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ANALYTICAL REPORT

PREPARED FOR

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City & County of Honolulu
630 South Beretania Street
Public Service Bldg. Room 310
Honolulu, Hawaii 96843

Generated 6/20/2024 9:27:56 AM

JOB DESCRIPTION

RED-HILL
525.2, 533, 537.1

JOB NUMBER

380-99971-1

Eurofins Eaton Analytical Pomona
941 Corporate Center Drive
Pomona CA 91768-2642

See page two for job notes and contact information.

Eurofins Eaton Analytical Pomona

Job Notes

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

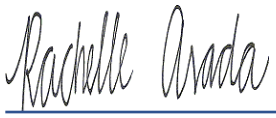

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Table of Contents

Definitions/Glossary

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
^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
4	MS, MSD: The analyte present in the original sample is greater than 4 times the matrix spike concentration; therefore, control limits are not applicable.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job Narrative
380-99971-1

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 6/14/2024 9:39 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 4 coolers at receipt time were 2.9°C, 3.2°C, 3.4°C and 3.5°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
Method 537.1: The following QC issues in 380-95157 OR 380-95190 were observed: Surrogate d5-NEtFOSAA, 13C2 PFHxA, 13C2 PFDA and 13C3-GenX recoveries for LCS were above QC acceptance criteria (high bias) and all target compound recoveries were below QC acceptance criteria for FB sample FB MOANALUA WELLS (380-99971-5). Results not acceptable per method. Insufficient volume for re-extraction / re-analysis. Data excluded, there are no detections in associated native sample therefore analysis of Field Blank is not necessary per method.

Method 537.1: The following QC issues in 380-95157 OR 380-95190 were observed: Surrogate d5-NEtFOSAA, 13C2 PFHxA, 13C2 PFDA and 13C3-GenX recoveries for LCS were above QC acceptance criteria (high bias) and all target compound recoveries were below QC acceptance criteria for FB sample FB AIEA GULCH WELLS PUMP2 (380-99971-6). Results not acceptable per method. Insufficient volume for re-extraction / re-analysis. Data excluded, there are no detections in associated native sample therefore analysis of Field Blank is not necessary per method.

Method 537.1: The following QC issues in 380-95157 OR 380-95190 were observed: Surrogate d5-NEtFOSAA, 13C2 PFHxA, 13C2 PFDA and 13C3-GenX recoveries for LCS were above QC acceptance criteria (high bias) and all target compound recoveries were below QC acceptance criteria for FB sample FB AIEA WELLS PUMPS 1&2 (260) (380-99971-7). Results not acceptable per method. Insufficient volume for re-extraction / re-analysis. Data excluded, there are no detections in associated native sample therefore analysis of Field Blank is not necessary per method.

Method 537.1: The following QC issues in 380-95157 OR 380-95190 were observed: Surrogate d5-NEtFOSAA, 13C2 PFHxA, 13C2 PFDA and 13C3-GenX recoveries for LCS were above QC acceptance criteria (high bias) and all target compound recoveries were below QC acceptance criteria for FB sample FB HALAWA WELLS UNITS 1 & 2 (380-99971-8). Results not acceptable per method. Insufficient volume for re-extraction / re-analysis. Any detection in associated native sample is not acceptable per method. There were detections in field sample therefore, both field sample and field blank data excluded due to this QC failure.

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: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS — Lab Sample ID: 380-99971-1

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.021		0.0098		ug/L	1		525.2	Total/NA

Client Sample ID: AIEA GULCH WELLS PUMP2 — Lab Sample ID: 380-99971-2

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) — Lab Sample ID: 380-99971-3

No Detections.

Client Sample ID: HALAWA WELLS UNITS 1 & 2 — Lab Sample ID: 380-99971-4

Analyte	Result	Qualifier	RL		Unit	Dil Fac	D	Method	Prep Type
Dieldrin	0.043		0.0097		ug/L	1		525.2	Total/NA
Heptachlor epoxide (isomer B)	0.017		0.0097		ug/L	1		525.2	Total/NA
Perfluorohexanesulfonic acid (PFHxS)	2.4		2.0		ng/L	1		533	Total/NA
Perfluorohexanoic acid (PFHxA)	2.2		2.0		ng/L	1		533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.4		2.0		ng/L	1		533	Total/NA
Perfluoropentanoic acid (PFPeA)	2.4		2.0		ng/L	1		533	Total/NA

Client Sample ID: FB MOANALUA WELLS — Lab Sample ID: 380-99971-5

No Detections.

Client Sample ID: FB AIEA GULCH WELLS PUMP2 — Lab Sample ID: 380-99971-6

No Detections.

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) — Lab Sample ID: 380-99971-7

No Detections.

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 — Lab Sample ID: 380-99971-8

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS
Date Collected: 06/12/24 10:10
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-1
Matrix: Water

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		06/17/24 12:30	06/18/24 16:43	1
2,4'-DDD	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
2,4'-DDE	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
2,4'-DDT	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
2,4-Dinitrotoluene	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
2,6-Dinitrotoluene	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
2-Methylnaphthalene	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
4,4'-DDD	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
4,4'-DDE	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
4,4'-DDT	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Acenaphthene	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Acenaphthylene	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Acetochlor	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Alachlor	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
alpha-BHC	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
alpha-Chlordane	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Anthracene	<0.020		0.020		ug/L		06/17/24 12:30	06/18/24 16:43	1
Atrazine	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Benz(a)anthracene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Benzo[a]pyrene	<0.020		0.020		ug/L		06/17/24 12:30	06/18/24 16:43	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		06/17/24 12:30	06/18/24 16:43	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		06/17/24 12:30	06/18/24 16:43	1
beta-BHC	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59		ug/L		06/17/24 12:30	06/18/24 16:43	1
Bromacil	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Butachlor	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Butylbenzylphthalate	<0.49		0.49		ug/L		06/17/24 12:30	06/18/24 16:43	1
Chlorobenzilate	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Chloroneb	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Chlorpyrifos	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Chrysene	<0.020		0.020		ug/L		06/17/24 12:30	06/18/24 16:43	1
delta-BHC	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Di(2-ethylhexyl)adipate	<0.59		0.59		ug/L		06/17/24 12:30	06/18/24 16:43	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Dieldrin	**0.021**		0.0098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Diethylphthalate	<0.49		0.49		ug/L		06/17/24 12:30	06/18/24 16:43	1
Dimethylphthalate	<0.49		0.49		ug/L		06/17/24 12:30	06/18/24 16:43	1
Di-n-butyl phthalate	<0.98		0.98		ug/L		06/17/24 12:30	06/18/24 16:43	1
Di-n-octyl phthalate	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Endosulfan I (Alpha)	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Endosulfan II (Beta)	<0.098	^3+	0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Endosulfan sulfate	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Endrin	<0.0098		0.0098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Endrin aldehyde	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
EPTC	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Fluoranthene	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS
Date Collected: 06/12/24 10:10
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-1
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
gamma-Chlordane	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Heptachlor	<0.0098		0.0098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Heptachlor epoxide (isomer B)	<0.0098		0.0098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Hexachlorobenzene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Isophorone	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Lindane	<0.0098		0.0098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Malathion	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Methoxychlor	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Metolachlor	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Molinate	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Naphthalene	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Parathion	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Pendimethalin (Penoxaline)	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Phenanthrene	<0.039		0.039		ug/L		06/17/24 12:30	06/18/24 16:43	1
Propachlor	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Pyrene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Simazine	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Terbacil	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Terbuthylazine	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Thiobencarb	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		06/17/24 12:30	06/18/24 16:43	1
trans-Nonachlor	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 16:43	1
Trifluralin	<0.098		0.098		ug/L		06/17/24 12:30	06/18/24 16:43	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*06/17/24 12:30*	*06/18/24 16:43*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*98*		*70 - 130*	*06/17/24 12:30*	*06/18/24 16:43*	*1*
Perylene-d12	*94*		*70 - 130*	*06/17/24 12:30*	*06/18/24 16:43*	*1*
Triphenylphosphate	*104*		*70 - 130*	*06/17/24 12:30*	*06/18/24 16:43*	*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-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS
Date Collected: 06/12/24 10:10
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-1
Matrix: Water

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		06/16/24 11:15	06/17/24 18:20	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:20	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*85*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C6 PFDA	*97*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C5 PFHxA	*91*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C4 PFHpA	*99*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C8 PFOA	*102*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C9 PFNA	*100*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C7 PFUnA	*90*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C2 PFDoA	*90*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C4 PFBA	*100*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C5 PFPeA	*108*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C3 PFBS	*106*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C3 PFHxS	*117*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C8 PFOS	*107*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C2-4:2-FTS	*131*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C2-6:2-FTS	*153*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*1*
13C2-8:2-FTS	*122*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:20*	*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		06/17/24 15:24	06/18/24 14:43	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1

Client Sample ID: MOANALUA WELLS

Date Collected: 06/12/24 10:10
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-1
Matrix: Water

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		06/17/24 15:24	06/18/24 14:43	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 14:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*117*		*70 - 130*	*06/17/24 15:24*	*06/18/24 14:43*	*1*
13C2 PFHxA	*123*		*70 - 130*	*06/17/24 15:24*	*06/18/24 14:43*	*1*
13C2 PFDA	*125*		*70 - 130*	*06/17/24 15:24*	*06/18/24 14:43*	*1*
13C3-GenX	*112*		*70 - 130*	*06/17/24 15:24*	*06/18/24 14:43*	*1*

Client Sample ID: AIEA GULCH WELLS PUMP2

Date Collected: 06/12/24 11:00
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-2
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
2,4'-DDD	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
2,4'-DDE	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
2,4'-DDT	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
2,4-Dinitrotoluene	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
2,6-Dinitrotoluene	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
2-Methylnaphthalene	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
4,4'-DDD	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
4,4'-DDE	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
4,4'-DDT	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Acenaphthene	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Acenaphthylene	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Acetochlor	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Alachlor	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
alpha-BHC	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
alpha-Chlordane	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Anthracene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:03	1
Atrazine	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Benz(a)anthracene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Benzo[a]pyrene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:03	1
Benzo[b]fluoranthene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:03	1
Benzo[g,h,i]perylene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA GULCH WELLS PUMP2
Date Collected: 06/12/24 11:00
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-2
Matrix: Water

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		06/17/24 12:30	06/18/24 17:03	1
beta-BHC	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58		ug/L		06/17/24 12:30	06/18/24 17:03	1
Bromacil	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Butachlor	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Butylbenzylphthalate	<0.48		0.48		ug/L		06/17/24 12:30	06/18/24 17:03	1
Chlorobenzilate	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Chloroneb	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Chlorothalonil (Draconil, Bravo)	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Chlorpyrifos	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Chrysene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:03	1
delta-BHC	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Di(2-ethylhexyl)adipate	<0.58		0.58		ug/L		06/17/24 12:30	06/18/24 17:03	1
Dibenz(a,h)anthracene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Diclorvos (DDVP)	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Dieldrin	<0.0096		0.0096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Diethylphthalate	<0.48		0.48		ug/L		06/17/24 12:30	06/18/24 17:03	1
Dimethylphthalate	<0.48		0.48		ug/L		06/17/24 12:30	06/18/24 17:03	1
Di-n-butyl phthalate	<0.96		0.96		ug/L		06/17/24 12:30	06/18/24 17:03	1
Di-n-octyl phthalate	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Endosulfan I (Alpha)	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Endosulfan II (Beta)	<0.096	^3+	0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Endosulfan sulfate	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Endrin	<0.0096		0.0096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Endrin aldehyde	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
EPTC	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Fluoranthene	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Fluorene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
gamma-Chlordane	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Heptachlor	<0.0096		0.0096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Heptachlor epoxide (isomer B)	<0.0096		0.0096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Hexachlorobenzene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Hexachlorocyclopentadiene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Isophorone	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Lindane	<0.0096		0.0096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Malathion	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Methoxychlor	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Metolachlor	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Molinate	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Naphthalene	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Parathion	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Pendimethalin (Penoxaline)	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Phenanthrene	<0.039		0.039		ug/L		06/17/24 12:30	06/18/24 17:03	1
Propachlor	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Pyrene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Simazine	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Terbacil	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Terbuthylazine	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA GULCH WELLS PUMP2
Date Collected: 06/12/24 11:00
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-2
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Thiobencarb	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1
Total Permethrin (mixed isomers)	<0.19		0.19		ug/L		06/17/24 12:30	06/18/24 17:03	1
trans-Nonachlor	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:03	1
Trifluralin	<0.096		0.096		ug/L		06/17/24 12:30	06/18/24 17:03	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*06/17/24 12:30*	*06/18/24 17:03*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*98*		*70 - 130*	*06/17/24 12:30*	*06/18/24 17:03*	*1*
Perylene-d12	*92*		*70 - 130*	*06/17/24 12:30*	*06/18/24 17:03*	*1*
Triphenylphosphate	*95*		*70 - 130*	*06/17/24 12:30*	*06/18/24 17:03*	*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-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:29	1

