	90	96	100	104	95	145	121	102
380-92886-G-1-A LMSD	Matrix Spike Duplicate	93	95	98	98	94	135	119	96
LCS 380-87677/22-A	Lab Control Sample	86	87	97	98	93	111	111	96
MBL 380-87677/20-A	Method Blank	94	96	96	104	93	122	123	96
MRL 380-87677/21-A	Lab Control Sample	92	95	97	101	92	121	117	97

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

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 380-87807/21-A
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 87807

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
2,4'-DDD	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
2,4'-DDE	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
2,4'-DDT	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
2-Methylnaphthalene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
4,4'-DDD	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
4,4'-DDE	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
4,4'-DDT	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Acenaphthene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Acenaphthylene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Acetochlor	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Alachlor	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
alpha-BHC	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
alpha-Chlordane	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Anthracene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 12:56	1
Atrazine	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Benz(a)anthracene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Benzo[a]pyrene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 12:56	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 12:56	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 12:56	1
beta-BHC	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		04/26/24 12:00	04/27/24 12:56	1
Bromacil	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Butachlor	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Butylbenzylphthalate	<0.50		0.50	ug/L		04/26/24 12:00	04/27/24 12:56	1
Chlorobenzilate	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Chloroneb	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Chlorpyrifos	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Chrysene	<0.020		0.020	ug/L		04/26/24 12:00	04/27/24 12:56	1
delta-BHC	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		04/26/24 12:00	04/27/24 12:56	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Dieldrin	<0.20		0.20	ug/L		04/26/24 12:00	04/27/24 12:56	1
Diethylphthalate	<0.50		0.50	ug/L		04/26/24 12:00	04/27/24 12:56	1
Dimethylphthalate	<0.50		0.50	ug/L		04/26/24 12:00	04/27/24 12:56	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		04/26/24 12:00	04/27/24 12:56	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Endosulfan sulfate	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Endrin	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Endrin aldehyde	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
EPTC	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1

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QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MB 380-87807/21-A
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 87807

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Fluorene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
gamma-Chlordane	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Heptachlor	<0.040		0.040	ug/L		04/26/24 12:00	04/27/24 12:56	1
Heptachlor epoxide (isomer B)	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Hexachlorobenzene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Isophorone	<0.50		0.50	ug/L		04/26/24 12:00	04/27/24 12:56	1
Lindane	<0.040		0.040	ug/L		04/26/24 12:00	04/27/24 12:56	1
Malathion	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Methoxychlor	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Metolachlor	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Molinate	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Naphthalene	<0.30		0.30	ug/L		04/26/24 12:00	04/27/24 12:56	1
Parathion	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Phenanthrene	<0.040		0.040	ug/L		04/26/24 12:00	04/27/24 12:56	1
Propachlor	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Pyrene	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Simazine	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Terbacil	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Terbutylazine	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1
Thiobencarb	<0.20		0.20	ug/L		04/26/24 12:00	04/27/24 12:56	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		04/26/24 12:00	04/27/24 12:56	1
trans-Nonachlor	<0.050		0.050	ug/L		04/26/24 12:00	04/27/24 12:56	1
Trifluralin	<0.099		0.099	ug/L		04/26/24 12:00	04/27/24 12:56	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Cyclopentasiloxane, decamethyl-	0.697	T J N	ug/L		2.70	541-02-6	04/26/24 12:00	04/27/24 12:56	1
Cyclohexasiloxane, dodecamethyl-	0.521	T J N	ug/L		3.26	540-97-6	04/26/24 12:00	04/27/24 12:56	1
9-Octadecenamamide, (Z)-	1.11	T J N	ug/L		7.60	301-02-0	04/26/24 12:00	04/27/24 12:56	1
Unknown	0.509	T J	ug/L		10.57	N/A	04/26/24 12:00	04/27/24 12:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	100		70 - 130	04/26/24 12:00	04/27/24 12:56	1
Perylene-d12	95		70 - 130	04/26/24 12:00	04/27/24 12:56	1
Triphenylphosphate	94		70 - 130	04/26/24 12:00	04/27/24 12:56	1

Lab Sample ID: LCS 380-87807/23-A
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.98	2.11		ug/L		107	70 - 130
2,4'-DDD	1.98	1.99		ug/L		101	70 - 130
2,4'-DDE	1.98	1.97		ug/L		100	70 - 130
2,4'-DDT	1.98	2.24		ug/L		113	70 - 130

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QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-87807/23-A
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dinitrotoluene	1.98	2.61	*+	ug/L		132	70 - 130
2,6-Dinitrotoluene	1.98	2.48		ug/L		125	70 - 130
2-Methylnaphthalene	1.98	2.17		ug/L		109	70 - 130
4,4'-DDD	1.98	1.97		ug/L		99	70 - 130
4,4'-DDE	1.98	1.79		ug/L		90	70 - 130
4,4'-DDT	1.98	2.30		ug/L		116	70 - 130
Acenaphthene	1.98	1.89		ug/L		96	70 - 130
Acenaphthylene	1.98	1.96		ug/L		99	70 - 130
Acetochlor	1.98	1.87		ug/L		94	70 - 130
Alachlor	1.98	1.97		ug/L		100	70 - 130
alpha-BHC	1.98	2.02		ug/L		102	70 - 130
alpha-Chlordane	1.98	1.56		ug/L		79	70 - 130
Anthracene	1.98	1.66		ug/L		84	70 - 130
Atrazine	1.98	1.94		ug/L		98	70 - 130
Benz(a)anthracene	1.98	1.88		ug/L		95	70 - 130
Benzo[a]pyrene	1.98	1.80		ug/L		91	70 - 130
Benzo[b]fluoranthene	1.98	2.01		ug/L		101	70 - 130
Benzo[g,h,i]perylene	1.98	2.02		ug/L		102	70 - 130
Benzo[k]fluoranthene	1.98	2.22		ug/L		112	70 - 130
beta-BHC	1.98	2.03		ug/L		103	70 - 130
Bis(2-ethylhexyl) phthalate	1.98	1.96		ug/L		99	70 - 130
Bromacil	1.98	2.68	*+	ug/L		135	70 - 130
Butachlor	1.98	2.03		ug/L		102	70 - 130
Butylbenzylphthalate	1.98	2.09		ug/L		106	70 - 130
Chlorobenzilate	1.98	1.83		ug/L		92	70 - 130
Chloroneb	1.98	2.06		ug/L		104	70 - 130
Chlorothalonil (Draconil, Bravo)	1.98	1.85		ug/L		93	70 - 130
Chlorpyrifos	1.98	2.12		ug/L		107	70 - 130
Chrysene	1.98	2.25		ug/L		114	70 - 130
delta-BHC	1.98	2.00		ug/L		101	70 - 130
Di(2-ethylhexyl)adipate	1.98	2.10		ug/L		106	70 - 130
Dibenz(a,h)anthracene	1.98	1.92		ug/L		97	70 - 130
Diclorvos (DDVP)	1.98	2.05		ug/L		103	70 - 130
Dieldrin	1.98	1.79		ug/L		90	70 - 130
Diethylphthalate	1.98	1.96		ug/L		99	70 - 130
Dimethylphthalate	1.98	2.03		ug/L		103	70 - 130
Di-n-butyl phthalate	3.96	4.04		ug/L		102	70 - 130
Di-n-octyl phthalate	1.98	1.83		ug/L		92	70 - 130
Endosulfan I (Alpha)	1.98	1.87		ug/L		95	70 - 130
Endosulfan II (Beta)	1.98	2.07		ug/L		104	70 - 130
Endosulfan sulfate	1.98	1.97		ug/L		99	70 - 130
Endrin	1.98	1.97		ug/L		99	70 - 130
Endrin aldehyde	1.98	1.35		ug/L		68	60 - 130
EPTC	1.98	2.25		ug/L		114	70 - 130
Fluoranthene	1.98	2.23		ug/L		113	70 - 130
Fluorene	1.98	2.08		ug/L		105	70 - 130
gamma-Chlordane	1.98	1.68		ug/L		85	70 - 130
Heptachlor	1.98	2.32		ug/L		117	70 - 130
Heptachlor epoxide (isomer B)	1.98	1.61		ug/L		81	70 - 130

