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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
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JOB DESCRIPTION

RED-HILL
RUSH Weekly Red Hill

JOB NUMBER

380-60464-1

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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Definitions/Glossary

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

Job ID: 380-60464-1

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

LCMS

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

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

Job ID: 380-60464-1

Job ID: 380-60464-1

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative 380-60464-1

Receipt

The samples were received on 8/24/2023 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 0.8° C and 3.5° C.

GC/MS Semi VOA

Method 525.2: The continuing calibration verification (CCV) associated with batch 380-53407 recovered above the upper control limit for Parathion and Hexachlorocyclopentadiene. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

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

LCMS

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

Organic Prep

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



Detection Summary

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

Job ID: 380-60464-1

Client Sample ID: MOANALUA WELLS
PWSID Number: HI0000331

Lab Sample ID: 380-60464-1

No Detections.

Client Sample ID: FB: MOANALUA WELLS
PWSID Number: HI0000331

Lab Sample ID: 380-60464-3

No Detections.

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This Detection Summary does not include radiochemical test results.

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Client Sample Results

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

Job ID: 380-60464-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-60464-1

Date Collected: 08/22/23 12:00

Matrix: Drinking Water

Date Received: 08/24/23 10:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
2,4'-DDD	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
2,4'-DDE	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
2,4'-DDT	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
2-Methylnaphthalene	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
4,4'-DDD	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
4,4'-DDE	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
4,4'-DDT	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Acenaphthene	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Acenaphthylene	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Acetochlor	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Alachlor	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
alpha-BHC	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
alpha-Chlordane	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Anthracene	<0.020		0.020	ug/L		08/26/23 07:45	08/27/23 17:42	1
Atrazine	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Benz(a)anthracene	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Benzo[a]pyrene	<0.020		0.020	ug/L		08/26/23 07:45	08/27/23 17:42	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		08/26/23 07:45	08/27/23 17:42	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		08/26/23 07:45	08/27/23 17:42	1
beta-BHC	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		08/26/23 07:45	08/27/23 17:42	1
Bromacil	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Butachlor	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Butylbenzylphthalate	<0.50		0.50	ug/L		08/26/23 07:45	08/27/23 17:42	1
Chlorobenzilate	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Chloroneb	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Chlorpyrifos	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Chrysene	<0.020		0.020	ug/L		08/26/23 07:45	08/27/23 17:42	1
delta-BHC	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		08/26/23 07:45	08/27/23 17:42	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Diclorvos (DDVP)	<0.050	*+ ^3+	0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Dieldrin	<0.20		0.20	ug/L		08/26/23 07:45	08/27/23 17:42	1
Diethylphthalate	<0.50		0.50	ug/L		08/26/23 07:45	08/27/23 17:42	1
Dimethylphthalate	<0.50		0.50	ug/L		08/26/23 07:45	08/27/23 17:42	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		08/26/23 07:45	08/27/23 17:42	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Endosulfan sulfate	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Endrin	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Endrin aldehyde	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
EPTC	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Fluoranthene	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1

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Client Sample Results

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

Job ID: 380-60464-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-60464-1

Date Collected: 08/22/23 12:00

Matrix: Drinking Water

Date Received: 08/24/23 10:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
gamma-Chlordane	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Heptachlor	<0.040		0.040	ug/L		08/26/23 07:45	08/27/23 17:42	1
Heptachlor epoxide (isomer B)	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Hexachlorobenzene	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Isophorone	<0.50		0.50	ug/L		08/26/23 07:45	08/27/23 17:42	1
Lindane	<0.040		0.040	ug/L		08/26/23 07:45	08/27/23 17:42	1
Malathion	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Methoxychlor	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Metolachlor	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Molinate	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Naphthalene	<0.30		0.30	ug/L		08/26/23 07:45	08/27/23 17:42	1
Parathion	<0.099	*+	0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Phenanthrene	<0.040		0.040	ug/L		08/26/23 07:45	08/27/23 17:42	1
Propachlor	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Pyrene	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Simazine	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Terbacil	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Terbutylazine	<0.099	*+	0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1
Thiobencarb	<0.20		0.20	ug/L		08/26/23 07:45	08/27/23 17:42	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		08/26/23 07:45	08/27/23 17:42	1
trans-Nonachlor	<0.050		0.050	ug/L		08/26/23 07:45	08/27/23 17:42	1
Trifluralin	<0.099		0.099	ug/L		08/26/23 07:45	08/27/23 17:42	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	08/26/23 07:45	08/27/23 17:42	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	98		70 - 130	08/26/23 07:45	08/27/23 17:42	1
Perylene-d12	83		70 - 130	08/26/23 07:45	08/27/23 17:42	1
Triphenylphosphate	117		70 - 130	08/26/23 07:45	08/27/23 17:42	1

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafiuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-60464-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-60464-1

Date Collected: 08/22/23 12:00

Matrix: Drinking Water

Date Received: 08/24/23 10:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:11	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	89		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C6 PFDA	93		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C5 PFHxA	96		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C4 PFHpA	94		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C8 PFOA	98		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C9 PFNA	99		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C7 PFUnA	91		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C2 PFDoA	95		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C4 PFBA	99		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C5 PFPeA	105		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C3 PFBS	100		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C3 PFHxS	102		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C8 PFOS	100		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C2-4:2-FTS	95		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C2-6:2-FTS	90		50 - 200			09/08/23 11:01	09/11/23 14:11	1
13C2-8:2-FTS	88		50 - 200			09/08/23 11:01	09/11/23 14:11	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		08/31/23 08:16	09/01/23 19:10	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-60464-1

Client Sample ID: MOANALUA WELLS

Date Collected: 08/22/23 12:00

Date Received: 08/24/23 10:20

Lab Sample ID: 380-60464-1

Matrix: Drinking Water

PWSID Number: HI0000331

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		08/31/23 08:16	09/01/23 19:10	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:10	1
Surrogate	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	113		70 - 130			08/31/23 08:16	09/01/23 19:10	1
13C2 PFHxA	110		70 - 130			08/31/23 08:16	09/01/23 19:10	1
13C2 PFDA	113		70 - 130			08/31/23 08:16	09/01/23 19:10	1
13C3-GenX	108		70 - 130			08/31/23 08:16	09/01/23 19:10	1