Client Sample ID: AIEA GULCH WELLS PUMP2
Date Collected: 06/12/24 11:00
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-2
Matrix: Water

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*81*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C6 PFDA	*87*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C5 PFHxA	*87*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C4 PFHpA	*89*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C8 PFOA	*90*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C9 PFNA	*84*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C7 PFUnA	*76*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C2 PFDoA	*69*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C4 PFBA	*89*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C5 PFPeA	*98*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C3 PFBS	*107*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C3 PFHxS	*118*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C8 PFOS	*106*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C2-4:2-FTS	*145*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C2-6:2-FTS	*141*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*1*
13C2-8:2-FTS	*119*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:29*	*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		06/17/24 15:24	06/18/24 14:53	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		06/17/24 15:24	06/18/24 14:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*122*		*70 - 130*	*06/17/24 15:24*	*06/18/24 14:53*	*1*
13C2 PFHxA	*127*		*70 - 130*	*06/17/24 15:24*	*06/18/24 14:53*	*1*
13C2 PFDA	*125*		*70 - 130*	*06/17/24 15:24*	*06/18/24 14:53*	*1*
13C3-GenX	*119*		*70 - 130*	*06/17/24 15:24*	*06/18/24 14:53*	*1*

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)
Date Collected: 06/12/24 11:30
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-3
Matrix: Water

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		06/17/24 12:30	06/18/24 17:23	1
2,4'-DDD	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
2,4'-DDE	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
2,4'-DDT	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
2,4-Dinitrotoluene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
2,6-Dinitrotoluene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
2-Methylnaphthalene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
4,4'-DDD	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
4,4'-DDE	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
4,4'-DDT	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Acenaphthene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Acenaphthylene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Acetochlor	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Alachlor	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
alpha-BHC	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
alpha-Chlordane	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Anthracene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:23	1
Atrazine	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Benz(a)anthracene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Benzo[a]pyrene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:23	1
Benzo[b]fluoranthene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:23	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Benzo[k]fluoranthene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:23	1
beta-BHC	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58		ug/L		06/17/24 12:30	06/18/24 17:23	1
Bromacil	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Butachlor	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Butylbenzylphthalate	<0.49		0.49		ug/L		06/17/24 12:30	06/18/24 17:23	1
Chlorobenzilate	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Chloroneb	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Chlorpyrifos	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Chrysene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:23	1
delta-BHC	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Di(2-ethylhexyl)adipate	<0.58		0.58		ug/L		06/17/24 12:30	06/18/24 17:23	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Dieldrin	<0.0097		0.0097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Diethylphthalate	<0.49		0.49		ug/L		06/17/24 12:30	06/18/24 17:23	1
Dimethylphthalate	<0.49		0.49		ug/L		06/17/24 12:30	06/18/24 17:23	1
Di-n-butyl phthalate	<0.97		0.97		ug/L		06/17/24 12:30	06/18/24 17:23	1
Di-n-octyl phthalate	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Endosulfan I (Alpha)	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Endosulfan II (Beta)	<0.097	^3+	0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Endosulfan sulfate	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Endrin	<0.0097		0.0097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Endrin aldehyde	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
EPTC	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Fluoranthene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)
Date Collected: 06/12/24 11:30
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-3
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
gamma-Chlordane	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Heptachlor	<0.0097		0.0097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Heptachlor epoxide (isomer B)	<0.0097		0.0097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Hexachlorobenzene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Isophorone	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Lindane	<0.0097		0.0097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Malathion	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Methoxychlor	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Metolachlor	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Molinate	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Naphthalene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Parathion	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Pendimethalin (Penoxaline)	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Phenanthrene	<0.039		0.039		ug/L		06/17/24 12:30	06/18/24 17:23	1
Propachlor	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Pyrene	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Simazine	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Terbacil	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Terbuthylazine	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Thiobencarb	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1
Total Permethrin (mixed isomers)	<0.19		0.19		ug/L		06/17/24 12:30	06/18/24 17:23	1
trans-Nonachlor	<0.049		0.049		ug/L		06/17/24 12:30	06/18/24 17:23	1
Trifluralin	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:23	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*06/17/24 12:30*	*06/18/24 17:23*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*98*		*70 - 130*	*06/17/24 12:30*	*06/18/24 17:23*	*1*
Perylene-d12	*95*		*70 - 130*	*06/17/24 12:30*	*06/18/24 17:23*	*1*
Triphenylphosphate	*101*		*70 - 130*	*06/17/24 12:30*	*06/18/24 17:23*	*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-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)
Date Collected: 06/12/24 11:30
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-3
Matrix: Water

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		06/16/24 11:15	06/17/24 18:39	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:39	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*79*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C6 PFDA	*91*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C5 PFHxA	*88*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C4 PFHpA	*91*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C8 PFOA	*92*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C9 PFNA	*90*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C7 PFUnA	*86*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C2 PFDoA	*84*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C4 PFBA	*94*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C5 PFPeA	*100*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C3 PFBS	*107*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C3 PFHxS	*117*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C8 PFOS	*103*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C2-4:2-FTS	*156*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C2-6:2-FTS	*145*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*1*
13C2-8:2-FTS	*119*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:39*	*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		06/17/24 15:24	06/18/24 15:02	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

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

Date Collected: 06/12/24 11:30
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-3
Matrix: Water

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		06/17/24 15:24	06/18/24 15:02	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		06/17/24 15:24	06/18/24 15:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*123*		*70 - 130*	*06/17/24 15:24*	*06/18/24 15:02*	*1*
13C2 PFHxA	*126*		*70 - 130*	*06/17/24 15:24*	*06/18/24 15:02*	*1*
13C2 PFDA	*125*		*70 - 130*	*06/17/24 15:24*	*06/18/24 15:02*	*1*
13C3-GenX	*117*		*70 - 130*	*06/17/24 15:24*	*06/18/24 15:02*	*1*

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Date Collected: 06/12/24 10:40
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-4
Matrix: Water

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		06/17/24 12:30	06/18/24 17:43	1
2,4'-DDD	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
2,4'-DDE	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
2,4'-DDT	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
2,4-Dinitrotoluene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
2,6-Dinitrotoluene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
2-Methylnaphthalene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
4,4'-DDD	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
4,4'-DDE	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
4,4'-DDT	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Acenaphthene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Acenaphthylene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Acetochlor	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Alachlor	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
alpha-BHC	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
alpha-Chlordane	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Anthracene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:43	1
Atrazine	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Benz(a)anthracene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Benzo[a]pyrene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:43	1
Benzo[b]fluoranthene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:43	1
Benzo[g,h,i]perylene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: HALAWA WELLS UNITS 1 & 2
Date Collected: 06/12/24 10:40
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-4
Matrix: Water

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		06/17/24 12:30	06/18/24 17:43	1
beta-BHC	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58		ug/L		06/17/24 12:30	06/18/24 17:43	1
Bromacil	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Butachlor	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Butylbenzylphthalate	<0.48		0.48		ug/L		06/17/24 12:30	06/18/24 17:43	1
Chlorobenzilate	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Chloroneb	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Chlorpyrifos	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Chrysene	<0.019		0.019		ug/L		06/17/24 12:30	06/18/24 17:43	1
delta-BHC	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Di(2-ethylhexyl)adipate	<0.58		0.58		ug/L		06/17/24 12:30	06/18/24 17:43	1
Dibenz(a,h)anthracene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Diclorvos (DDVP)	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Dieldrin	**0.043**		0.0097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Diethylphthalate	<0.48		0.48		ug/L		06/17/24 12:30	06/18/24 17:43	1
Dimethylphthalate	<0.48		0.48		ug/L		06/17/24 12:30	06/18/24 17:43	1
Di-n-butyl phthalate	<0.97		0.97		ug/L		06/17/24 12:30	06/18/24 17:43	1
Di-n-octyl phthalate	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Endosulfan I (Alpha)	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Endosulfan II (Beta)	<0.097	^3+	0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Endosulfan sulfate	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Endrin	<0.0097		0.0097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Endrin aldehyde	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
EPTC	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Fluoranthene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Fluorene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
gamma-Chlordane	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Heptachlor	<0.0097		0.0097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Heptachlor epoxide (isomer B)	**0.017**		0.0097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Hexachlorobenzene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Hexachlorocyclopentadiene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Indeno[1,2,3-cd]pyrene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Isophorone	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Lindane	<0.0097		0.0097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Malathion	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Methoxychlor	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Metolachlor	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Molinate	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Naphthalene	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Parathion	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Pendimethalin (Penoxaline)	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Phenanthrene	<0.039		0.039		ug/L		06/17/24 12:30	06/18/24 17:43	1
Propachlor	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Pyrene	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Simazine	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Terbacil	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Terbuthylazine	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Date Collected: 06/12/24 10:40
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-4

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Thiobencarb	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1
Total Permethrin (mixed isomers)	<0.19		0.19		ug/L		06/17/24 12:30	06/18/24 17:43	1
trans-Nonachlor	<0.048		0.048		ug/L		06/17/24 12:30	06/18/24 17:43	1
Trifluralin	<0.097		0.097		ug/L		06/17/24 12:30	06/18/24 17:43	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*06/17/24 12:30*	*06/18/24 17:43*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*97*		*70 - 130*	*06/17/24 12:30*	*06/18/24 17:43*	*1*
Perylene-d12	*97*		*70 - 130*	*06/17/24 12:30*	*06/18/24 17:43*	*1*
Triphenylphosphate	*102*		*70 - 130*	*06/17/24 12:30*	*06/18/24 17:43*	*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-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluorohexanesulfonic acid (PFHxS)	**2.4**		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluorohexanoic acid (PFHxA)	**2.2**		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluorooctanesulfonic acid (PFOS)	**2.4**		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluoropentanoic acid (PFPeA)	**2.4**		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 18:58	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-99971-4
Matrix: Water
Date Collected: 06/12/24 10:40
Date Received: 06/14/24 09:39

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		06/16/24 11:15	06/17/24 18:58	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*79*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C6 PFDA	*85*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C5 PFHxA	*83*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C4 PFHpA	*85*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C8 PFOA	*81*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C9 PFNA	*80*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C7 PFUnA	*85*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C2 PFDoA	*83*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C4 PFBA	*95*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C5 PFPeA	*104*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C3 PFBS	*107*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C3 PFHxS	*118*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C8 PFOS	*106*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C2-4:2-FTS	*156*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C2-6:2-FTS	*149*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*
13C2-8:2-FTS	*121*		*50 - 200*	*06/16/24 11:15*	*06/17/24 18:58*	*1*

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-99971-5
Matrix: Water
Date Collected: 06/12/24 10:10
Date Received: 06/14/24 09:39

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		06/16/24 11:15	06/17/24 19:08	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-99971-5
Date Collected: 06/12/24 10:10
Matrix: Water
Date Received: 06/14/24 09:39

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:08	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*91*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C6 PFDA	*104*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C5 PFHxA	*100*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C4 PFHpA	*108*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C8 PFOA	*110*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C9 PFNA	*107*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C7 PFUnA	*97*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C2 PFDoA	*94*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C4 PFBA	*103*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C5 PFPeA	*112*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C3 PFBS	*106*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C3 PFHxS	*116*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C8 PFOS	*105*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C2-4:2-FTS	*141*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C2-6:2-FTS	*139*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*
13C2-8:2-FTS	*112*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:08*	*1*

Client Sample ID: FB AIEA GULCH WELLS PUMP2

Lab Sample ID: 380-99971-6
Date Collected: 06/12/24 11:00
Matrix: Water
Date Received: 06/14/24 09:39