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QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCS 380-87807/23-A
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachlorobenzene	1.98	1.90		ug/L		96	70 - 130
Hexachlorocyclopentadiene	1.98	2.11		ug/L		107	70 - 130
Indeno[1,2,3-cd]pyrene	1.98	1.89		ug/L		96	70 - 130
Isophorone	1.98	1.89		ug/L		96	70 - 130
Lindane	1.98	2.09		ug/L		105	70 - 130
Malathion	1.98	1.87		ug/L		95	70 - 130
Methoxychlor	1.98	2.36		ug/L		119	70 - 130
Metolachlor	1.98	2.11		ug/L		107	70 - 130
Molinate	1.98	2.23		ug/L		113	70 - 130
Naphthalene	1.98	2.05		ug/L		104	70 - 130
Parathion	1.98	2.60	*+	ug/L		131	70 - 130
Pendimethalin (Penoxaline)	1.98	2.20		ug/L		111	70 - 130
Phenanthrene	1.98	1.98		ug/L		100	70 - 130
Propachlor	1.98	2.11		ug/L		107	70 - 130
Pyrene	1.98	2.27		ug/L		115	70 - 130
Simazine	1.98	2.09		ug/L		106	70 - 130
Terbacil	1.98	2.22		ug/L		112	70 - 130
Terbutylazine	1.98	1.96		ug/L		99	70 - 130
Thiobencarb	1.98	2.17		ug/L		109	70 - 130
trans-Nonachlor	1.98	1.82		ug/L		92	70 - 130
Trifluralin	1.98	1.80		ug/L		91	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	97		70 - 130
Perylene-d12	90		70 - 130
Triphenylphosphate	91		70 - 130

Lab Sample ID: LCSD 380-87807/24-A
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	1.99	2.13		ug/L		107	70 - 130	1	20
2,4'-DDD	1.99	2.15		ug/L		108	70 - 130	8	20
2,4'-DDE	1.99	2.09		ug/L		105	70 - 130	6	20
2,4'-DDT	1.99	2.40		ug/L		121	70 - 130	7	20
2,4-Dinitrotoluene	1.99	2.68	*+	ug/L		135	70 - 130	3	20
2,6-Dinitrotoluene	1.99	2.51		ug/L		126	70 - 130	1	20
2-Methylnaphthalene	1.99	2.19		ug/L		110	70 - 130	1	20
4,4'-DDD	1.99	2.13		ug/L		107	70 - 130	8	20
4,4'-DDE	1.99	1.92		ug/L		97	70 - 130	7	20
4,4'-DDT	1.99	2.48		ug/L		125	70 - 130	8	20
Acenaphthene	1.99	1.92		ug/L		97	70 - 130	1	20
Acenaphthylene	1.99	1.95		ug/L		98	70 - 130	0	20
Acetochlor	1.99	2.03		ug/L		102	70 - 130	8	20
Alachlor	1.99	2.11		ug/L		106	70 - 130	6	20
alpha-BHC	1.99	2.08		ug/L		105	70 - 130	3	20
alpha-Chlordane	1.99	1.75		ug/L		88	70 - 130	11	20

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-87807/24-A
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
Anthracene	1.99	1.71		ug/L		86	70 - 130	3	20	
Atrazine	1.99	2.05		ug/L		103	70 - 130	6	20	
Benz(a)anthracene	1.99	2.04		ug/L		103	70 - 130	8	20	
Benzo[a]pyrene	1.99	1.84		ug/L		93	70 - 130	2	20	
Benzo[b]fluoranthene	1.99	2.11		ug/L		106	70 - 130	5	20	
Benzo[g,h,i]perylene	1.99	2.10		ug/L		106	70 - 130	4	20	
Benzo[k]fluoranthene	1.99	2.30		ug/L		116	70 - 130	4	20	
beta-BHC	1.99	2.12		ug/L		106	70 - 130	4	20	
Bis(2-ethylhexyl) phthalate	1.99	2.03		ug/L		102	70 - 130	4	20	
Bromacil	1.99	2.89	*+	ug/L		145	70 - 130	8	20	
Butachlor	1.99	2.18		ug/L		110	70 - 130	7	20	
Butylbenzylphthalate	1.99	2.24		ug/L		113	70 - 130	7	20	
Chlorobenzilate	1.99	1.95		ug/L		98	70 - 130	7	20	
Chloroneb	1.99	2.09		ug/L		105	70 - 130	1	20	
Chlorothalonil (Draconil, Bravo)	1.99	2.01		ug/L		101	70 - 130	8	20	
Chlorpyrifos	1.99	2.29		ug/L		115	70 - 130	8	20	
Chrysene	1.99	2.30		ug/L		116	70 - 130	2	20	
delta-BHC	1.99	2.10		ug/L		106	70 - 130	5	20	
Di(2-ethylhexyl)adipate	1.99	2.30		ug/L		116	70 - 130	9	20	
Dibenz(a,h)anthracene	1.99	2.02		ug/L		102	70 - 130	5	20	
Diclorvos (DDVP)	1.99	2.17		ug/L		109	70 - 130	6	20	
Dieldrin	1.99	1.88		ug/L		95	70 - 130	5	20	
Diethylphthalate	1.99	2.03		ug/L		102	70 - 130	3	20	
Dimethylphthalate	1.99	2.08		ug/L		104	70 - 130	2	20	
Di-n-butyl phthalate	3.97	4.30		ug/L		108	70 - 130	6	20	
Di-n-octyl phthalate	1.99	1.88		ug/L		95	70 - 130	3	20	
Endosulfan I (Alpha)	1.99	1.98		ug/L		100	70 - 130	6	20	
Endosulfan II (Beta)	1.99	2.20		ug/L		111	70 - 130	6	20	
Endosulfan sulfate	1.99	2.13		ug/L		107	70 - 130	8	20	
Endrin	1.99	2.09		ug/L		105	70 - 130	6	20	
Endrin aldehyde	1.99	1.27		ug/L		64	60 - 130	6	20	
EPTC	1.99	2.28		ug/L		115	70 - 130	1	20	
Fluoranthene	1.99	2.36		ug/L		119	70 - 130	6	20	
Fluorene	1.99	2.13		ug/L		107	70 - 130	2	20	
gamma-Chlordane	1.99	1.88		ug/L		94	70 - 130	11	20	
Heptachlor	1.99	2.40		ug/L		121	70 - 130	3	20	
Heptachlor epoxide (isomer B)	1.99	1.75		ug/L		88	70 - 130	9	20	
Hexachlorobenzene	1.99	1.98		ug/L		100	70 - 130	4	20	
Hexachlorocyclopentadiene	1.99	2.13		ug/L		107	70 - 130	1	20	
Indeno[1,2,3-cd]pyrene	1.99	1.88		ug/L		94	70 - 130	1	20	
Isophorone	1.99	1.93		ug/L		97	70 - 130	2	20	
Lindane	1.99	2.13		ug/L		107	70 - 130	2	20	
Malathion	1.99	2.06		ug/L		104	70 - 130	9	20	
Methoxychlor	1.99	2.39		ug/L		120	70 - 130	1	20	
Metolachlor	1.99	2.23		ug/L		112	70 - 130	5	20	
Molinate	1.99	2.32		ug/L		117	70 - 130	4	20	
Naphthalene	1.99	2.06		ug/L		104	70 - 130	0	20	
Parathion	1.99	2.85	*+	ug/L		143	70 - 130	9	20	
Pendimethalin (Penoxaline)	1.99	2.33		ug/L		117	70 - 130	6	20	

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: LCSD 380-87807/24-A
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenanthrene	1.99	2.04		ug/L		103	70 - 130	3	20
Propachlor	1.99	2.19		ug/L		110	70 - 130	4	20
Pyrene	1.99	2.37		ug/L		119	70 - 130	4	20
Simazine	1.99	2.19		ug/L		110	70 - 130	5	20
Terbacil	1.99	2.43		ug/L		122	70 - 130	9	20
Terbutylazine	1.99	2.11		ug/L		106	70 - 130	7	20
Thiobencarb	1.99	2.30		ug/L		116	70 - 130	6	20
trans-Nonachlor	1.99	2.00		ug/L		101	70 - 130	10	20
Trifluralin	1.99	1.87		ug/L		94	70 - 130	4	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Nitro-m-xylene	99		70 - 130
Perylene-d12	89		70 - 130
Triphenylphosphate	101		70 - 130