Client Sample ID: FB: MOANALUA WELLS

Date Collected: 08/22/23 12:00

Date Received: 08/24/23 10:20

Lab Sample ID: 380-60464-3

Matrix: Water

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-60464-1

Client Sample ID: FB: MOANALUA WELLS

Lab Sample ID: 380-60464-3

Date Collected: 08/22/23 12:00

Matrix: Water

Date Received: 08/24/23 10:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0	ng/L		09/08/23 11:01	09/11/23 14:40	1
Isotope Dilution	%Recovery	Qualifier	Limits			Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	84		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C6 PFDA	91		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C5 PFHxA	89		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C4 PFHpA	91		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C8 PFOA	94		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C9 PFNA	94		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C7 PFUnA	89		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C2 PFDoA	94		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C4 PFBA	94		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C5 PFPeA	99		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C3 PFBS	94		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C3 PFHxS	95		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C8 PFOS	94		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C2-4:2-FTS	93		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C2-6:2-FTS	85		50 - 200			09/08/23 11:01	09/11/23 14:40	1
13C2-8:2-FTS	83		50 - 200			09/08/23 11:01	09/11/23 14:40	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		08/31/23 08:16	09/01/23 19:31	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-60464-1

Client Sample ID: FB: MOANALUA WELLS

Lab Sample ID: 380-60464-3

Date Collected: 08/22/23 12:00

Matrix: Water

Date Received: 08/24/23 10:20

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		08/31/23 08:16	09/01/23 19:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	109		70 - 130	08/31/23 08:16	09/01/23 19:31	1
13C2 PFHxA	102		70 - 130	08/31/23 08:16	09/01/23 19:31	1
13C2 PFDA	111		70 - 130	08/31/23 08:16	09/01/23 19:31	1
13C3-GenX	100		70 - 130	08/31/23 08:16	09/01/23 19:31	1

Action Limit Summary

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

Job ID: 380-60464-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-60464-1

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	<0.050		ug/L	2	0.050	525.2	Total/NA
Atrazine	<0.050		ug/L	3	0.050	525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		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	<0.099		ug/L	2	0.099	525.2	Total/NA
Heptachlor	<0.040		ug/L	0.4	0.040	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.050		ug/L	0.2	0.050	525.2	Total/NA
Hexachlorobenzene	<0.050		ug/L	1	0.050	525.2	Total/NA
Hexachlorocyclopentadiene	<0.050		ug/L	50	0.050	525.2	Total/NA
Lindane	<0.040		ug/L	0.2	0.040	525.2	Total/NA
Methoxychlor	<0.099		ug/L	40	0.099	525.2	Total/NA
Simazine	<0.050		ug/L	4	0.050	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-60464-1

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-60464-1	MOANALUA WELLS	98	83	117

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-60192-M-1-A MS	Matrix Spike	99	93	126
380-60205-AF-1-A DU	Duplicate	96	75	122
LCS 380-53334/23-A	Lab Control Sample	97	93	127
LCSD 380-53334/24-A	Lab Control Sample Dup	96	93	123
MB 380-53334/21-A	Method Blank	103	94	114
MRL 380-53334/22-A	Lab Control Sample	98	90	122

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

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-60464-1	MOANALUA WELLS	113	110	113	108

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
380-60464-3	FB: MOANALUA WELLS	109	102	111	100
380-60875-BD-1-A MS	Matrix Spike	103	113	111	111
380-60875-BE-1-A MSD	Matrix Spike Duplicate	103	116	108	109
LCS 380-53874/25-A	Lab Control Sample	106	111	108	109
LCSD 380-53874/26-A	Lab Control Sample Dup	112	119	114	116
MBL 380-53874/23-A	Method Blank	115	106	120	104
MRL 380-53874/24-A	Lab Control Sample	112	115	114	108

Surrogate Summary

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

Job ID: 380-60464-1

Surrogate Legend

d5NEFOS = d5-NEtFOSAA

PFHxA = 13C2 PFHxA

PFDA = 13C2 PFDA

GenX = 13C3-GenX

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Isotope Dilution Summary

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

Job ID: 380-60464-1

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)
380-60464-1	MOANALUA WELLS	89	93	96	94	98	99	91	95
380-60464-1 MS	MOANALUA WELLS	93	93	95	90	97	100	92	92
380-60464-1 MSD	MOANALUA WELLS	89	90	92	90	93	94	88	90

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)
380-60464-1	MOANALUA WELLS	99	105	100	102	100	95	90	88
380-60464-1 MS	MOANALUA WELLS	97	102	96	94	95	89	87	80
380-60464-1 MSD	MOANALUA WELLS	92	102	95	93	97	88	86	83

Surrogate Legend

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

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

Matrix: Water

Prep Type: Total/NA

Percent Isotope Dilution Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDaA (50-200)
380-60464-3	FB: MOANALUA WELLS	84	91	89	91	94	94	89	94
LCS 380-54980/23-A	Lab Control Sample	90	95	96	94	97	98	92	92
LCSD 380-54980/24-A	Lab Control Sample Dup	91	93	95	91	94	100	91	93
MBL 380-54980/21-A	Method Blank	75	86	82	80	84	88	77	84
MRL 380-54980/22-A	Lab Control Sample	83	87	93	91	91	93	82	86

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)
380-60464-3	FB: MOANALUA WELLS	94	99	94	95	94	93	85	83
LCS 380-54980/23-A	Lab Control Sample	92	105	89	89	92	84	85	78
LCSD 380-54980/24-A	Lab Control Sample Dup	91	103	93	92	96	85	84	77
MBL 380-54980/21-A	Method Blank	87	93	82	83	85	91	87	93
MRL 380-54980/22-A	Lab Control Sample	92	96	95	93	93	95	92	83

Surrogate Legend

HFPODA = 13C3 HFPO-DA

Isotope Dilution Summary

Job ID: 380-60464-1

Client: City & County of Honolulu

Project/Site: RED-HILL

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

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- 4
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QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: MB 380-53334/21-A
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53334

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
2,4'-DDD	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
2,4'-DDE	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
2,4'-DDT	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
2-Methylnaphthalene	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
4,4'-DDD	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
4,4'-DDE	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
4,4'-DDT	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Acenaphthene	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Acenaphthylene	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Acetochlor	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Alachlor	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
alpha-BHC	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
alpha-Chlordane	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Anthracene	<0.020		0.020	ug/L		08/26/23 06:00	08/27/23 10:38	1
Atrazine	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Benz(a)anthracene	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Benzo[a]pyrene	<0.020		0.020	ug/L		08/26/23 06:00	08/27/23 10:38	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		08/26/23 06:00	08/27/23 10:38	1
Benzo[g,h,i]perylene	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		08/26/23 06:00	08/27/23 10:38	1
beta-BHC	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Bis(2-ethylhexyl) phthalate	<0.60		0.60	ug/L		08/26/23 06:00	08/27/23 10:38	1
Bromacil	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Butachlor	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Butylbenzylphthalate	<0.50		0.50	ug/L		08/26/23 06:00	08/27/23 10:38	1
Chlorobenzilate	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Chloroneb	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Chlorpyrifos	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Chrysene	<0.020		0.020	ug/L		08/26/23 06:00	08/27/23 10:38	1
delta-BHC	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Di(2-ethylhexyl)adipate	<0.60		0.60	ug/L		08/26/23 06:00	08/27/23 10:38	1
Dibenz(a,h)anthracene	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Diclorvos (DDVP)	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Dieldrin	<0.20		0.20	ug/L		08/26/23 06:00	08/27/23 10:38	1
Diethylphthalate	<0.50		0.50	ug/L		08/26/23 06:00	08/27/23 10:38	1
Dimethylphthalate	<0.50		0.50	ug/L		08/26/23 06:00	08/27/23 10:38	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		08/26/23 06:00	08/27/23 10:38	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Endosulfan sulfate	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Endrin	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Endrin aldehyde	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
EPTC	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: MB 380-53334/21-A
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53334