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		06/16/24 11:15	06/17/24 19:17	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1

Client Sample ID: FB AIEA GULCH WELLS PUMP2

Lab Sample ID: 380-99971-6

Date Collected: 06/12/24 11:00
Matrix: Water
Date Received: 06/14/24 09:39

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:17	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C6 PFDA	*103*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C5 PFHxA	*103*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C4 PFHpA	*111*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C8 PFOA	*110*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C9 PFNA	*102*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C7 PFUnA	*94*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C2 PFDoA	*95*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C4 PFBA	*106*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C5 PFPeA	*112*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C3 PFBS	*107*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C3 PFHxS	*122*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C8 PFOS	*108*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C2-4:2-FTS	*138*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C2-6:2-FTS	*141*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*
13C2-8:2-FTS	*122*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:17*	*1*

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

Lab Sample ID: 380-99971-7

Date Collected: 06/12/24 11:30
Matrix: Water
Date Received: 06/14/24 09:39

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		06/16/24 11:15	06/17/24 19:27	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260)
Date Collected: 06/12/24 11:30
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-7
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:27	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*98*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C6 PFDA	*105*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C5 PFHxA	*107*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C4 PFHpA	*117*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C8 PFOA	*111*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C9 PFNA	*111*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C7 PFUnA	*101*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C2 PFDoA	*98*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C4 PFBA	*104*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C5 PFPeA	*110*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C3 PFBS	*111*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C3 PFHxS	*119*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C8 PFOS	*109*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C2-4:2-FTS	*145*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C2-6:2-FTS	*142*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*
13C2-8:2-FTS	*120*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:27*	*1*

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2
Date Collected: 06/12/24 10:40
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-8
Matrix: Water

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		06/16/24 11:15	06/17/24 19:36	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		06/16/24 11:15	06/17/24 19:36	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*97*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*
13C6 PFDA	*105*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*
13C5 PFHxA	*99*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*
13C4 PFHpA	*111*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*
13C8 PFOA	*113*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*
13C9 PFNA	*106*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*
13C7 PFUnA	*100*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*
13C2 PFDoA	*97*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*
13C4 PFBA	*103*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*
13C5 PFPeA	*108*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*
13C3 PFBS	*105*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*
13C3 PFHxS	*118*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*
13C8 PFOS	*103*		*50 - 200*	*06/16/24 11:15*	*06/17/24 19:36*	*1*

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2
Date Collected: 06/12/24 10:40
Date Received: 06/14/24 09:39

Lab Sample ID: 380-99971-8
Matrix: Water

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	141		50 - 200	06/16/24 11:15	06/17/24 19:36	1
13C2-6:2-FTS	130		50 - 200	06/16/24 11:15	06/17/24 19:36	1
13C2-8:2-FTS	114		50 - 200	06/16/24 11:15	06/17/24 19:36	1

Action Limit Summary

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS — Lab Sample ID: 380-99971-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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	<0.0098		ug/L	2	0.0098	525.2	Total/NA
Heptachlor	<0.0098		ug/L	0.4	0.0098	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0098		ug/L	0.2	0.0098	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	<0.0098		ug/L	0.2	0.0098	525.2	Total/NA
Methoxychlor	<0.049		ug/L	40	0.049	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)	<2.0		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 PUMP2 — Lab Sample ID: 380-99971-2

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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	<0.0096		ug/L	2	0.0096	525.2	Total/NA
Heptachlor	<0.0096		ug/L	0.4	0.0096	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0096		ug/L	0.2	0.0096	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	<0.0096		ug/L	0.2	0.0096	525.2	Total/NA
Methoxychlor	<0.048		ug/L	40	0.048	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

Client Sample ID: AIEA GULCH WELLS PUMP2 (Continued) — Lab Sample ID: 380-99971-2

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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) — Lab Sample ID: 380-99971-3

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
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	<0.0097		ug/L	2	0.0097	525.2	Total/NA
Heptachlor	<0.0097		ug/L	0.4	0.0097	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.0097		ug/L	0.2	0.0097	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	<0.0097		ug/L	0.2	0.0097	525.2	Total/NA
Methoxychlor	<0.049		ug/L	40	0.049	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)	<2.0		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: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: HALAWA WELLS UNITS 1 & 2 — Lab Sample ID: 380-99971-4

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 Limit	RL	Method	Prep Type
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	<0.0097		ug/L	2	0.0097	525.2	Total/NA
Heptachlor	<0.0097		ug/L	0.4	0.0097	525.2	Total/NA
Heptachlor epoxide (isomer B)	0.017		ug/L	0.2	0.0097	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	<0.0097		ug/L	0.2	0.0097	525.2	Total/NA
Methoxychlor	<0.048		ug/L	40	0.048	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)	2.4		ng/L	10	2.0	533	Total/NA
Perfluorononanoic acid (PFNA)	<2.0		ng/L	10	2.0	533	Total/NA
Perfluorooctanesulfonic acid (PFOS)	2.4		ng/L	4	2.0	533	Total/NA
Perfluorooctanoic acid (PFOA)	<2.0		ng/L	4	2.0	533	Total/NA

Client Sample ID: FB MOANALUA WELLS — Lab Sample ID: 380-99971-5

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

Client Sample ID: FB AIEA GULCH WELLS PUMP2 — Lab Sample ID: 380-99971-6

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

Action Limit Summary

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260) — Lab Sample ID: 380-99971-7

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

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2 — Lab Sample ID: 380-99971-8

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

Surrogate Summary

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	PRY	TPP
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-99951-E-2-A MS	Matrix Spike	99	90	110
380-99960-E-1-A DU	Duplicate	100	100	116
380-99971-1	MOANALUA WELLS	98	94	104
380-99971-2	AIEA GULCH WELLS PUMP2	98	92	95
380-99971-3	AIEA WELLS PUMPS 1&2 (260)	98	95	101
380-99971-4	HALAWA WELLS UNITS 1 & 2	97	97	102
LCS 380-95314/23-A	Lab Control Sample	100	94	111
MB 380-95314/20-A	Method Blank	101	100	105
MRL 380-95314/21-A	Lab Control Sample	100	90	97
MRL 380-95314/22-A	Lab Control Sample	101	92	98

Surrogate Legend

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

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

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS	PFHxA	PFDA	GenX
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
380-99960-B-6-A LMS	Matrix Spike	106	111	110	101
380-99960-C-6-A LMSD	Matrix Spike Duplicate	105	115	120	103
380-99971-1	MOANALUA WELLS	117	123	125	112
380-99971-2	AIEA GULCH WELLS PUMP2	122	127	125	119
380-99971-3	AIEA WELLS PUMPS 1&2 (260)	123	126	125	117
LCS 380-95387/22-A	Lab Control Sample	113	112	121	112
MBL 380-95387/20-A	Method Blank	111	114	117	108
MRL 380-95387/21-A	Lab Control Sample	116	114	122	111

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: 380-99971-1
SDG: 525.2, 533, 537.1

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)
380-99944-B-1-A MS	Matrix Spike	80	72	83	86	77	66	75	77
380-99944-C-1-A MSD	Matrix Spike Duplicate	86	99	93	101	101	96	90	88
380-99971-1	MOANALUA WELLS	85	97	91	99	102	100	90	90
380-99971-2	AIEA GULCH WELLS PUMP2	81	87	87	89	90	84	76	69
380-99971-3	AIEA WELLS PUMPS 1&2 (260)	79	91	88	91	92	90	86	84
380-99971-4	HALAWA WELLS UNITS 1 & 2	79	85	83	85	81	80	85	83
380-99971-5	FB MOANALUA WELLS	91	104	100	108	110	107	97	94
380-99971-6	FB AIEA GULCH WELLS PUMP	98	103	103	111	110	102	94	95
380-99971-7	FB AIEA WELLS PUMPS 1&2 (260)	98	105	107	117	111	111	101	98
380-99971-8	FB HALAWA WELLS UNITS 1 & 2	97	105	99	111	113	106	100	97
LCS 380-95178/22-A	Lab Control Sample	95	103	98	107	107	103	96	98
MBL 380-95178/20-A	Method Blank	89	103	105	110	108	103	94	97
MRL 380-95178/21-A	Lab Control Sample	87	104	103	111	106	104	94	93

		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)
380-99944-B-1-A MS	Matrix Spike	93	113	106	115	104	140	138	118
380-99944-C-1-A MSD	Matrix Spike Duplicate	99	119	104	115	102	141	131	116
380-99971-1	MOANALUA WELLS	100	108	106	117	107	131	153	122
380-99971-2	AIEA GULCH WELLS PUMP2	89	98	107	118	106	145	141	119
380-99971-3	AIEA WELLS PUMPS 1&2 (260)	94	100	107	117	103	156	145	119
380-99971-4	HALAWA WELLS UNITS 1 & 2	95	104	107	118	106	156	149	121
380-99971-5	FB MOANALUA WELLS	103	112	106	116	105	141	139	112
380-99971-6	FB AIEA GULCH WELLS PUMP	106	112	107	122	108	138	141	122
380-99971-7	FB AIEA WELLS PUMPS 1&2 (260)	104	110	111	119	109	145	142	120
380-99971-8	FB HALAWA WELLS UNITS 1 & 2	103	108	105	118	103	141	130	114
LCS 380-95178/22-A	Lab Control Sample	106	111	105	114	103	130	131	120
MBL 380-95178/20-A	Method Blank	101	108	106	116	102	138	130	113
MRL 380-95178/21-A	Lab Control Sample	105	109	105	117	103	136	136	116

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: 525.2 - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 380-95314/20-A
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 95314

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
2,4'-DDD	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
2,4'-DDE	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
2,4'-DDT	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
2,4-Dinitrotoluene	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
2,6-Dinitrotoluene	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
2-Methylnaphthalene	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
4,4'-DDD	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
4,4'-DDE	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
4,4'-DDT	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Acenaphthene	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Acenaphthylene	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Acetochlor	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Alachlor	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
alpha-BHC	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
alpha-Chlordane	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Anthracene	<0.020		0.020		ug/L		06/17/24 09:00	06/18/24 15:43	1
Atrazine	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Benz(a)anthracene	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Benzo[a]pyrene	<0.020		0.020		ug/L		06/17/24 09:00	06/18/24 15:43	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		06/17/24 09:00	06/18/24 15:43	1
Benzo[g,h,i]perylene	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		06/17/24 09:00	06/18/24 15:43	1
beta-BHC	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60		ug/L		06/17/24 09:00	06/18/24 15:43	1
Bromacil	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Butachlor	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Butylbenzylphthalate	<0.50		0.50		ug/L		06/17/24 09:00	06/18/24 15:43	1
Chlorobenzilate	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Chloroneb	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Chlorpyrifos	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Chrysene	<0.020		0.020		ug/L		06/17/24 09:00	06/18/24 15:43	1
delta-BHC	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Di(2-ethylhexyl)adipate	<0.60		0.60		ug/L		06/17/24 09:00	06/18/24 15:43	1
Dibenz(a,h)anthracene	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Diclorvos (DDVP)	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Dieldrin	<0.0099		0.0099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Diethylphthalate	<0.50		0.50		ug/L		06/17/24 09:00	06/18/24 15:43	1
Dimethylphthalate	<0.50		0.50		ug/L		06/17/24 09:00	06/18/24 15:43	1
Di-n-butyl phthalate	<0.99		0.99		ug/L		06/17/24 09:00	06/18/24 15:43	1
Di-n-octyl phthalate	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Endosulfan I (Alpha)	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Endosulfan II (Beta)	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Endosulfan sulfate	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Endrin	<0.0099		0.0099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Endrin aldehyde	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
EPTC	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1

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

Lab Sample ID: MB 380-95314/20-A
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 95314