Lab Sample ID: MRL 380-87807/22-A
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0994	0.120		ug/L		121	50 - 150
2,4'-DDD	0.0994	0.109		ug/L		109	50 - 150
2,4'-DDE	0.0994	0.104		ug/L		104	50 - 150
2,4'-DDT	0.0994	0.127		ug/L		127	50 - 150
2,4-Dinitrotoluene	0.0994	0.0944	J	ug/L		95	50 - 150
2,6-Dinitrotoluene	0.0994	0.0962	J	ug/L		97	50 - 150
2-Methylnaphthalene	0.0994	0.115		ug/L		116	50 - 150
4,4'-DDD	0.0994	0.117		ug/L		117	50 - 150
4,4'-DDE	0.0994	0.0855	J	ug/L		86	50 - 150
4,4'-DDT	0.0994	0.155	^3+	ug/L		156	50 - 150
Acenaphthene	0.0994	0.0917	J	ug/L		92	50 - 150
Acenaphthylene	0.0994	0.0906	J	ug/L		91	50 - 150
Acetochlor	0.0497	0.0449	J	ug/L		90	50 - 150
Alachlor	0.0497	0.0352	J	ug/L		71	50 - 150
alpha-BHC	0.0994	0.0938	J	ug/L		94	50 - 150
alpha-Chlordane	0.0248	<0.029		ug/L		73	50 - 150
Anthracene	0.0199	<0.019		ug/L		79	50 - 150
Atrazine	0.0497	0.0572		ug/L		115	50 - 150
Benz(a)anthracene	0.0497	0.0588		ug/L		118	50 - 150
Benzo[a]pyrene	0.0199	0.0151	J	ug/L		76	50 - 150
Benzo[b]fluoranthene	0.0199	0.0192	J	ug/L		97	50 - 150
Benzo[g,h,i]perylene	0.0497	0.0361	J	ug/L		73	50 - 150
Benzo[k]fluoranthene	0.0199	<0.017		ug/L		85	50 - 150
beta-BHC	0.0994	0.0942	J	ug/L		95	50 - 150
Bis(2-ethylhexyl) phthalate	0.596	0.554	J	ug/L		93	50 - 150
Bromacil	0.0994	0.117		ug/L		118	50 - 150
Butachlor	0.0497	0.0478	J	ug/L		96	50 - 150
Butylbenzylphthalate	0.149	0.154	J	ug/L		103	50 - 150

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-87807/22-A
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzilate	0.0994	0.0867	J	ug/L		87	50 - 150
Chloroneb	0.0994	0.0958	J	ug/L		96	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0994	0.0958	J	ug/L		96	50 - 150
Chlorpyrifos	0.0497	0.0436	J	ug/L		88	50 - 150
Chrysene	0.0199	0.0332	^3+	ug/L		167	50 - 150
delta-BHC	0.0994	0.0989	J	ug/L		100	50 - 150
Di(2-ethylhexyl)adipate	0.298	0.345	J	ug/L		116	50 - 150
Dibenz(a,h)anthracene	0.0497	0.0332	J	ug/L		67	50 - 150
Diclorvos (DDVP)	0.0497	0.0623		ug/L		125	50 - 150
Dieldrin	0.0994	0.0967	J	ug/L		97	50 - 150
Diethylphthalate	0.149	0.152	J	ug/L		102	50 - 150
Dimethylphthalate	0.298	0.264	J	ug/L		89	50 - 150
Di-n-butyl phthalate	0.298	0.312	J	ug/L		105	49 - 243
Di-n-octyl phthalate	0.0994	0.0641	J	ug/L		64	50 - 150
Endosulfan I (Alpha)	0.0994	0.0893	J	ug/L		90	50 - 150
Endosulfan II (Beta)	0.0994	0.124		ug/L		124	50 - 150
Endosulfan sulfate	0.0994	0.0906	J	ug/L		91	50 - 150
Endrin	0.0994	0.108		ug/L		109	50 - 150
Endrin aldehyde	0.0994	0.0998		ug/L		100	50 - 150
EPTC	0.0994	0.0992		ug/L		100	50 - 150
Fluoranthene	0.0497	0.0502	J	ug/L		101	50 - 150
Fluorene	0.0497	<0.050		ug/L		90	50 - 150
gamma-Chlordane	0.0248	<0.021		ug/L		74	50 - 150
Heptachlor	0.0397	0.0489		ug/L		123	50 - 150
Heptachlor epoxide (isomer B)	0.0497	0.0532		ug/L		107	50 - 150
Hexachlorobenzene	0.0497	0.0411	J	ug/L		83	50 - 150
Hexachlorocyclopentadiene	0.0497	0.0639		ug/L		129	50 - 150
Indeno[1,2,3-cd]pyrene	0.0497	0.0322	J	ug/L		65	50 - 150
Isophorone	0.0994	0.101	J	ug/L		102	50 - 150
Lindane	0.0397	0.0381	J	ug/L		96	50 - 150
Malathion	0.0994	0.0847	J	ug/L		85	50 - 150
Methoxychlor	0.0994	0.141		ug/L		142	50 - 150
Metolachlor	0.0497	0.0539		ug/L		109	50 - 150
Molinate	0.0994	0.107		ug/L		108	50 - 150
Naphthalene	0.0994	0.112	J	ug/L		113	50 - 150
Parathion	0.0994	0.0963	J	ug/L		97	50 - 150
Pendimethalin (Penoxaline)	0.0994	0.118		ug/L		119	50 - 150
Phenanthrene	0.0199	0.0188	J	ug/L		94	50 - 150
Propachlor	0.0497	0.0483	J	ug/L		97	50 - 150
Pyrene	0.0497	0.0506		ug/L		102	50 - 150
Simazine	0.0497	0.0457	J	ug/L		92	50 - 150
Terbacil	0.0994	0.129		ug/L		130	50 - 150
Terbutylazine	0.0994	0.117		ug/L		118	50 - 150
Thiobencarb	0.0994	0.113	J	ug/L		114	50 - 150
trans-Nonachlor	0.0248	<0.026		ug/L		61	50 - 150
Trifluralin	0.0994	0.0943	J	ug/L		95	50 - 150

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: MRL 380-87807/22-A
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87807

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	99		70 - 130
Perylene-d12	87		70 - 130
Triphenylphosphate	95		70 - 130

Lab Sample ID: 380-92521-Q-1-A MS
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.096		1.92	2.04		ug/L		106	70 - 130
2,4'-DDD	<0.096		1.92	1.97		ug/L		102	70 - 130
2,4'-DDE	<0.096		1.92	1.97		ug/L		102	70 - 130
2,4'-DDT	<0.096		1.92	2.23		ug/L		116	70 - 130
2,4-Dinitrotoluene	<0.096	*+ F1	1.92	2.62	F1	ug/L		137	70 - 130
2,6-Dinitrotoluene	<0.096		1.92	2.46		ug/L		128	70 - 130
2-Methylnaphthalene	<0.096		1.92	2.11		ug/L		110	70 - 130
4,4'-DDD	<0.096		1.92	1.96		ug/L		102	70 - 130
4,4'-DDE	<0.096		1.92	1.78		ug/L		93	70 - 130
4,4'-DDT	<0.096	^3+	1.92	2.30		ug/L		119	70 - 130
Acenaphthene	<0.096		1.92	1.84		ug/L		96	70 - 130
Acenaphthylene	<0.096		1.92	1.88		ug/L		98	70 - 130
Acetochlor	<0.096		1.92	1.85		ug/L		96	70 - 130
Alachlor	<0.048		1.92	1.97		ug/L		102	70 - 130
alpha-BHC	<0.096		1.92	1.97		ug/L		102	70 - 130
alpha-Chlordane	<0.048		1.92	1.58		ug/L		82	70 - 130
Anthracene	<0.019		1.92	1.47		ug/L		77	70 - 130
Atrazine	<0.048		1.92	1.95		ug/L		101	70 - 130
Benz(a)anthracene	<0.048		1.92	1.87		ug/L		97	70 - 130
Benzo[a]pyrene	<0.019		1.92	1.66		ug/L		86	70 - 130
Benzo[b]fluoranthene	<0.019		1.92	1.96		ug/L		102	70 - 130
Benzo[g,h,i]perylene	<0.048		1.92	1.87		ug/L		98	70 - 130
Benzo[k]fluoranthene	<0.019		1.92	2.15		ug/L		112	70 - 130
beta-BHC	<0.096		1.92	2.04		ug/L		106	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.92	1.95		ug/L		102	70 - 130
Bromacil	<0.096	F1 *+	1.92	2.77	F1	ug/L		144	70 - 130
Butachlor	<0.048		1.92	2.00		ug/L		104	70 - 130
Butylbenzylphthalate	<0.48		1.92	2.08		ug/L		108	70 - 130
Chlorobenzilate	<0.096		1.92	1.74		ug/L		90	70 - 130
Chloroneb	<0.096		1.92	2.00		ug/L		104	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.096		1.92	1.86		ug/L		97	70 - 130
Chlorpyrifos	<0.048		1.92	2.13		ug/L		111	70 - 130
Chrysene	<0.019	^3+	1.92	2.13		ug/L		111	70 - 130
delta-BHC	<0.096		1.92	1.94		ug/L		101	70 - 130
Di(2-ethylhexyl)adipate	<0.58		1.92	2.12		ug/L		110	70 - 130
Dibenz(a,h)anthracene	<0.048		1.92	1.85		ug/L		96	70 - 130
Diclorvos (DDVP)	<0.048		1.92	2.17		ug/L		113	70 - 130
Dieldrin	<0.19		1.92	1.74		ug/L		90	70 - 130
Diethylphthalate	<0.48		1.92	1.92		ug/L		100	70 - 130