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Fluorene	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
gamma-Chlordane	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Heptachlor	<0.040		0.040	ug/L		08/26/23 06:00	08/27/23 10:38	1
Heptachlor epoxide (isomer B)	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Hexachlorobenzene	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Hexachlorocyclopentadiene	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Indeno[1,2,3-cd]pyrene	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Isophorone	<0.50		0.50	ug/L		08/26/23 06:00	08/27/23 10:38	1
Lindane	<0.040		0.040	ug/L		08/26/23 06:00	08/27/23 10:38	1
Malathion	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Methoxychlor	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Metolachlor	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Molinate	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Naphthalene	<0.30		0.30	ug/L		08/26/23 06:00	08/27/23 10:38	1
Parathion	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Phenanthrene	<0.040		0.040	ug/L		08/26/23 06:00	08/27/23 10:38	1
Propachlor	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Pyrene	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Simazine	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Terbacil	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Terbutylazine	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1
Thiobencarb	<0.20		0.20	ug/L		08/26/23 06:00	08/27/23 10:38	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		08/26/23 06:00	08/27/23 10:38	1
trans-Nonachlor	<0.050		0.050	ug/L		08/26/23 06:00	08/27/23 10:38	1
Trifluralin	<0.099		0.099	ug/L		08/26/23 06:00	08/27/23 10:38	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
<i>n</i> -Hexadecanoic acid	0.742	T J N	ug/L		5.85	57-10-3	08/26/23 06:00	08/27/23 10:38	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>2</i> -Nitro- <i>m</i> -xylene	103		70 - 130	08/26/23 06:00	08/27/23 10:38	1
<i>Perylene-d</i> 12	94		70 - 130	08/26/23 06:00	08/27/23 10:38	1
<i>Triphenylphosphate</i>	114		70 - 130	08/26/23 06:00	08/27/23 10:38	1

Lab Sample ID: LCS 380-53334/23-A
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53334

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.99	1.88		ug/L		94	70 - 130
2,4'-DDD	1.99	2.29		ug/L		115	70 - 130
2,4'-DDE	1.99	2.18		ug/L		109	70 - 130
2,4'-DDT	1.99	2.46		ug/L		124	70 - 130
2,4-Dinitrotoluene	1.99	2.07		ug/L		104	70 - 130
2,6-Dinitrotoluene	1.99	2.08		ug/L		105	70 - 130
2-Methylnaphthalene	1.99	1.83		ug/L		92	70 - 130

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QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: LCS 380-53334/23-A
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53334

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDD	1.99	2.29		ug/L		115	70 - 130
4,4'-DDE	1.99	2.18		ug/L		110	70 - 130
4,4'-DDT	1.99	2.53		ug/L		127	70 - 130
Acenaphthene	1.99	1.81		ug/L		91	70 - 130
Acenaphthylene	1.99	1.95		ug/L		98	70 - 130
Acetochlor	1.99	2.45		ug/L		123	70 - 130
Alachlor	1.99	2.26		ug/L		113	70 - 130
alpha-BHC	1.99	1.98		ug/L		100	70 - 130
alpha-Chlordane	1.99	2.15		ug/L		108	70 - 130
Anthracene	1.99	1.95		ug/L		98	70 - 130
Atrazine	1.99	2.45		ug/L		123	70 - 130
Benz(a)anthracene	1.99	2.34		ug/L		118	70 - 130
Benzo[a]pyrene	1.99	2.13		ug/L		107	70 - 130
Benzo[b]fluoranthene	1.99	2.13		ug/L		107	70 - 130
Benzo[g,h,i]perylene	1.99	1.94		ug/L		97	70 - 130
Benzo[k]fluoranthene	1.99	2.28		ug/L		115	70 - 130
beta-BHC	1.99	2.09		ug/L		105	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	1.89		ug/L		95	70 - 130
Bromacil	1.99	2.35		ug/L		118	70 - 130
Butachlor	1.99	2.43		ug/L		122	70 - 130
Butylbenzylphthalate	1.99	2.18		ug/L		110	70 - 130
Chlorobenzilate	1.99	2.32		ug/L		117	70 - 130
Chloroneb	1.99	1.98		ug/L		100	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	2.18		ug/L		109	70 - 130
Chlorpyrifos	1.99	2.39		ug/L		120	70 - 130
Chrysene	1.99	2.07		ug/L		104	70 - 130
delta-BHC	1.99	1.94		ug/L		98	70 - 130
Di(2-ethylhexyl)adipate	1.99	2.22		ug/L		111	70 - 130
Dibenz(a,h)anthracene	1.99	2.08		ug/L		105	70 - 130
Diclorvos (DDVP)	1.99	2.73	*+	ug/L		137	70 - 130
Dieldrin	1.99	2.22		ug/L		111	70 - 130
Diethylphthalate	1.99	2.12		ug/L		107	70 - 130
Dimethylphthalate	1.99	2.10		ug/L		105	70 - 130
Di-n-butyl phthalate	3.98	4.71		ug/L		118	70 - 130
Di-n-octyl phthalate	1.99	1.85		ug/L		93	70 - 130
Endosulfan I (Alpha)	1.99	1.81		ug/L		91	70 - 130
Endosulfan II (Beta)	1.99	2.27		ug/L		114	70 - 130
Endosulfan sulfate	1.99	2.45		ug/L		123	70 - 130
Endrin	1.99	2.48		ug/L		125	70 - 130
Endrin aldehyde	1.99	2.13		ug/L		107	70 - 130
EPTC	1.99	2.13		ug/L		107	70 - 130
Fluoranthene	1.99	2.30		ug/L		116	70 - 130
Fluorene	1.99	2.06		ug/L		103	70 - 130
gamma-Chlordane	1.99	2.21		ug/L		111	70 - 130
Heptachlor	1.99	2.19		ug/L		110	70 - 130
Heptachlor epoxide (isomer B)	1.99	2.24		ug/L		113	70 - 130
Hexachlorobenzene	1.99	2.03		ug/L		102	70 - 130
Hexachlorocyclopentadiene	1.99	2.17		ug/L		109	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	2.01		ug/L		101	70 - 130