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Fluorene	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
gamma-Chlordane	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Heptachlor	<0.0099		0.0099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Heptachlor epoxide (isomer B)	<0.0099		0.0099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Hexachlorobenzene	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Hexachlorocyclopentadiene	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Isophorone	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Lindane	<0.0099		0.0099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Malathion	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Methoxychlor	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Metolachlor	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Molinate	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Naphthalene	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Parathion	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Pendimethalin (Penoxaline)	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Phenanthrene	<0.040		0.040		ug/L		06/17/24 09:00	06/18/24 15:43	1
Propachlor	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Pyrene	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Simazine	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Terbacil	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Terbuthylazine	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Thiobencarb	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		06/17/24 09:00	06/18/24 15:43	1
trans-Nonachlor	<0.050		0.050		ug/L		06/17/24 09:00	06/18/24 15:43	1
Trifluralin	<0.099		0.099		ug/L		06/17/24 09:00	06/18/24 15:43	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Camphene	*0.874*	*T J N*	*ug/L*		*2.28*	*79-92-5*	*06/17/24 09:00*	*06/18/24 15:43*	*1*
Decane	*1.53*	*T J N*	*ug/L*		*2.36*	*124-18-5*	*06/17/24 09:00*	*06/18/24 15:43*	*1*
Cyclopentasiloxane, decamethyl-	*0.498*	*T J N*	*ug/L*		*2.63*	*541-02-6*	*06/17/24 09:00*	*06/18/24 15:43*	*1*
n-Hexadecanoic acid	*0.883*	*T J N*	*ug/L*		*5.76*	*57-10-3*	*06/17/24 09:00*	*06/18/24 15:43*	*1*
Oleic Acid	*0.681*	*T J N*	*ug/L*		*6.36*	*112-80-1*	*06/17/24 09:00*	*06/18/24 15:43*	*1*
Octadecanoic acid	*0.504*	*T J N*	*ug/L*		*6.43*	*57-11-4*	*06/17/24 09:00*	*06/18/24 15:43*	*1*
9-Octadecenamide, (Z)-	*1.59*	*T J N*	*ug/L*		*7.39*	*301-02-0*	*06/17/24 09:00*	*06/18/24 15:43*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*101*		*70 - 130*	*06/17/24 09:00*	*06/18/24 15:43*	*1*
Perylene-d12	*100*		*70 - 130*	*06/17/24 09:00*	*06/18/24 15:43*	*1*
Triphenylphosphate	*105*		*70 - 130*	*06/17/24 09:00*	*06/18/24 15:43*	*1*

Lab Sample ID: LCS 380-95314/23-A
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95314

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
1-Methylnaphthalene			1.98	2.03		ug/L		102	70 - 130		

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

Lab Sample ID: LCS 380-95314/23-A
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95314

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.98	2.05		ug/L		104	70 - 130
2,4'-DDE	1.98	1.92		ug/L		97	70 - 130
2,4'-DDT	1.98	2.16		ug/L		109	70 - 130
2,4-Dinitrotoluene	1.98	2.01		ug/L		102	70 - 130
2,6-Dinitrotoluene	1.98	1.98		ug/L		100	70 - 130
2-Methylnaphthalene	1.98	2.13		ug/L		108	70 - 130
4,4'-DDD	1.98	2.15		ug/L		108	70 - 130
4,4'-DDE	1.98	2.11		ug/L		106	70 - 130
4,4'-DDT	1.98	2.10		ug/L		106	70 - 130
Acenaphthene	1.98	1.91		ug/L		96	70 - 130
Acenaphthylene	1.98	2.09		ug/L		106	70 - 130
Acetochlor	1.98	2.33		ug/L		117	70 - 130
Alachlor	1.98	2.21		ug/L		112	70 - 130
alpha-BHC	1.98	2.12		ug/L		107	70 - 130
alpha-Chlordane	1.98	2.19		ug/L		111	70 - 130
Anthracene	1.98	1.76		ug/L		89	70 - 130
Atrazine	1.98	2.14		ug/L		108	70 - 130
Benz(a)anthracene	1.98	2.01		ug/L		101	70 - 130
Benzo[a]pyrene	1.98	2.02		ug/L		102	70 - 130
Benzo[b]fluoranthene	1.98	2.29		ug/L		116	70 - 130
Benzo[g,h,i]perylene	1.98	2.26		ug/L		114	70 - 130
Benzo[k]fluoranthene	1.98	2.23		ug/L		112	70 - 130
beta-BHC	1.98	2.19		ug/L		111	70 - 130
Bis(2-ethylhexyl) phthalate	1.98	2.55		ug/L		128	70 - 130
Bromacil	1.98	2.13		ug/L		108	70 - 130
Butachlor	1.98	2.25		ug/L		114	70 - 130
Butylbenzylphthalate	1.98	2.22		ug/L		112	70 - 130
Chlorobenzilate	1.98	2.39		ug/L		121	70 - 130
Chloroneb	1.98	2.00		ug/L		101	70 - 130
Chlorothalonil (Draconil, Bravo)	1.98	2.06		ug/L		104	70 - 130
Chlorpyrifos	1.98	2.06		ug/L		104	70 - 130
Chrysene	1.98	2.10		ug/L		106	70 - 130
delta-BHC	1.98	2.11		ug/L		106	70 - 130
Di(2-ethylhexyl)adipate	1.98	2.38		ug/L		120	70 - 130
Dibenz(a,h)anthracene	1.98	2.36		ug/L		119	70 - 130
Diclorvos (DDVP)	1.98	2.26		ug/L		114	70 - 130
Dieldrin	1.98	1.98		ug/L		100	70 - 130
Diethylphthalate	1.98	2.14		ug/L		108	70 - 130
Dimethylphthalate	1.98	2.21		ug/L		112	70 - 130
Di-n-butyl phthalate	3.96	4.22		ug/L		106	70 - 130
Di-n-octyl phthalate	1.98	2.34		ug/L		118	70 - 130
Endosulfan I (Alpha)	1.98	2.14		ug/L		108	70 - 130
Endosulfan II (Beta)	1.98	2.23		ug/L		113	70 - 130
Endosulfan sulfate	1.98	2.08		ug/L		105	70 - 130
Endrin	1.98	1.86		ug/L		94	70 - 130
Endrin aldehyde	1.98	1.70		ug/L		86	60 - 130
EPTC	1.98	2.25		ug/L		113	70 - 130
Fluoranthene	1.98	2.17		ug/L		110	70 - 130
Fluorene	1.98	2.09		ug/L		106	70 - 130

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

Lab Sample ID: LCS 380-95314/23-A
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95314

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
gamma-Chlordane	1.98	2.29		ug/L		115	70 - 130
Heptachlor	1.98	2.07		ug/L		105	70 - 130
Heptachlor epoxide (isomer B)	1.98	2.41		ug/L		122	70 - 130
Hexachlorobenzene	1.98	2.01		ug/L		102	70 - 130
Hexachlorocyclopentadiene	1.98	1.80		ug/L		91	70 - 130
Indeno[1,2,3-cd]pyrene	1.98	2.42		ug/L		122	70 - 130
Isophorone	1.98	2.24		ug/L		113	70 - 130
Lindane	1.98	2.08		ug/L		105	70 - 130
Malathion	1.98	2.15		ug/L		109	70 - 130
Methoxychlor	1.98	2.29		ug/L		115	70 - 130
Metolachlor	1.98	2.16		ug/L		109	70 - 130
Molinate	1.98	2.28		ug/L		115	70 - 130
Naphthalene	1.98	2.06		ug/L		104	70 - 130
Parathion	1.98	2.31		ug/L		116	70 - 130
Pendimethalin (Penoxaline)	1.98	1.92		ug/L		97	70 - 130
Phenanthrene	1.98	1.98		ug/L		100	70 - 130
Propachlor	1.98	2.13		ug/L		107	70 - 130
Pyrene	1.98	2.02		ug/L		102	70 - 130
Simazine	1.98	2.25		ug/L		113	70 - 130
Terbacil	1.98	2.22		ug/L		112	70 - 130
Terbuthylazine	1.98	2.21		ug/L		111	70 - 130
Thiobencarb	1.98	2.23		ug/L		112	70 - 130
trans-Nonachlor	1.98	2.14		ug/L		108	70 - 130
Trifluralin	1.98	1.92		ug/L		97	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*100*		*70 - 130*
Perylene-d12	*94*		*70 - 130*
Triphenylphosphate	*111*		*70 - 130*

Lab Sample ID: MRL 380-95314/21-A
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95314

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0991	0.116		ug/L		117	50 - 150
2,4'-DDD	0.0991	0.110		ug/L		111	50 - 150
2,4'-DDE	0.0991	0.110		ug/L		111	50 - 150
2,4'-DDT	0.0991	0.0935	J	ug/L		94	50 - 150
2,4-Dinitrotoluene	0.0991	0.0969	J	ug/L		98	50 - 150
2,6-Dinitrotoluene	0.0991	0.0935	J	ug/L		94	50 - 150
2-Methylnaphthalene	0.0991	0.115		ug/L		116	50 - 150
4,4'-DDD	0.0991	0.109		ug/L		110	50 - 150
4,4'-DDE	0.0991	0.0946	J	ug/L		95	50 - 150
4,4'-DDT	0.0991	0.109		ug/L		110	50 - 150
Acenaphthene	0.0991	0.0978	J	ug/L		99	50 - 150
Acenaphthylene	0.0991	0.101		ug/L		102	50 - 150
Acetochlor	0.0496	0.0558	J	ug/L		113	50 - 150

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

Lab Sample ID: MRL 380-95314/21-A
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95314

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Alachlor	0.0496	0.0609		ug/L		123	50 - 150
alpha-BHC	0.0991	0.110		ug/L		111	50 - 150
alpha-Chlordane	0.0248	<0.029		ug/L		102	50 - 150
Anthracene	0.0198	0.0221		ug/L		112	50 - 150
Atrazine	0.0496	0.0503		ug/L		101	50 - 150
Benz(a)anthracene	0.0496	0.0574		ug/L		116	50 - 150
Benzo[a]pyrene	0.0198	0.0202		ug/L		102	50 - 150
Benzo[b]fluoranthene	0.0198	0.0213		ug/L		107	50 - 150
Benzo[g,h,i]perylene	0.0496	0.0572		ug/L		115	50 - 150
Benzo[k]fluoranthene	0.0198	0.0190	J	ug/L		96	50 - 150
beta-BHC	0.0991	0.107		ug/L		108	50 - 150
Bis(2-ethylhexyl) phthalate	0.595	0.705		ug/L		119	50 - 150
Bromacil	0.0991	0.0999		ug/L		101	50 - 150
Butachlor	0.0496	0.0591		ug/L		119	50 - 150
Butylbenzylphthalate	0.149	0.163	J	ug/L		110	50 - 150
Chlorobenzilate	0.0991	0.0928	J	ug/L		94	50 - 150
Chloroneb	0.0991	0.109		ug/L		110	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0991	0.103		ug/L		104	50 - 150
Chlorpyrifos	0.0496	0.0569		ug/L		115	50 - 150
Chrysene	0.0198	0.0226		ug/L		114	50 - 150
delta-BHC	0.0991	0.120		ug/L		121	50 - 150
Di(2-ethylhexyl)adipate	0.297	0.360	J	ug/L		121	50 - 150
Dibenz(a,h)anthracene	0.0496	0.0592		ug/L		119	50 - 150
Diclorvos (DDVP)	0.0496	0.0656		ug/L		132	50 - 150
Diethylphthalate	0.149	0.171	J	ug/L		115	50 - 150
Dimethylphthalate	0.297	0.310	J	ug/L		104	50 - 150
Di-n-butyl phthalate	0.297	0.329	J	ug/L		111	49 - 243
Di-n-octyl phthalate	0.0991	0.114		ug/L		115	50 - 150
Endosulfan I (Alpha)	0.0991	0.0897	J	ug/L		90	50 - 150
Endosulfan II (Beta)	0.0991	0.152	^3+	ug/L		153	50 - 150
Endosulfan sulfate	0.0991	0.0986	J	ug/L		100	50 - 150
Endrin aldehyde	0.0991	0.0938	J	ug/L		95	50 - 150
EPTC	0.0991	0.107		ug/L		108	50 - 150
Fluoranthene	0.0496	0.0529	J	ug/L		107	50 - 150
Fluorene	0.0496	0.0511		ug/L		103	50 - 150
gamma-Chlordane	0.0248	0.0244	J	ug/L		99	50 - 150
Hexachlorobenzene	0.0496	0.0433	J	ug/L		87	50 - 150
Hexachlorocyclopentadiene	0.0496	0.0463	J	ug/L		94	50 - 150
Indeno[1,2,3-cd]pyrene	0.0496	0.0586		ug/L		118	50 - 150
Isophorone	0.0991	0.115		ug/L		117	50 - 150
Malathion	0.0991	0.107		ug/L		108	50 - 150
Methoxychlor	0.0991	0.115		ug/L		116	50 - 150
Metolachlor	0.0496	0.0589		ug/L		119	50 - 150
Molinate	0.0991	0.110		ug/L		111	50 - 150
Naphthalene	0.0991	0.110		ug/L		111	50 - 150
Parathion	0.0991	0.107		ug/L		107	50 - 150
Pendimethalin (Penoxaline)	0.0991	0.100		ug/L		101	50 - 150
Phenanthrene	0.0198	0.0212	J	ug/L		107	50 - 150
Propachlor	0.0496	0.0550		ug/L		111	50 - 150