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-92521-Q-1-A MS
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result			Result	Qualifier				
Dimethylphthalate	<0.48		1.92	1.98		ug/L		103	70 - 130
Di-n-butyl phthalate	<0.96		3.84	4.05		ug/L		105	70 - 130
Di-n-octyl phthalate	<0.096		1.92	1.83		ug/L		95	70 - 130
Endosulfan I (Alpha)	<0.096		1.92	1.85		ug/L		96	70 - 130
Endosulfan II (Beta)	<0.096		1.92	2.00		ug/L		104	70 - 130
Endosulfan sulfate	<0.096		1.92	1.96		ug/L		102	70 - 130
Endrin	<0.096		1.92	1.93		ug/L		101	70 - 130
Endrin aldehyde	<0.096		1.92	1.16		ug/L		60	60 - 130
EPTC	<0.096		1.92	2.20		ug/L		115	70 - 130
Fluoranthene	<0.096		1.92	2.22		ug/L		115	70 - 130
Fluorene	<0.048		1.92	2.04		ug/L		106	70 - 130
gamma-Chlordane	<0.048		1.92	1.71		ug/L		89	70 - 130
Heptachlor	<0.038		1.92	2.18		ug/L		113	70 - 130
Heptachlor epoxide (isomer B)	<0.048		1.92	1.67		ug/L		87	70 - 130
Hexachlorobenzene	<0.048		1.92	1.94		ug/L		101	70 - 130
Hexachlorocyclopentadiene	<0.048		1.92	2.10		ug/L		110	70 - 130
Indeno[1,2,3-cd]pyrene	<0.048		1.92	1.76		ug/L		92	70 - 130
Isophorone	<0.48		1.92	1.84		ug/L		96	70 - 130
Lindane	<0.038		1.92	2.01		ug/L		104	70 - 130
Malathion	<0.096		1.92	1.85		ug/L		96	70 - 130
Methoxychlor	<0.096		1.92	2.29		ug/L		119	70 - 130
Metolachlor	<0.048		1.92	2.06		ug/L		107	70 - 130
Molinate	<0.096		1.92	2.19		ug/L		114	70 - 130
Naphthalene	<0.29		1.92	2.00		ug/L		104	70 - 130
Parathion	<0.096	F1 *+	1.92	2.63	F1	ug/L		137	70 - 130
Pendimethalin (Penoxaline)	<0.096		1.92	2.17		ug/L		113	70 - 130
Phenanthrene	<0.038		1.92	1.94		ug/L		101	70 - 130
Propachlor	<0.048		1.92	2.10		ug/L		109	70 - 130
Pyrene	<0.048		1.92	2.23		ug/L		116	70 - 130
Simazine	<0.048		1.92	2.07		ug/L		108	70 - 130
Terbacil	<0.096		1.92	2.19		ug/L		114	70 - 130
Terbutylazine	<0.096		1.92	1.96		ug/L		102	70 - 130
Thiobencarb	<0.19		1.92	2.21		ug/L		115	70 - 130
trans-Nonachlor	<0.048		1.92	1.81		ug/L		94	70 - 130
Trifluralin	<0.096		1.92	1.77		ug/L		92	70 - 130
				MS	MS				
Surrogate				%Recovery	Qualifier				Limits
2-Nitro-m-xylene				98					70 - 130
Perylene-d12				85					70 - 130
Triphenylphosphate				95					70 - 130

Lab Sample ID: 380-92521-Q-2-A DU
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	
							RPD	Limit
1-Methylnaphthalene	<0.096		<0.096		ug/L		NC	20
2,4'-DDD	<0.096		<0.096		ug/L		NC	20

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QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-92521-Q-2-A DU
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
2,4'-DDE	<0.096		<0.096		ug/L		NC	20
2,4'-DDT	<0.096		<0.096		ug/L		NC	20
2,4-Dinitrotoluene	<0.096	*+	<0.096	*+	ug/L		NC	20
2,6-Dinitrotoluene	<0.096		<0.096		ug/L		NC	20
2-Methylnaphthalene	<0.096		<0.096		ug/L		NC	20
4,4'-DDD	<0.096		<0.096		ug/L		NC	20
4,4'-DDE	<0.096		<0.096		ug/L		NC	20
4,4'-DDT	<0.096	^3+	<0.096		ug/L		NC	20
Acenaphthene	<0.096		<0.096		ug/L		NC	20
Acenaphthylene	<0.096		<0.096		ug/L		NC	20
Acetochlor	<0.096		<0.096		ug/L		NC	20
Alachlor	<0.048		<0.048		ug/L		NC	20
alpha-BHC	<0.096		<0.096		ug/L		NC	20
alpha-Chlordane	<0.048		<0.048		ug/L		NC	20
Anthracene	<0.019		<0.019		ug/L		NC	20
Atrazine	<0.048		<0.048		ug/L		NC	20
Benz(a)anthracene	<0.048		<0.048		ug/L		NC	20
Benzo[a]pyrene	<0.019		<0.019		ug/L		NC	20
Benzo[b]fluoranthene	<0.019		<0.019		ug/L		NC	20
Benzo[g,h,i]perylene	<0.048		<0.048		ug/L		NC	20
Benzo[k]fluoranthene	<0.019		<0.019		ug/L		NC	20
beta-BHC	<0.096		<0.096		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.58		<0.58		ug/L		NC	20
Bromacil	<0.096	*+	<0.096	*+	ug/L		NC	20
Butachlor	<0.048		<0.048		ug/L		NC	20
Butylbenzylphthalate	<0.48		<0.48		ug/L		NC	20
Chlorobenzilate	<0.096		<0.096		ug/L		NC	20
Chloroneb	<0.096		<0.096		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.096		<0.096		ug/L		NC	20
Chlorpyrifos	<0.048		<0.048		ug/L		NC	20
Chrysene	<0.019	^3+	<0.019		ug/L		NC	20
delta-BHC	<0.096		<0.096		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.58		<0.58		ug/L		NC	20
Dibenz(a,h)anthracene	<0.048		<0.048		ug/L		NC	20
Diclorvos (DDVP)	<0.048		<0.048		ug/L		NC	20
Dieldrin	<0.19		<0.19		ug/L		NC	20
Diethylphthalate	<0.48		<0.48		ug/L		NC	20
Dimethylphthalate	<0.48		<0.48		ug/L		NC	20
Di-n-butyl phthalate	<0.96		<0.96		ug/L		NC	20
Di-n-octyl phthalate	<0.096		<0.096		ug/L		NC	20
Endosulfan I (Alpha)	<0.096		<0.096		ug/L		NC	20
Endosulfan II (Beta)	<0.096		<0.096		ug/L		NC	20
Endosulfan sulfate	<0.096		<0.096		ug/L		NC	20
Endrin	<0.096		<0.096		ug/L		NC	20
Endrin aldehyde	<0.096		<0.096		ug/L		NC	20
EPTC	<0.096		<0.096		ug/L		NC	20
Fluoranthene	<0.096		<0.096		ug/L		NC	20
Fluorene	<0.048		<0.048		ug/L		NC	20
gamma-Chlordane	<0.048		<0.048		ug/L		NC	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Method: 525.2 - Semivolatile Organic Compounds (GC/MS) (Continued)

Lab Sample ID: 380-92521-Q-2-A DU
Matrix: Water
Analysis Batch: 87975

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 87807

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Heptachlor	<0.038		<0.038		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.048		<0.048		ug/L		NC	20
Hexachlorobenzene	<0.048		<0.048		ug/L		NC	20
Hexachlorocyclopentadiene	<0.048		<0.048		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.048		<0.048		ug/L		NC	20
Isophorone	<0.48		<0.48		ug/L		NC	20
Lindane	<0.038		<0.038		ug/L		NC	20
Malathion	<0.096		<0.096		ug/L		NC	20
Methoxychlor	<0.096		<0.096		ug/L		NC	20
Metolachlor	<0.048		<0.048		ug/L		NC	20
Molinate	<0.096		<0.096		ug/L		NC	20
Naphthalene	<0.29		<0.29		ug/L		NC	20
Parathion	<0.096	+	<0.096	+	ug/L		NC	20
Pendimethalin (Penoxaline)	<0.096		<0.096		ug/L		NC	20
Phenanthrene	<0.038		<0.038		ug/L		NC	20
Propachlor	<0.048		<0.048		ug/L		NC	20
Pyrene	<0.048		<0.048		ug/L		NC	20
Simazine	<0.048		<0.048		ug/L		NC	20
Terbacil	<0.096		<0.096		ug/L		NC	20
Terbutylazine	<0.096		<0.096		ug/L		NC	20
Thiobencarb	<0.19		<0.19		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.19		<0.19		ug/L		NC	20
trans-Nonachlor	<0.048		<0.048		ug/L		NC	20
Trifluralin	<0.096		<0.096		ug/L		NC	20

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	101		70 - 130
Perylene-d12	90		70 - 130
Triphenylphosphate	94		70 - 130