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QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: LCS 380-53334/23-A
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53334

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Isophorone	1.99	2.13		ug/L		107	70 - 130
Lindane	1.99	2.02		ug/L		102	70 - 130
Malathion	1.99	2.34		ug/L		118	70 - 130
Methoxychlor	1.99	2.28		ug/L		115	70 - 130
Metolachlor	1.99	2.40		ug/L		121	70 - 130
Molinate	1.99	2.31		ug/L		116	70 - 130
Naphthalene	1.99	1.84		ug/L		93	70 - 130
Parathion	1.99	2.73	*+	ug/L		137	70 - 130
Pendimethalin (Penoxaline)	1.99	2.55		ug/L		128	70 - 130
Phenanthrene	1.99	1.85		ug/L		93	70 - 130
Propachlor	1.99	2.31		ug/L		116	70 - 130
Pyrene	1.99	2.34		ug/L		118	70 - 130
Simazine	1.99	2.44		ug/L		123	70 - 130
Terbacil	1.99	2.47		ug/L		124	70 - 130
Terbutylazine	1.99	2.55		ug/L		128	70 - 130
Thiobencarb	1.99	2.32		ug/L		117	70 - 130
trans-Nonachlor	1.99	2.39		ug/L		120	70 - 130
Trifluralin	1.99	2.31		ug/L		116	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	97		70 - 130
Perylene-d12	93		70 - 130
Triphenylphosphate	127		70 - 130

Lab Sample ID: LCSD 380-53334/24-A
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53334

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	1.98	1.95		ug/L		98	70 - 130	4	20
2,4'-DDD	1.98	2.29		ug/L		115	70 - 130	0	20
2,4'-DDE	1.98	2.20		ug/L		111	70 - 130	1	20
2,4'-DDT	1.98	2.47		ug/L		124	70 - 130	0	20
2,4-Dinitrotoluene	1.98	2.09		ug/L		105	70 - 130	1	20
2,6-Dinitrotoluene	1.98	2.15		ug/L		108	70 - 130	3	20
2-Methylnaphthalene	1.98	1.90		ug/L		96	70 - 130	4	20
4,4'-DDD	1.98	2.29		ug/L		116	70 - 130	0	20
4,4'-DDE	1.98	2.21		ug/L		111	70 - 130	1	20
4,4'-DDT	1.98	2.54		ug/L		128	70 - 130	0	20
Acenaphthene	1.98	1.88		ug/L		95	70 - 130	4	20
Acenaphthylene	1.98	2.06		ug/L		104	70 - 130	5	20
Acetochlor	1.98	2.49		ug/L		126	70 - 130	2	20
Alachlor	1.98	2.30		ug/L		116	70 - 130	2	20
alpha-BHC	1.98	2.04		ug/L		103	70 - 130	3	20
alpha-Chlordane	1.98	2.24		ug/L		113	70 - 130	4	20
Anthracene	1.98	1.96		ug/L		99	70 - 130	1	20
Atrazine	1.98	2.52		ug/L		127	70 - 130	3	20
Benz(a)anthracene	1.98	2.37		ug/L		119	70 - 130	1	20

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: LCSD 380-53334/24-A
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53334

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
Benzo[a]pyrene	1.98	2.21		ug/L		111	70 - 130	4	20	
Benzo[b]fluoranthene	1.98	2.29		ug/L		115	70 - 130	7	20	
Benzo[g,h,i]perylene	1.98	2.06		ug/L		104	70 - 130	6	20	
Benzo[k]fluoranthene	1.98	2.27		ug/L		114	70 - 130	1	20	
beta-BHC	1.98	2.18		ug/L		110	70 - 130	4	20	
Bis(2-ethylhexyl) phthalate	1.98	1.95		ug/L		99	70 - 130	3	20	
Bromacil	1.98	2.38		ug/L		120	70 - 130	1	20	
Butachlor	1.98	2.44		ug/L		123	70 - 130	0	20	
Butylbenzylphthalate	1.98	2.19		ug/L		110	70 - 130	0	20	
Chlorobenzilate	1.98	2.32		ug/L		117	70 - 130	0	20	
Chloroneb	1.98	2.04		ug/L		103	70 - 130	3	20	
Chlorothalonil (Draconil, Bravo)	1.98	2.20		ug/L		111	70 - 130	1	20	
Chlorpyrifos	1.98	2.42		ug/L		122	70 - 130	1	20	
Chrysene	1.98	2.10		ug/L		106	70 - 130	2	20	
delta-BHC	1.98	1.95		ug/L		98	70 - 130	1	20	
Di(2-ethylhexyl)adipate	1.98	2.22		ug/L		112	70 - 130	0	20	
Dibenz(a,h)anthracene	1.98	2.19		ug/L		110	70 - 130	5	20	
Diclorvos (DDVP)	1.98	2.74	*+	ug/L		138	70 - 130	0	20	
Dieldrin	1.98	2.20		ug/L		111	70 - 130	1	20	
Diethylphthalate	1.98	2.21		ug/L		112	70 - 130	4	20	
Dimethylphthalate	1.98	2.18		ug/L		110	70 - 130	4	20	
Di-n-butyl phthalate	3.97	4.71		ug/L		119	70 - 130	0	20	
Di-n-octyl phthalate	1.98	1.93		ug/L		97	70 - 130	4	20	
Endosulfan I (Alpha)	1.98	1.84		ug/L		93	70 - 130	1	20	
Endosulfan II (Beta)	1.98	2.17		ug/L		109	70 - 130	4	20	
Endosulfan sulfate	1.98	2.47		ug/L		124	70 - 130	1	20	
Endrin	1.98	2.38		ug/L		120	70 - 130	4	20	
Endrin aldehyde	1.98	2.26		ug/L		114	70 - 130	6	20	
EPTC	1.98	2.20		ug/L		111	70 - 130	4	20	
Fluoranthene	1.98	2.33		ug/L		117	70 - 130	1	20	
Fluorene	1.98	2.14		ug/L		108	70 - 130	4	20	
gamma-Chlordane	1.98	2.28		ug/L		115	70 - 130	3	20	
Heptachlor	1.98	2.23		ug/L		112	70 - 130	2	20	
Heptachlor epoxide (isomer B)	1.98	2.31		ug/L		117	70 - 130	3	20	
Hexachlorobenzene	1.98	2.08		ug/L		105	70 - 130	2	20	
Hexachlorocyclopentadiene	1.98	2.31		ug/L		117	70 - 130	6	20	
Indeno[1,2,3-cd]pyrene	1.98	2.04		ug/L		103	70 - 130	1	20	
Isophorone	1.98	2.22		ug/L		112	70 - 130	4	20	
Lindane	1.98	2.08		ug/L		105	70 - 130	3	20	
Malathion	1.98	2.37		ug/L		119	70 - 130	1	20	
Methoxychlor	1.98	2.32		ug/L		117	70 - 130	2	20	
Metolachlor	1.98	2.44		ug/L		123	70 - 130	2	20	
Molinate	1.98	2.34		ug/L		118	70 - 130	1	20	
Naphthalene	1.98	1.89		ug/L		95	70 - 130	3	20	
Parathion	1.98	2.70	*+	ug/L		136	70 - 130	1	20	
Pendimethalin (Penoxaline)	1.98	2.57		ug/L		129	70 - 130	1	20	
Phenanthrene	1.98	1.87		ug/L		94	70 - 130	1	20	
Propachlor	1.98	2.38		ug/L		120	70 - 130	3	20	
Pyrene	1.98	2.34		ug/L		118	70 - 130	0	20	