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

Lab Sample ID: MRL 380-95314/21-A
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95314

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Pyrene			0.0496	0.0528		ug/L		106	50 - 150		
Simazine			0.0496	0.0508		ug/L		103	50 - 150		
Terbacil			0.0991	0.0981	J	ug/L		99	50 - 150		
Terbuthylazine			0.0991	0.105		ug/L		106	50 - 150		
Thiobencarb			0.0991	0.106		ug/L		107	50 - 150		
trans-Nonachlor			0.0248	<0.026		ug/L		97	50 - 150		
Trifluralin			0.0991	0.100		ug/L		101	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*100*		*70 - 130*
Perylene-d12	*90*		*70 - 130*
Triphenylphosphate	*97*		*70 - 130*

Lab Sample ID: MRL 380-95314/22-A
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95314

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Dieldrin			0.00992	0.00877	J	ug/L		88	50 - 150		
Endrin			0.00992	0.0122		ug/L		123	50 - 150		
Heptachlor			0.00992	0.0101		ug/L		101	50 - 150		
Heptachlor epoxide (isomer B)			0.00992	0.0117		ug/L		118	50 - 150		
Lindane			0.00992	0.0101		ug/L		101	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*101*		*70 - 130*
Perylene-d12	*92*		*70 - 130*
Triphenylphosphate	*98*		*70 - 130*

Lab Sample ID: 380-99951-E-2-A MS
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 95314

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
1-Methylnaphthalene	<0.10		1.99	2.04		ug/L		103	70 - 130		
2,4'-DDD	<0.10		1.99	2.05		ug/L		103	70 - 130		
2,4'-DDE	<0.10		1.99	1.90		ug/L		95	70 - 130		
2,4'-DDT	<0.10		1.99	2.13		ug/L		107	70 - 130		
2,4-Dinitrotoluene	<0.10		1.99	2.08		ug/L		105	70 - 130		
2,6-Dinitrotoluene	<0.10		1.99	2.07		ug/L		104	70 - 130		
2-Methylnaphthalene	<0.10		1.99	2.12		ug/L		107	70 - 130		
4,4'-DDD	<0.10		1.99	2.11		ug/L		106	70 - 130		
4,4'-DDE	<0.10		1.99	2.10		ug/L		106	70 - 130		
4,4'-DDT	<0.10		1.99	2.04		ug/L		102	70 - 130		
Acenaphthene	<0.10		1.99	1.92		ug/L		97	70 - 130		
Acenaphthylene	<0.10		1.99	2.14		ug/L		108	70 - 130		
Acetochlor	<0.10		1.99	2.30		ug/L		116	70 - 130		
Alachlor	<0.050		1.99	2.13		ug/L		107	70 - 130		

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

Lab Sample ID: 380-99951-E-2-A MS
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 95314

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
alpha-BHC	<0.10		1.99	2.15		ug/L		108	70 - 130
alpha-Chlordane	<0.050		1.99	2.17		ug/L		109	70 - 130
Anthracene	<0.020		1.99	1.70		ug/L		86	70 - 130
Atrazine	<0.050		1.99	2.19		ug/L		110	70 - 130
Benz(a)anthracene	<0.050		1.99	1.98		ug/L		100	70 - 130
Benzo[a]pyrene	<0.020		1.99	1.97		ug/L		99	70 - 130
Benzo[b]fluoranthene	<0.020		1.99	2.13		ug/L		107	70 - 130
Benzo[g,h,i]perylene	<0.050		1.99	1.97		ug/L		99	70 - 130
Benzo[k]fluoranthene	<0.020		1.99	2.15		ug/L		108	70 - 130
beta-BHC	<0.10		1.99	2.17		ug/L		109	70 - 130
Bis(2-ethylhexyl) phthalate	<0.60	F1	1.99	2.60	F1	ug/L		131	70 - 130
Bromacil	<0.10		1.99	2.14		ug/L		108	70 - 130
Butachlor	<0.050		1.99	2.22		ug/L		112	70 - 130
Butylbenzylphthalate	<0.50		1.99	2.24		ug/L		113	70 - 130
Chlorobenzilate	<0.10		1.99	2.25		ug/L		113	70 - 130
Chloroneb	<0.10		1.99	2.01		ug/L		101	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.10		1.99	2.05		ug/L		103	70 - 130
Chlorpyrifos	<0.050		1.99	2.00		ug/L		101	70 - 130
Chrysene	<0.020		1.99	2.04		ug/L		103	70 - 130
delta-BHC	<0.10		1.99	2.06		ug/L		104	70 - 130
Di(2-ethylhexyl)adipate	<0.60		1.99	2.41		ug/L		122	70 - 130
Dibenz(a,h)anthracene	<0.050		1.99	2.17		ug/L		109	70 - 130
Diclorvos (DDVP)	<0.050		1.99	2.25		ug/L		113	70 - 130
Dieldrin	<0.010		1.99	1.99		ug/L		100	70 - 130
Diethylphthalate	<0.50		1.99	2.21		ug/L		111	70 - 130
Dimethylphthalate	<0.50		1.99	2.24		ug/L		113	70 - 130
Di-n-butyl phthalate	<1.0		3.97	4.22		ug/L		106	70 - 130
Di-n-octyl phthalate	<0.10		1.99	2.31		ug/L		117	70 - 130
Endosulfan I (Alpha)	<0.10		1.99	2.02		ug/L		102	70 - 130
Endosulfan II (Beta)	<0.10	^3+	1.99	2.17		ug/L		109	70 - 130
Endosulfan sulfate	<0.10		1.99	2.03		ug/L		102	70 - 130
Endrin	<0.010		1.99	1.82		ug/L		91	70 - 130
Endrin aldehyde	<0.10		1.99	1.61		ug/L		81	60 - 130
EPTC	<0.10		1.99	2.24		ug/L		113	70 - 130
Fluoranthene	<0.10		1.99	2.14		ug/L		108	70 - 130
Fluorene	<0.050		1.99	2.10		ug/L		106	70 - 130
gamma-Chlordane	<0.050		1.99	2.21		ug/L		111	70 - 130
Heptachlor	<0.010		1.99	2.02		ug/L		102	70 - 130
Heptachlor epoxide (isomer B)	<0.010		1.99	2.31		ug/L		116	70 - 130
Hexachlorobenzene	<0.050		1.99	2.01		ug/L		101	70 - 130
Hexachlorocyclopentadiene	<0.050		1.99	1.77		ug/L		89	70 - 130
Indeno[1,2,3-cd]pyrene	<0.050		1.99	2.16		ug/L		109	70 - 130
Isophorone	<0.10		1.99	2.19		ug/L		111	70 - 130
Lindane	<0.010		1.99	2.10		ug/L		106	70 - 130
Malathion	<0.10		1.99	2.20		ug/L		111	70 - 130
Methoxychlor	<0.050		1.99	2.18		ug/L		110	70 - 130
Metolachlor	<0.050		1.99	2.29		ug/L		115	70 - 130
Molinate	<0.10		1.99	2.28		ug/L		115	70 - 130
Naphthalene	<0.10		1.99	2.04		ug/L		103	70 - 130

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

Lab Sample ID: 380-99951-E-2-A MS
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 95314

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Parathion	<0.10		1.99	2.39		ug/L		120	70 - 130
Pendimethalin (Penoxaline)	<0.10		1.99	1.98		ug/L		100	70 - 130
Phenanthrene	<0.040		1.99	1.96		ug/L		98	70 - 130
Propachlor	<0.050		1.99	2.23		ug/L		112	70 - 130
Pyrene	<0.050		1.99	2.00		ug/L		101	70 - 130
Simazine	<0.050		1.99	2.31		ug/L		116	70 - 130
Terbacil	<0.10		1.99	2.23		ug/L		112	70 - 130
Terbuthylazine	<0.10		1.99	2.25		ug/L		113	70 - 130
Thiobencarb	<0.10		1.99	2.19		ug/L		111	70 - 130
trans-Nonachlor	<0.050		1.99	2.09		ug/L		105	70 - 130
Trifluralin	<0.10		1.99	1.92		ug/L		97	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*99*		*70 - 130*
Perylene-d12	*90*		*70 - 130*
Triphenylphosphate	*110*		*70 - 130*

Lab Sample ID: 380-99960-E-1-A DU
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 95314

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
1-Methylnaphthalene	<0.098		<0.098		ug/L		NC	20
2,4'-DDD	<0.098		<0.098		ug/L		NC	20
2,4'-DDE	<0.098		<0.098		ug/L		NC	20
2,4'-DDT	<0.098		<0.098		ug/L		NC	20
2,4-Dinitrotoluene	<0.098		<0.098		ug/L		NC	20
2,6-Dinitrotoluene	<0.098		<0.098		ug/L		NC	20
2-Methylnaphthalene	<0.098		<0.098		ug/L		NC	20
4,4'-DDD	<0.098		<0.098		ug/L		NC	20
4,4'-DDE	<0.098		<0.098		ug/L		NC	20
4,4'-DDT	<0.098		<0.098		ug/L		NC	20
Acenaphthene	<0.098		<0.098		ug/L		NC	20
Acenaphthylene	<0.098		<0.098		ug/L		NC	20
Acetochlor	<0.098		<0.098		ug/L		NC	20
Alachlor	<0.049		<0.049		ug/L		NC	20
alpha-BHC	<0.098		<0.098		ug/L		NC	20
alpha-Chlordane	<0.049		<0.049		ug/L		NC	20
Anthracene	<0.020		<0.020		ug/L		NC	20
Atrazine	<0.049		<0.049		ug/L		NC	20
Benz(a)anthracene	<0.049		<0.049		ug/L		NC	20
Benzo[a]pyrene	<0.020		<0.020		ug/L		NC	20
Benzo[b]fluoranthene	<0.020		<0.020		ug/L		NC	20
Benzo[g,h,i]perylene	<0.049		<0.049		ug/L		NC	20
Benzo[k]fluoranthene	<0.020		<0.020		ug/L		NC	20
beta-BHC	<0.098		<0.098		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.59		<0.59		ug/L		NC	20
Bromacil	<0.098		<0.098		ug/L		NC	20