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

Lab Sample ID: MBL 380-87677/20-A
Matrix: Water
Analysis Batch: 87848

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 87677

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1

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QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

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

Lab Sample ID: MBL 380-87677/20-A
Matrix: Water
Analysis Batch: 87848

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 87677

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		04/25/24 15:45	04/26/24 11:59	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	73		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C6 PFDA	86		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C5 PFHxA	87		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C4 PFHpA	94		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C8 PFOA	92		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C9 PFNA	87		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C7 PFUnA	85		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C2 PFDoA	85		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C4 PFBA	94		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C5 PFPeA	96		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C3 PFBS	96		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C3 PFHxS	104		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C8 PFOS	93		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C2-4:2-FTS	122		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C2-6:2-FTS	123		50 - 200	04/25/24 15:45	04/26/24 11:59	1
13C2-8:2-FTS	96		50 - 200	04/25/24 15:45	04/26/24 11:59	1

Lab Sample ID: LCS 380-87677/22-A
Matrix: Water
Analysis Batch: 87848

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87677

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11CI-PF3OUdS)	60.4	56.7		ng/L		94	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

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

Lab Sample ID: LCS 380-87677/22-A
Matrix: Water
Analysis Batch: 87848

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87677

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.4	58.8		ng/L		97	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.4	54.6		ng/L		90	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.4	59.7		ng/L		99	70 - 130
Perfluorobutanesulfonic acid (PFBS)	60.4	60.9		ng/L		101	70 - 130
Perfluorodecanoic acid (PFDA)	60.4	59.0		ng/L		98	70 - 130
Perfluorododecanoic acid (PFDoA)	60.4	59.2		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.4	57.5		ng/L		95	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.4	60.0		ng/L		99	70 - 130
Perfluorohexanoic acid (PFHxA)	60.4	57.7		ng/L		96	70 - 130
Perfluorononanoic acid (PFNA)	60.4	55.8		ng/L		92	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.4	56.0		ng/L		93	70 - 130
Perfluorooctanoic acid (PFOA)	60.4	57.6		ng/L		95	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.4	61.6		ng/L		102	70 - 130
Perfluorobutanoic acid (PFBA)	60.4	59.4		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.4	61.1		ng/L		101	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.4	62.7		ng/L		104	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.4	59.8		ng/L		99	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.4	53.0		ng/L		88	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	60.4	57.4		ng/L		95	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.4	57.5		ng/L		95	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.4	56.5		ng/L		94	70 - 130
Perfluoropentanoic acid (PFPeA)	60.4	58.5		ng/L		97	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.4	59.9		ng/L		99	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.4	56.6		ng/L		94	70 - 130

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	73		50 - 200
13C6 PFDA	89		50 - 200
13C5 PFHxA	83		50 - 200
13C4 PFHpA	89		50 - 200
13C8 PFOA	89		50 - 200
13C9 PFNA	90		50 - 200
13C7 PFUnA	84		50 - 200
13C2 PFDoA	86		50 - 200
13C4 PFBA	86		50 - 200

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

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

Lab Sample ID: LCS 380-87677/22-A
Matrix: Water
Analysis Batch: 87848

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87677

Isotope Dilution	LCS LCS		Limits
	%Recovery	Qualifier	
13C5 PFPeA	87		50 - 200
13C3 PFBS	97		50 - 200
13C3 PFHxS	98		50 - 200
13C8 PFOS	93		50 - 200
13C2-4:2-FTS	111		50 - 200
13C2-6:2-FTS	111		50 - 200
13C2-8:2-FTS	96		50 - 200

Lab Sample ID: MRL 380-87677/21-A
Matrix: Water
Analysis Batch: 87848

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87677

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	1.86	J	ng/L		92	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	1.90	J	ng/L		95	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.91	J	ng/L		95	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.10	J	ng/L		104	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.06	J	ng/L		102	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.01	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.14	J	ng/L		106	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.01	J	ng/L		100	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.93	J	ng/L		96	50 - 150
Perfluorononanoic acid (PFNA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.02	J	ng/L		101	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.07	J	ng/L		103	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	1.97	J	ng/L		98	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.13	J	ng/L		106	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.25	J	ng/L		112	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.10	J	ng/L		104	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	1.86	J	ng/L		92	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.01	1.79	J	ng/L		89	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.05	J	ng/L		102	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	1.86	J	ng/L		93	50 - 150

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

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

Lab Sample ID: MRL 380-87677/21-A
Matrix: Water
Analysis Batch: 87848

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87677

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoropentanoic acid (PFPeA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.10	J	ng/L		104	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	1.89	J	ng/L		94	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	73		50 - 200
13C6 PFDA	92		50 - 200
13C5 PFHxA	91		50 - 200
13C4 PFHpA	95		50 - 200
13C8 PFOA	93		50 - 200
13C9 PFNA	93		50 - 200
13C7 PFUnA	90		50 - 200
13C2 PFDoA	89		50 - 200
13C4 PFBA	92		50 - 200
13C5 PFPeA	95		50 - 200
13C3 PFBS	97		50 - 200
13C3 PFHxS	101		50 - 200
13C8 PFOS	92		50 - 200
13C2-4:2-FTS	121		50 - 200
13C2-6:2-FTS	117		50 - 200
13C2-8:2-FTS	97		50 - 200

Lab Sample ID: 380-92886-E-1-A LMS
Matrix: Water
Analysis Batch: 87848

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 87677

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.01	2.02		ng/L		101	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.01	2.02		ng/L		101	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.01	1.89	J	ng/L		94	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.01	1.92	J	ng/L		96	50 - 150
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.01	2.11		ng/L		105	50 - 150
Perfluorodecanoic acid (PFDA)	<2.0		2.01	2.02		ng/L		101	50 - 150
Perfluorododecanoic acid (PFDoA)	<2.0		2.01	2.23		ng/L		111	50 - 150
Perfluoroheptanoic acid (PFHpA)	<2.0		2.01	2.10		ng/L		105	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.01	2.09		ng/L		104	50 - 150
Perfluorohexanoic acid (PFHxA)	<2.0		2.01	2.02		ng/L		101	50 - 150
Perfluorononanoic acid (PFNA)	<2.0		2.01	2.11		ng/L		105	50 - 150
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.01	2.13		ng/L		106	50 - 150
Perfluorooctanoic acid (PFOA)	<2.0		2.01	2.03		ng/L		101	50 - 150

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QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

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

Lab Sample ID: 380-92886-E-1-A LMS
Matrix: Water
Analysis Batch: 87848

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 87677

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroundecanoic acid (PFUnA)	<2.0		2.01	2.09		ng/L		104	50 - 150
Perfluorobutanoic acid (PFBA)	<2.0		2.01	2.05		ng/L		102	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.01	2.30		ng/L		115	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.01	2.21		ng/L		110	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.01	2.22		ng/L		111	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.01	1.88	J	ng/L		94	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.01	1.87	J	ng/L		93	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.01	1.97	J	ng/L		98	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.01	1.91	J	ng/L		95	50 - 150
Perfluoropentanoic acid (PFPeA)	<2.0		2.01	2.08		ng/L		103	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.01	2.09		ng/L		104	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.01	1.90	J	ng/L		94	50 - 150

Isotope Dilution	LMS LMS		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	75		50 - 200
13C6 PFDA	90		50 - 200
13C5 PFHxA	86		50 - 200
13C4 PFHpA	91		50 - 200
13C8 PFOA	90		50 - 200
13C9 PFNA	88		50 - 200
13C7 PFUnA	84		50 - 200
13C2 PFDoA	85		50 - 200
13C4 PFBA	90		50 - 200
13C5 PFPeA	96		50 - 200
13C3 PFBS	100		50 - 200
13C3 PFHxS	104		50 - 200
13C8 PFOS	95		50 - 200
13C2-4:2-FTS	145		50 - 200
13C2-6:2-FTS	121		50 - 200
13C2-8:2-FTS	102		50 - 200

Lab Sample ID: 380-92886-G-1-A LMSD
Matrix: Water
Analysis Batch: 87848

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 87677

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec	RPD	
									Limits	RPD	Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.01	1.79	J	ng/L		89	50 - 150	12	50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.01	1.91	J	ng/L		95	50 - 150	6	50

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QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