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: LCSD 380-53334/24-A
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53334

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Simazine	1.98	2.49		ug/L		126	70 - 130	2	20
Terbacil	1.98	2.45		ug/L		123	70 - 130	1	20
Terbuthylazine	1.98	2.66	*+	ug/L		134	70 - 130	4	20
Thiobencarb	1.98	2.30		ug/L		116	70 - 130	1	20
trans-Nonachlor	1.98	2.47		ug/L		125	70 - 130	3	20
Trifluralin	1.98	2.37		ug/L		119	70 - 130	3	20

Surrogate	LCSD %Recovery	LCSD Qualifier	Limits
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	93		70 - 130
Triphenylphosphate	123		70 - 130

Lab Sample ID: MRL 380-53334/22-A
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53334

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0990	0.108		ug/L		109	50 - 150
2,4'-DDD	0.0990	0.145		ug/L		146	50 - 150
2,4'-DDE	0.0990	0.118		ug/L		119	50 - 150
2,4'-DDT	0.0990	0.131		ug/L		132	50 - 150
2,4-Dinitrotoluene	0.0990	0.117		ug/L		119	50 - 150
2,6-Dinitrotoluene	0.0990	0.112		ug/L		113	50 - 150
2-Methylnaphthalene	0.0990	0.103		ug/L		104	50 - 150
4,4'-DDD	0.0990	0.118		ug/L		120	50 - 150
4,4'-DDE	0.0990	0.117		ug/L		118	50 - 150
4,4'-DDT	0.0990	0.145		ug/L		146	50 - 150
Acenaphthene	0.0990	0.0969	J	ug/L		98	50 - 150
Acenaphthylene	0.0990	0.0927	J	ug/L		94	50 - 150
Acetochlor	0.0495	0.0531	J	ug/L		107	50 - 150
Alachlor	0.0495	0.0568		ug/L		115	50 - 150
alpha-BHC	0.0990	0.100		ug/L		101	50 - 150
alpha-Chlordane	0.0248	<0.029		ug/L		93	50 - 150
Anthracene	0.0198	<0.019		ug/L		92	50 - 150
Atrazine	0.0495	0.0733		ug/L		148	50 - 150
Benz(a)anthracene	0.0495	0.0524		ug/L		106	50 - 150
Benzo[a]pyrene	0.0198	0.0186	J	ug/L		94	50 - 150
Benzo[b]fluoranthene	0.0198	0.0172	J	ug/L		87	50 - 150
Benzo[g,h,i]perylene	0.0495	0.0382	J	ug/L		77	50 - 150
Benzo[k]fluoranthene	0.0198	0.0206		ug/L		104	50 - 150
beta-BHC	0.0990	0.110		ug/L		111	50 - 150
Bis(2-ethylhexyl) phthalate	0.594	0.657		ug/L		111	50 - 150
Bromacil	0.0990	0.143		ug/L		144	50 - 150
Butachlor	0.0495	0.0614		ug/L		124	50 - 150
Butylbenzylphthalate	0.149	0.211	J	ug/L		142	50 - 150
Chlorobenzilate	0.0990	0.146		ug/L		147	50 - 150
Chloroneb	0.0990	0.114		ug/L		116	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0990	0.148		ug/L		150	50 - 150

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: MRL 380-53334/22-A
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53334

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chlorpyrifos	0.0495	0.0597		ug/L		121	50 - 150
Chrysene	0.0198	0.0218		ug/L		110	50 - 150
delta-BHC	0.0990	0.115		ug/L		116	50 - 150
Di(2-ethylhexyl)adipate	0.297	0.405	J	ug/L		136	50 - 150
Dibenz(a,h)anthracene	0.0495	0.0386	J	ug/L		78	50 - 150
Diclorvos (DDVP)	0.0495	0.0971	^3+	ug/L		196	50 - 150
Dieldrin	0.0990	0.123	J	ug/L		125	50 - 150
Diethylphthalate	0.149	0.197	J	ug/L		133	50 - 150
Dimethylphthalate	0.297	0.308	J	ug/L		104	50 - 150
Di-n-butyl phthalate	0.297	0.424	J	ug/L		143	49 - 243
Di-n-octyl phthalate	0.0990	0.114		ug/L		115	50 - 150
Endosulfan I (Alpha)	0.0990	0.0856	J	ug/L		86	50 - 150
Endosulfan II (Beta)	0.0990	0.136		ug/L		137	50 - 150
Endosulfan sulfate	0.0990	0.136		ug/L		138	50 - 150
Endrin	0.0990	0.145		ug/L		147	50 - 150
Endrin aldehyde	0.0990	0.148		ug/L		149	50 - 150
EPTC	0.0990	0.110		ug/L		111	50 - 150
Fluoranthene	0.0495	0.0567	J	ug/L		115	50 - 150
Fluorene	0.0495	0.0504		ug/L		102	50 - 150
gamma-Chlordane	0.0248	0.0255	J	ug/L		103	50 - 150
Heptachlor	0.0396	0.0497		ug/L		126	50 - 150
Heptachlor epoxide (isomer B)	0.0495	0.0497	J	ug/L		100	50 - 150
Hexachlorobenzene	0.0495	0.0502		ug/L		101	50 - 150
Hexachlorocyclopentadiene	0.0495	0.0575		ug/L		116	50 - 150
Indeno[1,2,3-cd]pyrene	0.0495	0.0385	J	ug/L		78	50 - 150
Isophorone	0.0990	0.118	J	ug/L		120	50 - 150
Lindane	0.0396	0.0397	J	ug/L		100	50 - 150
Malathion	0.0990	0.127		ug/L		129	50 - 150
Methoxychlor	0.0990	0.133		ug/L		135	50 - 150
Metolachlor	0.0495	0.0648		ug/L		131	50 - 150
Molinate	0.0990	0.118		ug/L		119	50 - 150
Naphthalene	0.0990	0.105	J	ug/L		106	50 - 150
Parathion	0.0990	0.145		ug/L		146	50 - 150
Pendimethalin (Penoxaline)	0.0990	0.133		ug/L		134	50 - 150
Phenanthrene	0.0198	0.0215	J	ug/L		109	50 - 150
Propachlor	0.0495	0.0559		ug/L		113	50 - 150
Pyrene	0.0495	0.0537		ug/L		109	50 - 150
Simazine	0.0495	0.0680		ug/L		137	50 - 150
Terbacil	0.0990	0.128		ug/L		129	50 - 150
Terbutylazine	0.0990	0.117		ug/L		118	50 - 150
Thiobencarb	0.0990	0.128	J	ug/L		129	50 - 150
trans-Nonachlor	0.0248	0.0260	J	ug/L		105	50 - 150
Trifluralin	0.0990	0.128		ug/L		129	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	98		70 - 130
Perylene-d12	90		70 - 130
Triphenylphosphate	122		70 - 130