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

Lab Sample ID: 380-99960-E-1-A DU
Matrix: Water
Analysis Batch: 95490

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 95314

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Butachlor	<0.049			<0.049		ug/L				NC	20
Butylbenzylphthalate	<0.49			<0.49		ug/L				NC	20
Chlorobenzilate	<0.098			<0.098		ug/L				NC	20
Chloroneb	<0.098			<0.098		ug/L				NC	20
Chlorothalonil (Draconil, Bravo)	<0.098			<0.098		ug/L				NC	20
Chlorpyrifos	<0.049			<0.049		ug/L				NC	20
Chrysene	<0.020			<0.020		ug/L				NC	20
delta-BHC	<0.098			<0.098		ug/L				NC	20
Di(2-ethylhexyl)adipate	<0.59			<0.59		ug/L				NC	20
Dibenz(a,h)anthracene	<0.049			<0.049		ug/L				NC	20
Diclorvos (DDVP)	<0.049			<0.049		ug/L				NC	20
Dieldrin	<0.0098			<0.0098		ug/L				NC	20
Diethylphthalate	<0.49			<0.49		ug/L				NC	20
Dimethylphthalate	<0.49			<0.49		ug/L				NC	20
Di-n-butyl phthalate	<0.98			<0.98		ug/L				NC	20
Di-n-octyl phthalate	<0.098			<0.098		ug/L				NC	20
Endosulfan I (Alpha)	<0.098			<0.098		ug/L				NC	20
Endosulfan II (Beta)	<0.098	^3+		<0.098		ug/L				NC	20
Endosulfan sulfate	<0.098			<0.098		ug/L				NC	20
Endrin	<0.0098			<0.0098		ug/L				NC	20
Endrin aldehyde	<0.098			<0.098		ug/L				NC	20
EPTC	<0.098			<0.098		ug/L				NC	20
Fluoranthene	<0.098			<0.098		ug/L				NC	20
Fluorene	<0.049			<0.049		ug/L				NC	20
gamma-Chlordane	<0.049			<0.049		ug/L				NC	20
Heptachlor	<0.0098			<0.0098		ug/L				NC	20
Heptachlor epoxide (isomer B)	<0.0098			<0.0098		ug/L				NC	20
Hexachlorobenzene	<0.049			<0.049		ug/L				NC	20
Hexachlorocyclopentadiene	<0.049			<0.049		ug/L				NC	20
Indeno[1,2,3-cd]pyrene	<0.049			<0.049		ug/L				NC	20
Isophorone	<0.098			<0.098		ug/L				NC	20
Lindane	<0.0098			<0.0098		ug/L				NC	20
Malathion	<0.098			<0.098		ug/L				NC	20
Methoxychlor	<0.049			<0.049		ug/L				NC	20
Metolachlor	<0.049			<0.049		ug/L				NC	20
Molinate	<0.098			<0.098		ug/L				NC	20
Naphthalene	<0.098			<0.098		ug/L				NC	20
Parathion	<0.098			<0.098		ug/L				NC	20
Pendimethalin (Penoxaline)	<0.098			<0.098		ug/L				NC	20
Phenanthrene	<0.039			<0.039		ug/L				NC	20
Propachlor	<0.049			<0.049		ug/L				NC	20
Pyrene	<0.049			<0.049		ug/L				NC	20
Simazine	<0.049			<0.049		ug/L				NC	20
Terbacil	<0.098			<0.098		ug/L				NC	20
Terbuthylazine	<0.098			<0.098		ug/L				NC	20
Thiobencarb	<0.098			<0.098		ug/L				NC	20
Total Permethrin (mixed isomers)	<0.20			<0.20		ug/L				NC	20
trans-Nonachlor	<0.049			<0.049		ug/L				NC	20
Trifluralin	<0.098			<0.098		ug/L				NC	20

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

Surrogate	DU %Recovery	DU Qualifier	Limits
2-Nitro-m-xylene	*100*		*70 - 130*
Perylene-d12	*100*		*70 - 130*
Triphenylphosphate	*116*		*70 - 130*

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

Lab Sample ID: MBL 380-95178/20-A
Matrix: Water
Analysis Batch: 95338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 95178

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		06/16/24 11:15	06/17/24 16:25	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*89*		*50 - 200*	*06/16/24 11:15*	*06/17/24 16:25*	*1*
13C6 PFDA	*103*		*50 - 200*	*06/16/24 11:15*	*06/17/24 16:25*	*1*
13C5 PFHxA	*105*		*50 - 200*	*06/16/24 11:15*	*06/17/24 16:25*	*1*
13C4 PFHpA	*110*		*50 - 200*	*06/16/24 11:15*	*06/17/24 16:25*	*1*

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

Lab Sample ID: MBL 380-95178/20-A
Matrix: Water
Analysis Batch: 95338

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 95178

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOA	108		50 - 200	06/16/24 11:15	06/17/24 16:25	1
13C9 PFNA	103		50 - 200	06/16/24 11:15	06/17/24 16:25	1
13C7 PFUnA	94		50 - 200	06/16/24 11:15	06/17/24 16:25	1
13C2 PFDoA	97		50 - 200	06/16/24 11:15	06/17/24 16:25	1
13C4 PFBA	101		50 - 200	06/16/24 11:15	06/17/24 16:25	1
13C5 PFPeA	108		50 - 200	06/16/24 11:15	06/17/24 16:25	1
13C3 PFBS	106		50 - 200	06/16/24 11:15	06/17/24 16:25	1
13C3 PFHxS	116		50 - 200	06/16/24 11:15	06/17/24 16:25	1
13C8 PFOS	102		50 - 200	06/16/24 11:15	06/17/24 16:25	1
13C2-4:2-FTS	138		50 - 200	06/16/24 11:15	06/17/24 16:25	1
13C2-6:2-FTS	130		50 - 200	06/16/24 11:15	06/17/24 16:25	1
13C2-8:2-FTS	113		50 - 200	06/16/24 11:15	06/17/24 16:25	1

Lab Sample ID: LCS 380-95178/22-A
Matrix: Water
Analysis Batch: 95338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95178

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	120	115		ng/L		96	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	120	122		ng/L		102	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	120	113		ng/L		94	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	120	120		ng/L		100	70 - 130
Perfluorobutanesulfonic acid (PFBS)	120	127		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	120	123		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	120	122		ng/L		101	70 - 130
Perfluoroheptanoic acid (PFHpA)	120	119		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	120	117		ng/L		97	70 - 130
Perfluorohexanoic acid (PFHxA)	120	122		ng/L		101	70 - 130
Perfluorononanoic acid (PFNA)	120	121		ng/L		100	70 - 130
Perfluorooctanesulfonic acid (PFOS)	120	126		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	120	123		ng/L		102	70 - 130
Perfluoroundecanoic acid (PFUnA)	120	129		ng/L		107	70 - 130
Perfluorobutanoic acid (PFBA)	120	119		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	120	120		ng/L		99	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	120	125		ng/L		104	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	120	124		ng/L		103	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	120	118		ng/L		98	70 - 130

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

Lab Sample ID: LCS 380-95178/22-A
Matrix: Water
Analysis Batch: 95338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95178

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	120	120		ng/L		100	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	120	124		ng/L		103	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	120	117		ng/L		97	70 - 130
Perfluoropentanoic acid (PFPeA)	120	117		ng/L		97	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	120	128		ng/L		106	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	120	118		ng/L		98	70 - 130

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*95*		*50 - 200*
13C6 PFDA	*103*		*50 - 200*
13C5 PFHxA	*98*		*50 - 200*
13C4 PFHpA	*107*		*50 - 200*
13C8 PFOA	*107*		*50 - 200*
13C9 PFNA	*103*		*50 - 200*
13C7 PFUnA	*96*		*50 - 200*
13C2 PFDoA	*98*		*50 - 200*
13C4 PFBA	*106*		*50 - 200*
13C5 PFPeA	*111*		*50 - 200*
13C3 PFBS	*105*		*50 - 200*
13C3 PFHxS	*114*		*50 - 200*
13C8 PFOS	*103*		*50 - 200*
13C2-4:2-FTS	*130*		*50 - 200*
13C2-6:2-FTS	*131*		*50 - 200*
13C2-8:2-FTS	*120*		*50 - 200*

Lab Sample ID: MRL 380-95178/21-A
Matrix: Water
Analysis Batch: 95338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95178

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.00	J	ng/L		99	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.02	J	ng/L		100	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	1.96	J	ng/L		97	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.09	J	ng/L		104	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.26	J	ng/L		112	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.10	J	ng/L		104	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.26	J	ng/L		112	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.12	J	ng/L		105	50 - 150

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

Lab Sample ID: MRL 380-95178/21-A
Matrix: Water
Analysis Batch: 95338

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95178

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.13	J	ng/L		106	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.05	J	ng/L		102	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.12	J	ng/L		106	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.39	J	ng/L		119	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	1.98	J	ng/L		99	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.32	J	ng/L		115	50 - 150
Perfluorobutanoic acid (PFBA)	2.01	2.04	J	ng/L		101	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.19	J	ng/L		109	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.46	J	ng/L		122	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.36	J	ng/L		117	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.11	J	ng/L		105	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	2.02	J	ng/L		101	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.06	J	ng/L		102	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.00	J	ng/L		99	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.14	J	ng/L		107	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.20	J	ng/L		109	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	2.03	J	ng/L		101	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*87*		*50 - 200*
13C6 PFDA	*104*		*50 - 200*
13C5 PFHxA	*103*		*50 - 200*
13C4 PFHpA	*111*		*50 - 200*
13C8 PFOA	*106*		*50 - 200*
13C9 PFNA	*104*		*50 - 200*
13C7 PFUnA	*94*		*50 - 200*
13C2 PFDoA	*93*		*50 - 200*
13C4 PFBA	*105*		*50 - 200*
13C5 PFPeA	*109*		*50 - 200*
13C3 PFBS	*105*		*50 - 200*
13C3 PFHxS	*117*		*50 - 200*
13C8 PFOS	*103*		*50 - 200*
13C2-4:2-FTS	*136*		*50 - 200*
13C2-6:2-FTS	*136*		*50 - 200*
13C2-8:2-FTS	*116*		*50 - 200*

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

Lab Sample ID: 380-99944-B-1-A MS
Matrix: Water
Analysis Batch: 95338

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 95178

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.1	58.8		ng/L		98	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.1	60.3		ng/L		100	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.1	53.8		ng/L		89	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.1	58.5		ng/L		97	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.1	70.0		ng/L		113	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.1	61.5		ng/L		102	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.1	63.7		ng/L		106	70 - 130
Perfluoroheptanoic acid (PFHpA)	2.2		60.1	61.4		ng/L		99	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	13		60.1	76.0		ng/L		104	70 - 130
Perfluorohexanoic acid (PFHxA)	4.6		60.1	68.3		ng/L		106	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.1	62.3		ng/L		104	70 - 130
Perfluorooctanesulfonic acid (PFOS)	5.1		60.1	69.4		ng/L		107	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.1	61.2		ng/L		99	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.1	66.9		ng/L		111	70 - 130
Perfluorobutanoic acid (PFBA)	2.1		60.1	65.0		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.1	65.1		ng/L		108	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.1	64.3		ng/L		107	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.1	63.1		ng/L		105	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.1	64.8		ng/L		108	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.1	60.9		ng/L		101	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.1	66.2		ng/L		110	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.1	58.0		ng/L		97	70 - 130
Perfluoropentanoic acid (PFPeA)	5.3		60.1	65.4		ng/L		100	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.1	65.0		ng/L		108	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.1	60.9		ng/L		99	70 - 130

Isotope Dilution	*MS %Recovery*	*MS Qualifier*	*Limits*
13C3 HFPO-DA	*80*		*50 - 200*
13C6 PFDA	*72*		*50 - 200*
13C5 PFHxA	*83*		*50 - 200*
13C4 PFHpA	*86*		*50 - 200*
13C8 PFOA	*77*		*50 - 200*
13C9 PFNA	*66*		*50 - 200*

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

Lab Sample ID: 380-99944-B-1-A MS
Matrix: Water
Analysis Batch: 95338

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 95178

Isotope Dilution	MS %Recovery	MS Qualifier	Limits
13C7 PFUnA	75		50 - 200
13C2 PFDoA	77		50 - 200
13C4 PFBA	93		50 - 200
13C5 PFPeA	113		50 - 200
13C3 PFBS	106		50 - 200
13C3 PFHxS	115		50 - 200
13C8 PFOS	104		50 - 200
13C2-4:2-FTS	140		50 - 200
13C2-6:2-FTS	138		50 - 200
13C2-8:2-FTS	118		50 - 200

Lab Sample ID: 380-99944-C-1-A MSD
Matrix: Water
Analysis Batch: 95338

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 95178

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.2	61.2		ng/L		102	70 - 130	4	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.2	62.0		ng/L		103	70 - 130	3	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.2	57.5		ng/L		95	70 - 130	7	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.2	61.9		ng/L		103	70 - 130	6	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.2	71.3		ng/L		115	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		60.2	60.5		ng/L		100	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.2	65.4		ng/L		109	70 - 130	3	30
Perfluoroheptanoic acid (PFHpA)	2.2		60.2	64.2		ng/L		103	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	13		60.2	74.9		ng/L		102	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	4.6		60.2	68.6		ng/L		106	70 - 130	0	30
Perfluorononanoic acid (PFNA)	<2.0		60.2	63.4		ng/L		105	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	5.1		60.2	70.0		ng/L		108	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		60.2	61.8		ng/L		100	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.2	68.2		ng/L		113	70 - 130	2	30
Perfluorobutanoic acid (PFBA)	2.1		60.2	66.6		ng/L		107	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.2	65.7		ng/L		109	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.2	66.6		ng/L		110	70 - 130	3	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.2	67.6		ng/L		112	70 - 130	7	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.2	62.0		ng/L		103	70 - 130	4	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		60.2	64.5		ng/L		107	70 - 130	6	30