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

Lab Sample ID: 380-92886-G-1-A LMSD
Matrix: Water
Analysis Batch: 87848

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 87677

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.01	1.89	J	ng/L		94	50 - 150	0	50
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.01	1.97	J	ng/L		98	50 - 150	2	50
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.01	2.07		ng/L		103	50 - 150	2	50
Perfluorodecanoic acid (PFDA)	<2.0		2.01	2.01		ng/L		100	50 - 150	1	50
Perfluorododecanoic acid (PFDoA)	<2.0		2.01	2.05		ng/L		102	50 - 150	8	50
Perfluoroheptanoic acid (PFHpA)	<2.0		2.01	2.09		ng/L		104	50 - 150	1	50
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.01	2.08		ng/L		103	50 - 150	1	50
Perfluorohexanoic acid (PFHxA)	<2.0		2.01	2.00		ng/L		99	50 - 150	1	50
Perfluorononanoic acid (PFNA)	<2.0		2.01	2.06		ng/L		102	50 - 150	2	50
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.01	2.05		ng/L		102	50 - 150	4	50
Perfluorooctanoic acid (PFOA)	<2.0		2.01	2.00		ng/L		99	50 - 150	2	50
Perfluoroundecanoic acid (PFUnA)	<2.0		2.01	2.00		ng/L		100	50 - 150	4	50
Perfluorobutanoic acid (PFBA)	<2.0		2.01	2.01		ng/L		100	50 - 150	2	50
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.01	1.95	J	ng/L		97	50 - 150	17	50
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.01	2.19		ng/L		109	50 - 150	1	50
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.01	2.14		ng/L		107	50 - 150	4	50
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.01	2.00		ng/L		99	50 - 150	6	50
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.01	1.84	J	ng/L		91	50 - 150	2	50
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.01	2.06		ng/L		102	50 - 150	4	50
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.01	1.90	J	ng/L		94	50 - 150	0	50
Perfluoropentanoic acid (PFPeA)	<2.0		2.01	2.13		ng/L		106	50 - 150	3	50
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.01	2.14		ng/L		106	50 - 150	2	50
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.01	1.86	J	ng/L		92	50 - 150	2	50

Isotope Dilution	LMSD %Recovery	LMSD Qualifier	Limits
13C3 HFPO-DA	71		50 - 200
13C6 PFDA	85		50 - 200
13C5 PFHxA	86		50 - 200
13C4 PFHpA	91		50 - 200
13C8 PFOA	90		50 - 200
13C9 PFNA	87		50 - 200
13C7 PFUnA	82		50 - 200
13C2 PFDoA	83		50 - 200
13C4 PFBA	93		50 - 200
13C5 PFPeA	95		50 - 200
13C3 PFBS	98		50 - 200
13C3 PFHxS	98		50 - 200

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

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

Lab Sample ID: 380-92886-G-1-A LMSD
Matrix: Water
Analysis Batch: 87848

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 87677

Isotope Dilution	LMSD LMSD		Limits
	%Recovery	Qualifier	
13C8 PFOS	94		50 - 200
13C2-4:2-FTS	135		50 - 200
13C2-6:2-FTS	119		50 - 200
13C2-8:2-FTS	96		50 - 200

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

Lab Sample ID: MBL 380-87602/22-A
Matrix: Water
Analysis Batch: 87682

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 87602

Analyte	MBL MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	<0.30		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		04/25/24 07:24	04/25/24 20:00	1

Surrogate	MBL MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	123		70 - 130	04/25/24 07:24	04/25/24 20:00	1
13C2 PFHxA	120		70 - 130	04/25/24 07:24	04/25/24 20:00	1
13C2 PFDA	120		70 - 130	04/25/24 07:24	04/25/24 20:00	1
13C3-GenX	115		70 - 130	04/25/24 07:24	04/25/24 20:00	1

Lab Sample ID: LCS 380-87602/24-A
Matrix: Water
Analysis Batch: 87682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87602

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

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

Lab Sample ID: LCS 380-87602/24-A
Matrix: Water
Analysis Batch: 87682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87602

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorooctanesulfonic acid (PFOS)	50.1	51.4		ng/L		103	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.1	53.3		ng/L		106	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.1	53.3		ng/L		106	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.1	54.1		ng/L		108	70 - 130
Perfluorohexanoic acid (PFHxA)	50.1	52.6		ng/L		105	70 - 130
Perfluorododecanoic acid (PFDoA)	50.1	52.3		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	50.1	54.7		ng/L		109	70 - 130
Perfluorodecanoic acid (PFDA)	50.1	52.7		ng/L		105	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.1	54.3		ng/L		108	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.1	48.9		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.1	54.8		ng/L		109	70 - 130
Perfluorononanoic acid (PFNA)	50.1	53.0		ng/L		106	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.1	54.9		ng/L		110	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.1	52.0		ng/L		104	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.1	50.5		ng/L		101	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.1	50.8		ng/L		101	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.1	55.5		ng/L		111	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	118		70 - 130
13C2 PFHxA	118		70 - 130
13C2 PFDA	117		70 - 130
13C3-GenX	115		70 - 130

Lab Sample ID: MRL 380-87602/23-A
Matrix: Water
Analysis Batch: 87682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87602

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.27	J	ng/L		114	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.26	J	ng/L		113	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.36	J	ng/L		118	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.27	J	ng/L		113	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.45	J	ng/L		122	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

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

Lab Sample ID: MRL 380-87602/23-A
Matrix: Water
Analysis Batch: 87682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 87602

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorohexanoic acid (PFHxA)	2.00	2.40	J	ng/L		120	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.21	J	ng/L		111	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.41	J	ng/L		120	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.33	J	ng/L		117	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.30	J	ng/L		115	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.95	J	ng/L		98	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.46	J	ng/L		123	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.36	J	ng/L		118	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.80	J	ng/L		140	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.37	J	ng/L		118	50 - 150
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.08	J	ng/L		104	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.10	J	ng/L		105	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.37	J	ng/L		118	50 - 150
Surrogate		MRL	MRL				Limits
<i>d5-NEtFOSAA</i>		116	Qualifier				70 - 130
<i>13C2 PFHxA</i>		112					70 - 130
<i>13C2 PFDA</i>		115					70 - 130
<i>13C3-GenX</i>		112					70 - 130

Lab Sample ID: 380-92705-B-1-A MS
Matrix: Water
Analysis Batch: 87682

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 87602

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		50.3	49.1		ng/L		98	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.3	50.7		ng/L		101	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.3	49.4		ng/L		98	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.3	51.9		ng/L		103	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.3	53.3		ng/L		106	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		50.3	51.8		ng/L		103	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		50.3	48.0		ng/L		95	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		50.3	53.6		ng/L		107	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		50.3	49.2		ng/L		98	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.3	51.9		ng/L		103	70 - 130

QC Sample Results

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

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

Lab Sample ID: 380-92705-B-1-A MS
Matrix: Water
Analysis Batch: 87682

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 87602

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.3	51.7		ng/L		103	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		50.3	51.0		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		50.3	51.0		ng/L		101	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		50.3	48.2		ng/L		96	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.3	46.9		ng/L		93	70 - 130
9-Chlorohexadecafluoro-3-oxanone-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.3	49.9		ng/L		99	70 - 130
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.3	47.8		ng/L		95	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.3	49.7		ng/L		99	70 - 130

Surrogate	MS %Recovery	MS Qualifier	Limits
d5-NEtFOSAA	110		70 - 130
13C2 PFHxA	110		70 - 130
13C2 PFDA	103		70 - 130
13C3-GenX	102		70 - 130

Lab Sample ID: 380-92705-C-1-A MSD
Matrix: Water
Analysis Batch: 87682

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 87602

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.3	49.1		ng/L		98	70 - 130	0	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		50.3	49.5		ng/L		98	70 - 130	2	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.3	50.8		ng/L		101	70 - 130	3	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.3	51.9		ng/L		103	70 - 130	0	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.3	53.9		ng/L		107	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.3	52.0		ng/L		103	70 - 130	0	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.3	49.0		ng/L		97	70 - 130	2	30
Perfluorooctanoic acid (PFOA)	<2.0		50.3	54.4		ng/L		108	70 - 130	1	30
Perfluorodecanoic acid (PFDA)	<2.0		50.3	50.8		ng/L		101	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.3	51.2		ng/L		102	70 - 130	1	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		50.3	49.7		ng/L		99	70 - 130	4	30
Perfluoroheptanoic acid (PFHpA)	<2.0		50.3	52.9		ng/L		105	70 - 130	4	30
Perfluorononanoic acid (PFNA)	<2.0		50.3	51.4		ng/L		102	70 - 130	1	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.3	50.3		ng/L		100	70 - 130	4	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.3	48.7		ng/L		97	70 - 130	4	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-92750-1
 SDG: 525.2, 533, 537.1

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

Lab Sample ID: 380-92705-C-1-A MSD

Matrix: Water

Analysis Batch: 87682

Client Sample ID: Matrix Spike Duplicate

Prep Type: Total/NA

Prep Batch: 87602

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.3	48.7		ng/L		97	70 - 130	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.3	45.8		ng/L		91	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.3	50.3		ng/L		100	70 - 130	1	30
Surrogate	MSD %Recovery	MSD Qualifier	Limits								
d5-NEtFOSAA	108		70 - 130								
13C2 PFHxA	114		70 - 130								
13C2 PFDA	105		70 - 130								
13C3-GenX	108		70 - 130								