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: 380-60192-M-1-A MS

Matrix: Water

Analysis Batch: 53407

Client Sample ID: Matrix Spike

Prep Type: Total/NA

Prep Batch: 53334

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.098		1.97	1.88		ug/L		95	70 - 130
2,4'-DDD	<0.098		1.97	2.25		ug/L		114	70 - 130
2,4'-DDE	<0.098		1.97	2.06		ug/L		105	70 - 130
2,4'-DDT	<0.098		1.97	2.27		ug/L		115	70 - 130
2,4-Dinitrotoluene	<0.098		1.97	2.10		ug/L		107	70 - 130
2,6-Dinitrotoluene	<0.098		1.97	2.18		ug/L		110	70 - 130
2-Methylnaphthalene	<0.098		1.97	1.85		ug/L		94	70 - 130
4,4'-DDD	<0.098		1.97	2.24		ug/L		114	70 - 130
4,4'-DDE	<0.098		1.97	2.00		ug/L		102	70 - 130
4,4'-DDT	<0.098		1.97	2.32		ug/L		117	70 - 130
Acenaphthene	<0.098		1.97	1.81		ug/L		92	70 - 130
Acenaphthylene	<0.098		1.97	1.95		ug/L		99	70 - 130
Acetochlor	<0.098		1.97	2.43		ug/L		123	70 - 130
Alachlor	<0.049		1.97	2.19		ug/L		111	70 - 130
alpha-BHC	<0.098		1.97	1.96		ug/L		99	70 - 130
alpha-Chlordane	<0.049		1.97	2.17		ug/L		110	70 - 130
Anthracene	<0.020	F1	1.97	1.19	F1	ug/L		60	70 - 130
Atrazine	<0.049		1.97	2.45		ug/L		124	70 - 130
Benz(a)anthracene	<0.049		1.97	2.11		ug/L		107	70 - 130
Benzo[a]pyrene	<0.020		1.97	1.65		ug/L		84	70 - 130
Benzo[b]fluoranthene	<0.020		1.97	2.09		ug/L		106	70 - 130
Benzo[g,h,i]perylene	<0.049		1.97	1.93		ug/L		98	70 - 130
Benzo[k]fluoranthene	<0.020		1.97	2.10		ug/L		107	70 - 130
beta-BHC	<0.098		1.97	2.10		ug/L		106	70 - 130
Bis(2-ethylhexyl) phthalate	<0.59		1.97	1.60		ug/L		81	70 - 130
Bromacil	<0.098		1.97	2.44		ug/L		124	70 - 130
Butachlor	<0.049		1.97	2.40		ug/L		122	70 - 130
Butylbenzylphthalate	<0.49		1.97	2.18		ug/L		111	70 - 130
Chlorobenzilate	<0.098		1.97	2.32		ug/L		117	70 - 130
Chloroneb	<0.098		1.97	1.97		ug/L		100	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.098		1.97	2.18		ug/L		110	70 - 130
Chlorpyrifos	<0.049		1.97	2.36		ug/L		120	70 - 130
Chrysene	<0.020		1.97	1.93		ug/L		98	70 - 130
delta-BHC	<0.098		1.97	1.91		ug/L		97	70 - 130
Di(2-ethylhexyl)adipate	<0.59		1.97	1.87		ug/L		90	70 - 130
Dibenz(a,h)anthracene	<0.049		1.97	1.99		ug/L		101	70 - 130
Diclorvos (DDVP)	<0.049	F1 ^3+ **	1.97	2.59	F1	ug/L		132	70 - 130
Dieldrin	<0.20		1.97	2.21		ug/L		112	70 - 130
Diethylphthalate	<0.49		1.97	2.10		ug/L		107	70 - 130
Dimethylphthalate	<0.49		1.97	2.10		ug/L		106	70 - 130
Di-n-butyl phthalate	<0.98		3.94	4.58		ug/L		114	70 - 130
Di-n-octyl phthalate	<0.098		1.97	1.61		ug/L		82	70 - 130
Endosulfan I (Alpha)	<0.098		1.97	1.79		ug/L		91	70 - 130
Endosulfan II (Beta)	<0.098		1.97	2.19		ug/L		111	70 - 130
Endosulfan sulfate	<0.098		1.97	2.44		ug/L		124	70 - 130
Endrin	<0.098		1.97	2.38		ug/L		121	70 - 130
Endrin aldehyde	<0.098		1.97	2.00		ug/L		101	70 - 130
EPTC	<0.098		1.97	2.12		ug/L		108	70 - 130

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QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: 380-60192-M-1-A MS
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53334