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

Lab Sample ID: 380-99944-C-1-A MSD
Matrix: Water
Analysis Batch: 95338

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 95178

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.2	66.7		ng/L		111	70 - 130	1	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.2	60.4		ng/L		100	70 - 130	4	30
Perfluoropentanoic acid (PFPeA)	5.3		60.2	64.0		ng/L		97	70 - 130	2	30
Perfluoroheptanesulfonic acid (PFHpS)	2 0		60 2	65 8		ng/L		109	70 - 130	1	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.2	62.5		ng/L		102	70 - 130	3	30

Isotope Dilution	*MSD %Recovery*	*MSD Qualifier*	*Limits*
13C3 HFPO-DA	*86*		*50 - 200*
13C6 PFDA	*99*		*50 - 200*
13C5 PFHxA	*93*		*50 - 200*
13C4 PFHpA	*101*		*50 - 200*
13C8 PFOA	*101*		*50 - 200*
13C9 PFNA	*96*		*50 - 200*
13C7 PFUnA	*90*		*50 - 200*
13C2 PFDoA	*88*		*50 - 200*
13C4 PFBA	*99*		*50 - 200*
13C5 PFPeA	*119*		*50 - 200*
13C3 PFBS	*104*		*50 - 200*
13C3 PFHxS	*115*		*50 - 200*
13C8 PFOS	*102*		*50 - 200*
13C2-4:2-FTS	*141*		*50 - 200*
13C2-6:2-FTS	*131*		*50 - 200*
13C2-8:2-FTS	*116*		*50 - 200*

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

Lab Sample ID: MBL 380-95387/20-A
Matrix: Water
Analysis Batch: 95468

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 95387

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1

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

Lab Sample ID: MBL 380-95387/20-A
Matrix: Water
Analysis Batch: 95468

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 95387

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		06/17/24 15:24	06/18/24 12:45	1

Surrogate	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*111*		*70 - 130*	*06/17/24 15:24*	*06/18/24 12:45*	*1*
13C2 PFHxA	*114*		*70 - 130*	*06/17/24 15:24*	*06/18/24 12:45*	*1*
13C2 PFDA	*117*		*70 - 130*	*06/17/24 15:24*	*06/18/24 12:45*	*1*
13C3-GenX	*108*		*70 - 130*	*06/17/24 15:24*	*06/18/24 12:45*	*1*

Lab Sample ID: LCS 380-95387/22-A
Matrix: Water
Analysis Batch: 95468

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95387

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			25.0	27.3		ng/L		109	70 - 130		
Perfluorooctanesulfonic acid (PFOS)			25.0	27.7		ng/L		111	70 - 130		
Perfluoroundecanoic acid (PFUnA)			25.0	29.2		ng/L		117	70 - 130		
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)			25.0	26.5		ng/L		106	70 - 130		
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)			25.0	28.1		ng/L		112	70 - 130		
Perfluorohexanoic acid (PFHxA)			25.0	28.1		ng/L		112	70 - 130		
Perfluorododecanoic acid (PFDoA)			25.0	28.4		ng/L		113	70 - 130		
Perfluorooctanoic acid (PFOA)			25.0	28.8		ng/L		115	70 - 130		
Perfluorodecanoic acid (PFDA)			25.0	28.6		ng/L		114	70 - 130		
Perfluorohexanesulfonic acid (PFHxS)			25.0	29.6		ng/L		119	70 - 130		
Perfluorobutanesulfonic acid (PFBS)			25.0	25.6		ng/L		102	70 - 130		
Perfluoroheptanoic acid (PFHpA)			25.0	30.8		ng/L		123	70 - 130		
Perfluorononanoic acid (PFNA)			25.0	29.3		ng/L		117	70 - 130		
Perfluorotetradecanoic acid (PFTA)			25.0	28.5		ng/L		114	70 - 130		
Perfluorotridecanoic acid (PFTrDA)			25.0	28.0		ng/L		112	70 - 130		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			25.0	29.4		ng/L		117	70 - 130		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			25.0	25.8		ng/L		103	70 - 130		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			25.0	28.8		ng/L		115	70 - 130		

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	113		70 - 130
13C2 PFHxA	112		70 - 130
13C2 PFDA	121		70 - 130
13C3-GenX	112		70 - 130

Lab Sample ID: MRL 380-95387/21-A
Matrix: Water
Analysis Batch: 95468

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 95387

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.37	J	ng/L		118	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	2.50	J	ng/L		125	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.51	J	ng/L		125	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.59	J	ng/L		129	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.00	2.47	J	ng/L		123	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.51	J	ng/L		125	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.28	J	ng/L		114	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.63	J	ng/L		131	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.55	J	ng/L		127	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	2.48	J	ng/L		124	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	2.21	J	ng/L		111	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.56	J	ng/L		128	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.63	J	ng/L		131	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.29	J	ng/L		114	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.00	2.38	J	ng/L		119	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	2.29	J	ng/L		114	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	2.11	J	ng/L		105	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	2.51	J	ng/L		125	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	116		70 - 130
13C2 PFHxA	114		70 - 130
13C2 PFDA	122		70 - 130
13C3-GenX	111		70 - 130

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

Lab Sample ID: 380-99960-B-6-A LMS
Matrix: Water
Analysis Batch: 95468

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 95387

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.01	2.25		ng/L		112	50 - 150
Perfluorooctanesulfonic acid (PFOS)	10		2.01	12.9	4	ng/L		122	50 - 150
Perfluoroundecanoic acid (PFUnA)	<2.0		2.01	2.44		ng/L		121	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.01	2.58		ng/L		128	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.01	2.60		ng/L		129	50 - 150
Perfluorohexanoic acid (PFHxA)	7.7		2.01	9.90		ng/L		109	50 - 150
Perfluorododecanoic acid (PFDoA)	<2.0		2.01	2.20		ng/L		109	50 - 150
Perfluorooctanoic acid (PFOA)	14		2.01	16.4	4	ng/L		140	50 - 150
Perfluorodecanoic acid (PFDA)	<2.0		2.01	2.81		ng/L		119	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.01	3.95		ng/L		129	50 - 150
Perfluorobutanesulfonic acid (PFBS)	3.3		2.01	5.70		ng/L		119	50 - 150
Perfluoroheptanoic acid (PFHpA)	3.6		2.01	6.11		ng/L		125	50 - 150
Perfluorononanoic acid (PFNA)	2.7		2.01	5.29		ng/L		127	50 - 150
Perfluorotetradecanoic acid (PFTA)	<2.0		2.01	2.03		ng/L		101	50 - 150
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.01	2.07		ng/L		103	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.01	2.36		ng/L		117	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.01	2.08		ng/L		104	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.01	2.46		ng/L		122	50 - 150

Surrogate	*LMS %Recovery*	*LMS Qualifier*	*Limits*
d5-NEtFOSAA	*106*		*70 - 130*
13C2 PFHxA	*111*		*70 - 130*
13C2 PFDA	*110*		*70 - 130*
13C3-GenX	*101*		*70 - 130*

Lab Sample ID: 380-99960-C-6-A LMSD
Matrix: Water
Analysis Batch: 95468

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 95387

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.01	2.39		ng/L		119	50 - 150	6	50
Perfluorooctanesulfonic acid (PFOS)	10		2.01	12.2	4	ng/L		88	50 - 150	5	50
Perfluoroundecanoic acid (PFUnA)	<2.0		2.01	2.46		ng/L		122	50 - 150	1	50
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.01	2.45		ng/L		122	50 - 150	5	50

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

Lab Sample ID: 380-99960-C-6-A LMSD
Matrix: Water
Analysis Batch: 95468

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 95387

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.01	2.40		ng/L		119	50 - 150	8	50
Perfluorohexanoic acid (PFHxA)	7.7		2.01	9.75		ng/L		101	50 - 150	2	50
Perfluorododecanoic acid (PFDoA)	<2.0		2.01	2.18		ng/L		109	50 - 150	1	50
Perfluorooctanoic acid (PFOA)	14		2.01	15.5	4	ng/L		95	50 - 150	6	50
Perfluorodecanoic acid (PFDA)	<2.0		2.01	2.99		ng/L		128	50 - 150	6	50
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.01	3.70		ng/L		117	50 - 150	6	50
Perfluorobutanesulfonic acid (PFBS)	3.3		2.01	5.68		ng/L		118	50 - 150	0	50
Perfluoroheptanoic acid (PFHpA)	3.6		2.01	6.21		ng/L		130	50 - 150	2	50
Perfluorononanoic acid (PFNA)	2.7		2.01	5.19		ng/L		123	50 - 150	2	50
Perfluorotetradecanoic acid (PFTA)	<2.0		2.01	1.85	J	ng/L		92	50 - 150	9	50
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.01	2.03		ng/L		101	50 - 150	2	50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.01	2.43		ng/L		121	50 - 150	3	50
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.01	2.00		ng/L		99	50 - 150	4	50
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.01	2.50		ng/L		124	50 - 150	2	50

Surrogate	*LMSD %Recovery*	*LMSD Qualifier*	*Limits*
d5-NEtFOSAA	*105*		*70 - 130*
13C2 PFHxA	*115*		*70 - 130*
13C2 PFDA	*120*		*70 - 130*
13C3-GenX	*103*		*70 - 130*

GC/MS Semi VOA

Prep Batch: 95314

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99971-1	MOANALUA WELLS	Total/NA	Water	525.2	
380-99971-2	AIEA GULCH WELLS PUMP2	Total/NA	Water	525.2	
380-99971-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	525.2	
380-99971-4	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	525.2	
MB 380-95314/20-A	Method Blank	Total/NA	Water	525.2	
LCS 380-95314/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-95314/21-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-95314/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-99951-E-2-A MS	Matrix Spike	Total/NA	Water	525.2	
380-99960-E-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 95490

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99971-1	MOANALUA WELLS	Total/NA	Water	525.2	95314
380-99971-2	AIEA GULCH WELLS PUMP2	Total/NA	Water	525.2	95314
380-99971-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	525.2	95314
380-99971-4	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	525.2	95314
MB 380-95314/20-A	Method Blank	Total/NA	Water	525.2	95314
LCS 380-95314/23-A	Lab Control Sample	Total/NA	Water	525.2	95314
MRL 380-95314/21-A	Lab Control Sample	Total/NA	Water	525.2	95314
MRL 380-95314/22-A	Lab Control Sample	Total/NA	Water	525.2	95314
380-99951-E-2-A MS	Matrix Spike	Total/NA	Water	525.2	95314
380-99960-E-1-A DU	Duplicate	Total/NA	Water	525.2	95314

LCMS

Prep Batch: 95178

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99971-1	MOANALUA WELLS	Total/NA	Water	533	
380-99971-2	AIEA GULCH WELLS PUMP2	Total/NA	Water	533	
380-99971-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	533	
380-99971-4	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	533	
380-99971-5	FB MOANALUA WELLS	Total/NA	Water	533	
380-99971-6	FB AIEA GULCH WELLS PUMP2	Total/NA	Water	533	
380-99971-7	FB AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	533	
380-99971-8	FB HALAWA WELLS UNITS 1 & 2	Total/NA	Water	533	
MBL 380-95178/20-A	Method Blank	Total/NA	Water	533	
LCS 380-95178/22-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-95178/21-A	Lab Control Sample	Total/NA	Water	533	
380-99944-B-1-A MS	Matrix Spike	Total/NA	Water	533	
380-99944-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	

Analysis Batch: 95338

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99971-1	MOANALUA WELLS	Total/NA	Water	533	95178
380-99971-2	AIEA GULCH WELLS PUMP2	Total/NA	Water	533	95178
380-99971-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	533	95178
380-99971-4	HALAWA WELLS UNITS 1 & 2	Total/NA	Water	533	95178
380-99971-5	FB MOANALUA WELLS	Total/NA	Water	533	95178
380-99971-6	FB AIEA GULCH WELLS PUMP2	Total/NA	Water	533	95178
380-99971-7	FB AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	533	95178