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QC Association Summary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

GC/MS Semi VOA

Prep Batch: 87807

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-92750-1	MOANALUA WELLS	Total/NA	Drinking Water	525.2	
380-92750-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	
380-92750-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	525.2	
380-92750-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	525.2	
MB 380-87807/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-87807/23-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-87807/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-87807/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-92521-Q-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-92521-Q-2-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 87975

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-92750-1	MOANALUA WELLS	Total/NA	Drinking Water	525.2	87807
380-92750-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	87807
380-92750-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	525.2	87807
380-92750-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	525.2	87807
MB 380-87807/21-A	Method Blank	Total/NA	Water	525.2	87807
LCS 380-87807/23-A	Lab Control Sample	Total/NA	Water	525.2	87807
LCSD 380-87807/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	87807
MRL 380-87807/22-A	Lab Control Sample	Total/NA	Water	525.2	87807
380-92521-Q-1-A MS	Matrix Spike	Total/NA	Water	525.2	87807
380-92521-Q-2-A DU	Duplicate	Total/NA	Water	525.2	87807

LCMS

Prep Batch: 87602

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-92750-1	MOANALUA WELLS	Total/NA	Drinking Water	537.1 DW	
380-92750-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	537.1 DW	
380-92750-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	537.1 DW	
380-92750-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	537.1 DW	
380-92750-5	FB MOANALUA WELLS	Total/NA	Water	537.1 DW	
380-92750-6	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1 DW	
380-92750-7	FB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	537.1 DW	
380-92750-8	FB HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	537.1 DW	
MBL 380-87602/22-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-87602/24-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-87602/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-92705-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-92705-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Prep Batch: 87677

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-92750-1	MOANALUA WELLS	Total/NA	Drinking Water	533	
380-92750-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	533	
380-92750-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	533	
380-92750-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	533	
380-92750-5	FB MOANALUA WELLS	Total/NA	Water	533	
380-92750-6	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	533	
380-92750-7	FB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	533	

QC Association Summary

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

Job ID: 380-92750-1
 SDG: 525.2, 533, 537.1

LCMS (Continued)

Prep Batch: 87677 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-92750-8	FB HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	533	
MBL 380-87677/20-A	Method Blank	Total/NA	Water	533	
LCS 380-87677/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-87677/21-A	Lab Control Sample	Total/NA	Water	533	
380-92886-E-1-A LMS	Matrix Spike	Total/NA	Water	533	
380-92886-G-1-A LMSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 87682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-92750-1	MOANALUA WELLS	Total/NA	Drinking Water	537.1	87602
380-92750-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	537.1	87602
380-92750-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	537.1	87602
380-92750-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	537.1	87602
380-92750-5	FB MOANALUA WELLS	Total/NA	Water	537.1	87602
380-92750-6	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	537.1	87602
380-92750-7	FB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	537.1	87602
380-92750-8	FB HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	537.1	87602
MBL 380-87602/22-A	Method Blank	Total/NA	Water	537.1	87602
LCS 380-87602/24-A	Lab Control Sample	Total/NA	Water	537.1	87602
MRL 380-87602/23-A	Lab Control Sample	Total/NA	Water	537.1	87602
380-92705-B-1-A MS	Matrix Spike	Total/NA	Water	537.1	87602
380-92705-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	87602

Analysis Batch: 87848

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-92750-1	MOANALUA WELLS	Total/NA	Drinking Water	533	87677
380-92750-2	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	533	87677
380-92750-3	AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Drinking Water	533	87677
380-92750-4	HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Drinking Water	533	87677
380-92750-5	FB MOANALUA WELLS	Total/NA	Water	533	87677
380-92750-6	FB AIEA GULCH WELLS PUMP 2	Total/NA	Water	533	87677
380-92750-7	FB AIEA WELLS PUMPS 1&2 (260) P2	Total/NA	Water	533	87677
380-92750-8	FB HALAWA WELLS UNITS 1 & 2 P1	Total/NA	Water	533	87677
MBL 380-87677/20-A	Method Blank	Total/NA	Water	533	87677
LCS 380-87677/22-A	Lab Control Sample	Total/NA	Water	533	87677
MRL 380-87677/21-A	Lab Control Sample	Total/NA	Water	533	87677
380-92886-E-1-A LMS	Matrix Spike	Total/NA	Water	533	87677
380-92886-G-1-A LMSD	Matrix Spike Duplicate	Total/NA	Water	533	87677

Lab Chronicle

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

Job ID: 380-92750-1
 SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-92750-1

Date Collected: 04/22/24 09:44

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			87807	KRD3	EA POM	04/26/24 12:00
Total/NA	Analysis	525.2		1	87975	Q8LA	EA POM	04/27/24 13:57
Total/NA	Prep	533			87677	N8NE	EA POM	04/25/24 15:45
Total/NA	Analysis	533		1	87848	SZ9R	EA POM	04/26/24 12:56
Total/NA	Prep	537.1 DW			87602	A5GB	EA POM	04/25/24 07:24
Total/NA	Analysis	537.1		1	87682	Y5FM	EA POM	04/25/24 21:47

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-92750-2

Date Collected: 04/22/24 10:35

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			87807	KRD3	EA POM	04/26/24 12:00
Total/NA	Analysis	525.2		1	87975	Q8LA	EA POM	04/27/24 14:17
Total/NA	Prep	533			87677	N8NE	EA POM	04/25/24 15:45
Total/NA	Analysis	533		1	87848	SZ9R	EA POM	04/26/24 13:06
Total/NA	Prep	537.1 DW			87602	A5GB	EA POM	04/25/24 07:24
Total/NA	Analysis	537.1		1	87682	Y5FM	EA POM	04/25/24 21:58

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-3

Date Collected: 04/22/24 11:13

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			87807	KRD3	EA POM	04/26/24 12:00
Total/NA	Analysis	525.2		1	87975	Q8LA	EA POM	04/27/24 14:37
Total/NA	Prep	533			87677	N8NE	EA POM	04/25/24 15:45
Total/NA	Analysis	533		1	87848	SZ9R	EA POM	04/26/24 13:15
Total/NA	Prep	537.1 DW			87602	A5GB	EA POM	04/25/24 07:24
Total/NA	Analysis	537.1		1	87682	Y5FM	EA POM	04/25/24 22:09

Client Sample ID: HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-4

Date Collected: 04/22/24 10:09

Matrix: Drinking Water

Date Received: 04/24/24 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Batch Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			87807	KRD3	EA POM	04/26/24 12:00
Total/NA	Analysis	525.2		1	87975	Q8LA	EA POM	04/27/24 14:57
Total/NA	Prep	533			87677	N8NE	EA POM	04/25/24 15:45
Total/NA	Analysis	533		1	87848	SZ9R	EA POM	04/26/24 13:25
Total/NA	Prep	537.1 DW			87602	A5GB	EA POM	04/25/24 07:24
Total/NA	Analysis	537.1		1	87682	Y5FM	EA POM	04/25/24 22:19

Lab Chronicle

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-92750-5

Date Collected: 04/22/24 09:44

Matrix: Water

Date Received: 04/24/24 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			87677	N8NE	EA POM	04/25/24 15:45
Total/NA	Analysis	533		1	87848	SZ9R	EA POM	04/26/24 13:34
Total/NA	Prep	537.1 DW			87602	A5GB	EA POM	04/25/24 07:24
Total/NA	Analysis	537.1		1	87682	Y5FM	EA POM	04/25/24 22:30

Client Sample ID: FB AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-92750-6

Date Collected: 04/22/24 10:35

Matrix: Water

Date Received: 04/24/24 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			87677	N8NE	EA POM	04/25/24 15:45
Total/NA	Analysis	533		1	87848	SZ9R	EA POM	04/26/24 13:44
Total/NA	Prep	537.1 DW			87602	A5GB	EA POM	04/25/24 07:24
Total/NA	Analysis	537.1		1	87682	Y5FM	EA POM	04/25/24 22:51

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) P2

Lab Sample ID: 380-92750-7

Date Collected: 04/22/24 11:13

Matrix: Water

Date Received: 04/24/24 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			87677	N8NE	EA POM	04/25/24 15:45
Total/NA	Analysis	533		1	87848	SZ9R	EA POM	04/26/24 13:53
Total/NA	Prep	537.1 DW			87602	A5GB	EA POM	04/25/24 07:24
Total/NA	Analysis	537.1		1	87682	Y5FM	EA POM	04/25/24 23:02

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 P1

Lab Sample ID: 380-92750-8

Date Collected: 04/22/24 10:09

Matrix: Water

Date Received: 04/24/24 10:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			87677	N8NE	EA POM	04/25/24 15:45
Total/NA	Analysis	533		1	87848	SZ9R	EA POM	04/26/24 14:03
Total/NA	Prep	537.1 DW			87602	A5GB	EA POM	04/25/24 07:24
Total/NA	Analysis	537.1		1	87682	Y5FM	EA POM	04/25/24 23:13