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS Qualifier	Unit	D	%Rec	%Rec Limits
	Result			Result					
Fluoranthene	<0.098		1.97	2.27		ug/L		115	70 - 130
Fluorene	<0.049		1.97	2.04		ug/L		104	70 - 130
gamma-Chlordane	<0.049		1.97	2.19		ug/L		111	70 - 130
Heptachlor	<0.039		1.97	2.19		ug/L		111	70 - 130
Heptachlor epoxide (isomer B)	<0.049		1.97	2.26		ug/L		115	70 - 130
Hexachlorobenzene	<0.049		1.97	2.03		ug/L		103	70 - 130
Hexachlorocyclopentadiene	<0.049		1.97	2.46		ug/L		125	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.97	1.95		ug/L		99	70 - 130
Isophorone	<0.49		1.97	2.15		ug/L		109	70 - 130
Lindane	<0.039		1.97	1.98		ug/L		100	70 - 130
Malathion	<0.098		1.97	2.33		ug/L		118	70 - 130
Methoxychlor	<0.098		1.97	2.31		ug/L		117	70 - 130
Metolachlor	<0.049		1.97	2.37		ug/L		120	70 - 130
Molinate	<0.098		1.97	2.35		ug/L		119	70 - 130
Naphthalene	<0.29		1.97	1.85		ug/L		94	70 - 130
Parathion	<0.098	F1 *+	1.97	2.69	F1	ug/L		137	70 - 130
Pendimethalin (Penoxaline)	<0.098	F1	1.97	2.58	F1	ug/L		131	70 - 130
Phenanthrene	<0.039		1.97	1.81		ug/L		92	70 - 130
Propachlor	<0.049		1.97	2.29		ug/L		116	70 - 130
Pyrene	<0.049		1.97	2.31		ug/L		117	70 - 130
Simazine	<0.049		1.97	2.46		ug/L		125	70 - 130
Terbacil	<0.098		1.97	2.47		ug/L		125	70 - 130
Terbutylazine	<0.098	*+	1.97	2.55		ug/L		129	70 - 130
Thiobencarb	<0.20		1.97	2.30		ug/L		117	70 - 130
trans-Nonachlor	<0.049		1.97	2.30		ug/L		117	70 - 130
Trifluralin	<0.098		1.97	2.35		ug/L		119	70 - 130

Surrogate	MS MS		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	99		70 - 130
Perylene-d12	93		70 - 130
Triphenylphosphate	126		70 - 130

Lab Sample ID: 380-60205-AF-1-A DU
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 53334

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	
							RPD	Limit
1-Methylnaphthalene	<0.099		<0.099		ug/L		NC	20
2,4'-DDD	<0.099		<0.099		ug/L		NC	20
2,4'-DDE	<0.099		<0.099		ug/L		NC	20
2,4'-DDT	<0.099		<0.099		ug/L		NC	20
2,4-Dinitrotoluene	<0.099		<0.099		ug/L		NC	20
2,6-Dinitrotoluene	<0.099		<0.099		ug/L		NC	20
2-Methylnaphthalene	<0.099		<0.099		ug/L		NC	20
4,4'-DDD	<0.099		<0.099		ug/L		NC	20
4,4'-DDE	<0.099		<0.099		ug/L		NC	20
4,4'-DDT	<0.099		<0.099		ug/L		NC	20
Acenaphthene	<0.099		<0.099		ug/L		NC	20

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QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: 380-60205-AF-1-A DU
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 53334

Analyte	Sample	Sample Qualifier	DU	DU	Unit	D	RPD	Limit
	Result		Result	Qualifier				
Acenaphthylene	<0.099		<0.099		ug/L		NC	20
Acetochlor	<0.099		<0.099		ug/L		NC	20
Alachlor	<0.049		<0.049		ug/L		NC	20
alpha-BHC	<0.099		<0.099		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	<0.099		<0.099		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.59		<0.59		ug/L		NC	20
Bromacil	<0.099		<0.099		ug/L		NC	20
Butachlor	<0.049		<0.049		ug/L		NC	20
Butylbenzylphthalate	<0.49		<0.49		ug/L		NC	20
Chlorobenzilate	<0.099		<0.099		ug/L		NC	20
Chloroneb	<0.099		<0.099		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.099		<0.099		ug/L		NC	20
Chlorpyrifos	<0.049		<0.049		ug/L		NC	20
Chrysene	<0.020		<0.020		ug/L		NC	20
delta-BHC	<0.099		<0.099		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	^3+ **	<0.049	*+	ug/L		NC	20
Dieldrin	<0.20		<0.20		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	<0.99		<0.99		ug/L		NC	20
Di-n-octyl phthalate	<0.099		<0.099		ug/L		NC	20
Endosulfan I (Alpha)	<0.099		<0.099		ug/L		NC	20
Endosulfan II (Beta)	<0.099		<0.099		ug/L		NC	20
Endosulfan sulfate	<0.099		<0.099		ug/L		NC	20
Endrin	<0.099		<0.099		ug/L		NC	20
Endrin aldehyde	<0.099		<0.099		ug/L		NC	20
EPTC	<0.099		<0.099		ug/L		NC	20
Fluoranthene	<0.099		<0.099		ug/L		NC	20
Fluorene	<0.049		<0.049		ug/L		NC	20
gamma-Chlordane	<0.049		<0.049		ug/L		NC	20
Heptachlor	<0.040		<0.039		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.049		<0.049		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	<0.49		<0.49		ug/L		NC	20
Lindane	<0.040		<0.039		ug/L		NC	20
Malathion	<0.099		<0.099		ug/L		NC	20
Methoxychlor	<0.099		<0.099		ug/L		NC	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: 380-60205-AF-1-A DU
Matrix: Water
Analysis Batch: 53407

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 53334

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	Limit
	Result	Qualifier	Result	Qualifier				
Metolachlor	<0.049		<0.049		ug/L		NC	20
Molinate	<0.099		<0.099		ug/L		NC	20
Naphthalene	<0.30		<0.30		ug/L		NC	20
Parathion	<0.099	*+	<0.099	*+	ug/L		NC	20
Pendimethalin (Penoxaline)	<0.099		<0.099		ug/L		NC	20
Phenanthrene	<0.040		<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	<0.099		<0.099		ug/L		NC	20
Terbutylazine	<0.099	*+	<0.099	*+	ug/L		NC	20
Thiobencarb	<0.20		<0.20		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	<0.099		<0.099		ug/L		NC	20

Surrogate	DU	DU	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	96		70 - 130
Perylene-d12	75		70 - 130
Triphenylphosphate	122		70 - 130

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

Lab Sample ID: MBL 380-54980/21-A
Matrix: Water
Analysis Batch: 55204

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54980

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
11-Chloroeicosafuoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1

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QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: MBL 380-54980/21-A
Matrix: Water
Analysis Batch: 55204

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 54980

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<0.25		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0	ng/L		09/08/23 11:01	09/11/23 13:32	1