LCMS (Continued)

Analysis Batch: 95338 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99971-8	FB HALAWA WELLS UNITS 1 & 2	Total/NA	Water	533	95178
MBL 380-95178/20-A	Method Blank	Total/NA	Water	533	95178
LCS 380-95178/22-A	Lab Control Sample	Total/NA	Water	533	95178
MRL 380-95178/21-A	Lab Control Sample	Total/NA	Water	533	95178
380-99944-B-1-A MS	Matrix Spike	Total/NA	Water	533	95178
380-99944-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	533	95178

Prep Batch: 95387

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99971-1	MOANALUA WELLS	Total/NA	Water	537.1 DW	
380-99971-2	AIEA GULCH WELLS PUMP2	Total/NA	Water	537.1 DW	
380-99971-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	537.1 DW	
MBL 380-95387/20-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-95387/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-95387/21-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-99960-B-6-A LMS	Matrix Spike	Total/NA	Water	537.1 DW	
380-99960-C-6-A LMSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 95468

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-99971-1	MOANALUA WELLS	Total/NA	Water	537.1	95387
380-99971-2	AIEA GULCH WELLS PUMP2	Total/NA	Water	537.1	95387
380-99971-3	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	537.1	95387
MBL 380-95387/20-A	Method Blank	Total/NA	Water	537.1	95387
LCS 380-95387/22-A	Lab Control Sample	Total/NA	Water	537.1	95387
MRL 380-95387/21-A	Lab Control Sample	Total/NA	Water	537.1	95387
380-99960-B-6-A LMS	Matrix Spike	Total/NA	Water	537.1	95387
380-99960-C-6-A LMSD	Matrix Spike Duplicate	Total/NA	Water	537.1	95387

Lab Chronicle

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS
Lab Sample ID: 380-99971-1
Date Collected: 06/12/24 10:10
Matrix: Water
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			95314	OTM3	EA POM	06/17/24 12:30
Total/NA	Analysis	525.2		1	95490	X8AA	EA POM	06/18/24 16:43
Total/NA	Prep	533			95178	N8NE	EA POM	06/16/24 11:15
Total/NA	Analysis	533		1	95338	SZ9R	EA POM	06/17/24 18:20
Total/NA	Prep	537.1 DW			95387	G9MN	EA POM	06/17/24 15:24
Total/NA	Analysis	537.1		1	95468	SZ9R	EA POM	06/18/24 14:43

Client Sample ID: AIEA GULCH WELLS PUMP2
Lab Sample ID: 380-99971-2
Date Collected: 06/12/24 11:00
Matrix: Water
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			95314	OTM3	EA POM	06/17/24 12:30
Total/NA	Analysis	525.2		1	95490	X8AA	EA POM	06/18/24 17:03
Total/NA	Prep	533			95178	N8NE	EA POM	06/16/24 11:15
Total/NA	Analysis	533		1	95338	SZ9R	EA POM	06/17/24 18:29
Total/NA	Prep	537.1 DW			95387	G9MN	EA POM	06/17/24 15:24
Total/NA	Analysis	537.1		1	95468	SZ9R	EA POM	06/18/24 14:53

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)
Lab Sample ID: 380-99971-3
Date Collected: 06/12/24 11:30
Matrix: Water
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			95314	OTM3	EA POM	06/17/24 12:30
Total/NA	Analysis	525.2		1	95490	X8AA	EA POM	06/18/24 17:23
Total/NA	Prep	533			95178	N8NE	EA POM	06/16/24 11:15
Total/NA	Analysis	533		1	95338	SZ9R	EA POM	06/17/24 18:39
Total/NA	Prep	537.1 DW			95387	G9MN	EA POM	06/17/24 15:24
Total/NA	Analysis	537.1		1	95468	SZ9R	EA POM	06/18/24 15:02

Client Sample ID: HALAWA WELLS UNITS 1 & 2
Lab Sample ID: 380-99971-4
Date Collected: 06/12/24 10:40
Matrix: Water
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			95314	OTM3	EA POM	06/17/24 12:30
Total/NA	Analysis	525.2		1	95490	X8AA	EA POM	06/18/24 17:43
Total/NA	Prep	533			95178	N8NE	EA POM	06/16/24 11:15
Total/NA	Analysis	533		1	95338	SZ9R	EA POM	06/17/24 18:58

Lab Chronicle

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

Job ID: 380-99971-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB MOANALUA WELLS
Lab Sample ID: 380-99971-5
Date Collected: 06/12/24 10:10
Matrix: Water
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			95178	N8NE	EA POM	06/16/24 11:15
Total/NA	Analysis	533		1	95338	SZ9R	EA POM	06/17/24 19:08

Client Sample ID: FB AIEA GULCH WELLS PUMP2
Lab Sample ID: 380-99971-6
Date Collected: 06/12/24 11:00
Matrix: Water
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			95178	N8NE	EA POM	06/16/24 11:15
Total/NA	Analysis	533		1	95338	SZ9R	EA POM	06/17/24 19:17

Client Sample ID: FB AIEA WELLS PUMPS 1&2 (260)
Lab Sample ID: 380-99971-7
Date Collected: 06/12/24 11:30
Matrix: Water
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			95178	N8NE	EA POM	06/16/24 11:15
Total/NA	Analysis	533		1	95338	SZ9R	EA POM	06/17/24 19:27

Client Sample ID: FB HALAWA WELLS UNITS 1 & 2
Lab Sample ID: 380-99971-8
Date Collected: 06/12/24 10:40
Matrix: Water
Date Received: 06/14/24 09:39

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			95178	N8NE	EA POM	06/16/24 11:15
Total/NA	Analysis	533		1	95338	SZ9R	EA POM	06/17/24 19:36

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: 380-99971-1
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	01-31-25

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	Water	1-Methylnaphthalene
525.2	525.2	Water	2,4'-DDD
525.2	525.2	Water	2,4'-DDE
525.2	525.2	Water	2,4'-DDT
525.2	525.2	Water	2,4-Dinitrotoluene
525.2	525.2	Water	2,6-Dinitrotoluene
525.2	525.2	Water	2-Methylnaphthalene
525.2	525.2	Water	4,4'-DDD
525.2	525.2	Water	4,4'-DDE
525 2	525 2	Water	4,4' DDT
525.2	525.2	Water	Acetochlor
525.2	525.2	Water	alpha-BHC
525.2	525.2	Water	alpha-Chlordane
525.2	525.2	Water	beta-BHC
525.2	525.2	Water	Chlorobenzilate
525.2	525.2	Water	Chloroneb
525.2	525.2	Water	Chlorothalonil (Draconil, Bravo)
525.2	525.2	Water	Chlorpyrifos
525.2	525.2	Water	delta-BHC
525.2	525.2	Water	Diclorvos (DDVP)
525.2	525.2	Water	Endosulfan I (Alpha)
525.2	525.2	Water	Endosulfan II (Beta)
525.2	525.2	Water	Endosulfan sulfate
525.2	525.2	Water	Endrin aldehyde
525.2	525.2	Water	EPTC
525.2	525.2	Water	gamma-Chlordane
525.2	525.2	Water	Isophorone
525.2	525.2	Water	Malathion
525.2	525.2	Water	Parathion
525.2	525.2	Water	Pendimethalin (Penoxaline)
525.2	525.2	Water	Terbacil
525.2	525.2	Water	Terbuthylazine
525.2	525.2	Water	Total Permethrin (mixed isomers)
525.2	525.2	Water	trans-Nonachlor

Method Summary

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

Job ID: 380-99971-1
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: 380-99971-1
SDG: 525.2, 533, 537.1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-99971-1	MOANALUA WELLS	Water	06/12/24 10:10	06/14/24 09:39
380-99971-2	AIEA GULCH WELLS PUMP2	Water	06/12/24 11:00	06/14/24 09:39
380-99971-3	AIEA WELLS PUMPS 1&2 (260)	Water	06/12/24 11:30	06/14/24 09:39
380-99971-4	HALAWA WELLS UNITS 1 & 2	Water	06/12/24 10:40	06/14/24 09:39
380-99971-5	FB MOANALUA WELLS	Water	06/12/24 10:10	06/14/24 09:39
380-99971-6	FB AIEA GULCH WELLS PUMP2	Water	06/12/24 11:00	06/14/24 09:39
380-99971-7	FB AIEA WELLS PUMPS 1&2 (260)	Water	06/12/24 11:30	06/14/24 09:39
380-99971-8	FB HALAWA WELLS UNITS 1 & 2	Water	06/12/24 10:40	06/14/24 09:39

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

Chain of Custody Record

eurofins Environment Testing America

Client Information	Sampler: Preetha Anand	Lab PM: Arada Rachelle	Carrier Tracking No(s):	COC No: 380-27941-2757 2
Client Contact: Dr Ron Fenstermacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 1 of 1
Company: City & County of Honolulu	PWSID			Job #:
Address: 630 South Beretania Street; Chemistry Lab	Due Date Requested			
City: Honolulu	TAT Requested (days):			
State, Zip: HI 96843	Compliance Project: Δ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@hbws.org	WO #:			
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111			
Site:	SSOW#:			

Analysis Requested

Preservation Codes

A HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F MeOH, G Amchlor, H Ascorbic Acid, I - Ice, J - DI Water, K EDTA, L - EDA, M Hexane, N - None, O AsNaO2, P - Na2O4S, Q - Na2SO3, R Na2S2O3, S H2SO4, T TSP Dodecahydrate, U - Acetone, V - MCAA, W pH 4-5, Y - Trizma, Z - other (specify)

Other:

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water S=solid, O=waste/oil, BT=Tissue, A=Air)	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_DRO_LL_CS - HNL Ranges C10-C24/C24-C36/C8-C18	625.2_PREC (MOD) 525plus PLUS TICs	537 1_DW_PREC 537 1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
Preservation Code:							R	A	Q	QA	Y	I		
MOANALUA WELLS	12-Jun-2024	1010	G	Water							3	3		chlorinated
AIEA GULCH WELLS PUMP2	12-Jun-2024	1100	G	Water							3	3		chlorinated
AIEA WELLS PUMPS 1&2 (260)	12-Jun-2024	1130	G	Water							3	3		(1) 7768 5643 9320
HALAWA WELLS UNITS 1&2	12-Jun-2024	1040	G	Water							3	3		(751A) 3.3°-0.1°=3.2°
FB MOANALUA WELLS	12-Jun-2024	1010	G	Water							1	1		(3) FB bottle sampled with in regular sample bottle
FB AIEA GULCH WELLS PUMP2	12-Jun-2024	1100	G	Water							1	1		(2) 7768 5643 9330
FB AIEA WELLS PUMPS 1&2 (260)	12-Jun-2024	1130	G	Water							1	1		(751A) 3.5°-0.1°=3.4°
FB HALAWA WELLS UNITS 1&2	12-Jun-2024	1040	G	Water							1	1		(3) 7768 5643 9341
														(751A) 3.6°-0.1°=3.5°
														(4) 7768 5643 9352

380-99971 COC

(4)(751A) 3.0°-0.1°=2.9°

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown ☐ Radiological

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I II III, IV Other (specify)

Special Instructions/QC Requirements.

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FED EX 4 COOLERS ↑
Relinquished by: [redacted]	Date/Time: 6/13/24 1200	Company: HBWS	Received by: G. REITNER Date/Time: 06/14/2024 09:39 Company: EEAP
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company
Relinquished by:	Date/Time:	Company	Received by: Date/Time: Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No	Cooler Temperature(s) °C and Other Remarks: (751A) -0.1° CORRECTION GEL-FROZEN ↑

Ver: 01/16/2019

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-99971-1
SDG Number: 525.2, 533, 537.1

Login Number: 99971
List Number: 1
Creator: Elyas, Matthew

List Source: Eurofins Eaton Analytical Pomona

Question	Answer	Comment
The coolers custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
Samples were received on ice.	True	
Cooler(s) Temperature is acceptable.	True	
Cooler(s) Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and is legible.	True	
COC is filled out with all pertinent information.	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
ClO4 headspace requirement met (>50% for CA, >30% for other states).	True	
Samples do not require splitting or compositing.	True	
Container provided by EEA	True	