Laboratory References:

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

Accreditation/Certification Summary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Laboratory: Eurofins Eaton Analytical Pomona

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	02-12-24 *

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	1-Methylnaphthalene
525.2	525.2	Drinking Water	2,4'-DDD
525.2	525.2	Drinking Water	2,4'-DDE
525.2	525.2	Drinking Water	2,4'-DDT
525.2	525.2	Drinking Water	2,4-Dinitrotoluene
525.2	525.2	Drinking Water	2,6-Dinitrotoluene
525.2	525.2	Drinking Water	2-Methylnaphthalene
525.2	525.2	Drinking Water	4,4'-DDD
525.2	525.2	Drinking Water	4,4'-DDE
525.2	525.2	Drinking Water	4,4' DDT
525.2	525.2	Drinking Water	Acenaphthene
525.2	525.2	Drinking Water	Acenaphthylene
525.2	525.2	Drinking Water	Acetochlor
525.2	525.2	Drinking Water	alpha-BHC
525.2	525.2	Drinking Water	alpha-Chlordane
525.2	525.2	Drinking Water	Anthracene
525.2	525.2	Drinking Water	Benz(a)anthracene
525.2	525.2	Drinking Water	Benzo[b]fluoranthene
525.2	525.2	Drinking Water	Benzo[g,h,i]perylene
525.2	525.2	Drinking Water	Benzo[k]fluoranthene
525.2	525.2	Drinking Water	beta-BHC
525.2	525.2	Drinking Water	Bromacil
525.2	525.2	Drinking Water	Butylbenzylphthalate
525.2	525.2	Drinking Water	Chlorobenzilate
525.2	525.2	Drinking Water	Chloroneb
525.2	525.2	Drinking Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Drinking Water	Chlorpyrifos
525.2	525.2	Drinking Water	Chrysene
525.2	525.2	Drinking Water	delta-BHC
525.2	525.2	Drinking Water	Dibenz(a,h)anthracene
525.2	525.2	Drinking Water	Diclorvos (DDVP)
525.2	525.2	Drinking Water	Diethylphthalate
525.2	525.2	Drinking Water	Dimethylphthalate
525.2	525.2	Drinking Water	Di-n-butyl phthalate
525.2	525.2	Drinking Water	Di n octyl phthalate
525.2	525.2	Drinking Water	Endosulfan I (Alpha)
525.2	525.2	Drinking Water	Endosulfan II (Beta)
525.2	525.2	Drinking Water	Endosulfan sulfate
525.2	525.2	Drinking Water	Endrin aldehyde
525.2	525.2	Drinking Water	EPTC
525.2	525.2	Drinking Water	Fluoranthene
525.2	525.2	Drinking Water	Fluorene
525.2	525.2	Drinking Water	gamma-Chlordane
525.2	525.2	Drinking Water	Indeno[1,2,3-cd]pyrene
525.2	525.2	Drinking Water	Isophorone

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

Accreditation/Certification Summary

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

Job ID: 380-92750-1
 SDG: 525.2, 533, 537.1

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Molinate
525.2	525.2	Drinking Water	Naphthalene
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Phenanthrene
525.2	525.2	Drinking Water	Pyrene
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	Terbutylazine
525.2	525.2	Drinking Water	Thiobencarb
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor
525.2	525.2	Drinking Water	Trifluralin
533	533	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
533	533	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
533	533	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)
533	533	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
533	533	Drinking Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
533	533	Drinking Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
533	533	Drinking Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
533	533	Drinking Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
533	533	Drinking Water	Perfluorobutanoic acid (PFBA)
533	533	Drinking Water	Perfluoroheptanesulfonic acid (PFHpS)
533	533	Drinking Water	Perfluoropentanesulfonic acid (PFPeS)
533	533	Drinking Water	Perfluoropentanoic acid (PFPeA)
533	533	Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
533	533	Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
533	533	Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
533	533	Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
533	533	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
533	533	Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)

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

Accreditation/Certification Summary

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

Job ID: 380-92750-1
 SDG: 525.2, 533, 537.1

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

Authority	Program	Identification Number	Expiration Date
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The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

Analysis Method	Prep Method	Matrix	Analyte
533	533	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
533	533	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
533	533	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
533	533	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
533	533	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
533	533	Water	Perfluorobutanoic acid (PFBA)
533	533	Water	Perfluoroheptanesulfonic acid (PFHpS)
533	533	Water	Perfluoropentanesulfonic acid (PFPeS)
533	533	Water	Perfluoropentanoic acid (PFPeA)
537.1	537.1 DW	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
537.1	537.1 DW	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)
537.1	537.1 DW	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
537.1	537.1 DW	Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
537.1	537.1 DW	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)
537.1	537.1 DW	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)

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

Method Summary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

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

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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



Sample Summary

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

Job ID: 380-92750-1
SDG: 525.2, 533, 537.1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-92750-1	MOANALUA WELLS	Drinking Water	04/22/24 09:44	04/24/24 10:40
380-92750-2	AIEA GULCH WELLS PUMP 2	Drinking Water	04/22/24 10:35	04/24/24 10:40
380-92750-3	AIEA WELLS PUMPS 1&2 (260) P2	Drinking Water	04/22/24 11:13	04/24/24 10:40
380-92750-4	HALAWA WELLS UNITS 1 & 2 P1	Drinking Water	04/22/24 10:09	04/24/24 10:40
380-92750-5	FB MOANALUA WELLS	Water	04/22/24 09:44	04/24/24 10:40
380-92750-6	FB AIEA GULCH WELLS PUMP 2	Water	04/22/24 10:35	04/24/24 10:40
380-92750-7	FB AIEA WELLS PUMPS 1&2 (260) P2	Water	04/22/24 11:13	04/24/24 10:40
380-92750-8	FB HALAWA WELLS UNITS 1 & 2 P1	Water	04/22/24 10:09	04/24/24 10:40

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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

eurofins

Client Information Client Contact: Dr. Ron Fenstermacher Company: City & County of Honolulu		Lab PM: Arada, Rachelle E Mail: Rachelle.Arada@et.eurofins.com		Carner Tracking No(s): 380-27941-2757 2 State of Origin:	
Address: 630 South Beretania Street, Chemistry Lab City: Honolulu State Zip: HI, 96843 Phone: 808-748-5091 (tel) Email: rfenstermacher@hbws.org		Due Date Requested: TAT Requested (days): Compliance Project: No PO #: C20525101 exp 05312023 WO #:		Job #: 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:	
Project Name: RED-HILL/HBWS sites Event Desc RUSH Weekly Red Hill Site:		Project #: 38001111 SOW#:		Analysis Requested: SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs 8015B_GRO_LL - (MOD) GRO 8015B_ORO_LL_CS - HNL Ranges C10-C24/C24-C36/C8-C18 525 2_PREC - (MOD) 525plus PLUS TICs 537 1_DW_PREC - 537 1 Full List 533 - All Analytes	
Sample Identification MOANALUA WELLS AIEA GULCH WELLS PUMP2 AIEA WELLS PUMPS 1&2 (260) P2 HALAWA WELLS UNITS 1&2 P1 FB MOANALUA WELLS FB AIEA GULCH WELLS PUMP2 FB AIEA WELLS PUMPS 1&2 (260) FB HALAWA WELLS UNITS 1&2		Sample Date: 22-Apr-2024 Sample Time: 0944 Sample Type (C=Comp, G=grab): G Matrix (W=water, S=solid, Q=soil, T=tissue, A=air): Water		Field Filtered Sample (Yes or No): Perform MS/MSD (Yes or No): SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs 8015B_GRO_LL - (MOD) GRO 8015B_ORO_LL_CS - HNL Ranges C10-C24/C24-C36/C8-C18 525 2_PREC - (MOD) 525plus PLUS TICs 537 1_DW_PREC - 537 1 Full List 533 - All Analytes	
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested I II III IV Other (specify):		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months		Special Instructions/Note: chlorinated chlorinated 380-92750 COC	
Empty Kit Relinquished by: [Redacted] Relinquished Date: 15/04/2024 Relinquished by: G. PARTNER Relinquished by:		Date: 15/04/2024 Date/Time: 10:40 Date/Time:		Method of Shipment: 1 7760 7702 2010 2 7760 7702 2032 Company: EAP	
Custody Seals Intact Yes No		Custody Seal No		Cooler Temperature(s) °C and Other Remarks: 1 1.9°-0.1°-1.5° 2 3.3°-0.1°-3.2° GEL-FROZEN	



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-92750-1
SDG Number: 525.2, 533, 537.1

Login Number: 92750
List Number: 1
Creator: Elyas, Matthew

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and 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	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	