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3 HFPO-DA	75		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C6 PFDA	86		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C5 PFHxA	82		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C4 PFHpA	80		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C8 PFOA	84		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C9 PFNA	88		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C7 PFUnA	77		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C2 PFDoA	84		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C4 PFBA	87		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C5 PFPeA	93		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C3 PFBS	82		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C3 PFHxS	83		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C8 PFOS	85		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C2-4:2-FTS	91		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C2-6:2-FTS	87		50 - 200	09/08/23 11:01	09/11/23 13:32	1
13C2-8:2-FTS	93		50 - 200	09/08/23 11:01	09/11/23 13:32	1

Lab Sample ID: LCS 380-54980/23-A
Matrix: Water
Analysis Batch: 55204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54980

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.0	50.4		ng/L		84	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.0	48.1		ng/L		80	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.0	53.9		ng/L		90	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.0	56.4		ng/L		94	70 - 130

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QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: LCS 380-54980/23-A
Matrix: Water
Analysis Batch: 55204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54980

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorobutanesulfonic acid (PFBS)	60.0	52.0		ng/L		87	70 - 130
Perfluorodecanoic acid (PFDA)	60.0	52.2		ng/L		87	70 - 130
Perfluorododecanoic acid (PFDoA)	60.0	50.7		ng/L		85	70 - 130
Perfluoroheptanoic acid (PFHpA)	60.0	53.0		ng/L		88	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	60.0	51.7		ng/L		86	70 - 130
Perfluorohexanoic acid (PFHxA)	60.0	49.7		ng/L		83	70 - 130
Perfluorononanoic acid (PFNA)	60.0	54.5		ng/L		91	70 - 130
Perfluorooctanesulfonic acid (PFOS)	60.0	50.1		ng/L		84	70 - 130
Perfluorooctanoic acid (PFOA)	60.0	50.5		ng/L		84	70 - 130
Perfluoroundecanoic acid (PFUnA)	60.0	51.1		ng/L		85	70 - 130
Perfluorobutanoic acid (PFBA)	60.0	50.8		ng/L		85	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.0	54.0		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.0	50.5		ng/L		84	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.0	54.0		ng/L		90	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.0	45.6		ng/L		76	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	60.0	52.3		ng/L		87	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.0	54.7		ng/L		91	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.0	49.6		ng/L		83	70 - 130
Perfluoropentanoic acid (PFPeA)	60.0	50.8		ng/L		85	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	60.0	51.8		ng/L		86	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	60.0	51.7		ng/L		86	70 - 130

Isotope Dilution	LCS %Recovery	LCS Qualifier	Limits
13C3 HFPO-DA	90		50 - 200
13C6 PFDA	95		50 - 200
13C5 PFHxA	96		50 - 200
13C4 PFHpA	94		50 - 200
13C8 PFOA	97		50 - 200
13C9 PFNA	98		50 - 200
13C7 PFUnA	92		50 - 200
13C2 PFDoA	92		50 - 200
13C4 PFBA	92		50 - 200
13C5 PFPeA	105		50 - 200
13C3 PFBS	89		50 - 200
13C3 PFHxS	89		50 - 200
13C8 PFOS	92		50 - 200
13C2-4:2-FTS	84		50 - 200
13C2-6:2-FTS	85		50 - 200

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: LCS 380-54980/23-A
Matrix: Water
Analysis Batch: 55204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54980

<i>Isotope Dilution</i>	<i>%Recovery</i>	<i>Qualifier</i>	<i>Limits</i>
13C2-8:2-FTS	78		50 - 200

Lab Sample ID: LCSD 380-54980/24-A
Matrix: Water
Analysis Batch: 55204

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 54980

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	60.0	54.4		ng/L		91	70 - 130	8	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	60.0	51.5		ng/L		86	70 - 130	7	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	60.0	56.0		ng/L		93	70 - 130	4	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	60.0	59.2		ng/L		99	70 - 130	5	30
Perfluorobutanesulfonic acid (PFBS)	60.0	55.0		ng/L		92	70 - 130	6	30
Perfluorodecanoic acid (PFDA)	60.0	57.5		ng/L		96	70 - 130	10	30
Perfluorododecanoic acid (PFDoA)	60.0	55.8		ng/L		93	70 - 130	10	30
Perfluoroheptanoic acid (PFHpA)	60.0	55.8		ng/L		93	70 - 130	5	30
Perfluorohexanesulfonic acid (PFHxS)	60.0	54.8		ng/L		91	70 - 130	6	30
Perfluorohexanoic acid (PFHxA)	60.0	51.4		ng/L		86	70 - 130	3	30
Perfluorononanoic acid (PFNA)	60.0	55.6		ng/L		93	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	60.0	51.8		ng/L		86	70 - 130	3	30
Perfluorooctanoic acid (PFOA)	60.0	55.7		ng/L		93	70 - 130	10	30
Perfluoroundecanoic acid (PFUnA)	60.0	54.3		ng/L		90	70 - 130	6	30
Perfluorobutanoic acid (PFBA)	60.0	54.5		ng/L		91	70 - 130	7	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	60.0	58.5		ng/L		98	70 - 130	8	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	60.0	54.3		ng/L		90	70 - 130	7	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	60.0	56.4		ng/L		94	70 - 130	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	60.0	49.2		ng/L		82	70 - 130	8	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	60.0	53.3		ng/L		89	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	60.0	57.1		ng/L		95	70 - 130	4	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	60.0	53.9		ng/L		90	70 - 130	8	30
Perfluoropentanoic acid (PFPeA)	60.0	51.7		ng/L		86	70 - 130	2	30
Perfluoroheptanesulfonic acid (PFHpS)	60.0	53.9		ng/L		90	70 - 130	4	30
Perfluoropentanesulfonic acid (PFPeS)	60.0	55.8		ng/L		93	70 - 130	8	30

QC Sample Results

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

Job ID: 380-60464-1

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

Isotope Dilution	LCSD		Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	91		50 - 200
13C6 PFDA	93		50 - 200
13C5 PFHxA	95		50 - 200
13C4 PFHpA	91		50 - 200
13C8 PFOA	94		50 - 200
13C9 PFNA	100		50 - 200
13C7 PFUnA	91		50 - 200
13C2 PFDoA	93		50 - 200
13C4 PFBA	91		50 - 200
13C5 PFPeA	103		50 - 200
13C3 PFBS	93		50 - 200
13C3 PFHxS	92		50 - 200
13C8 PFOS	96		50 - 200
13C2-4:2-FTS	85		50 - 200
13C2-6:2-FTS	84		50 - 200
13C2-8:2-FTS	77		50 - 200

Lab Sample ID: MRL 380-54980/22-A
Matrix: Water
Analysis Batch: 55204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54980

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.00	1.84	J	ng/L		92	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.00	1.79	J	ng/L		89	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.00	1.86	J	ng/L		93	50 - 150
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	1.99	J	ng/L		100	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.00	1.81	J	ng/L		91	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	1.86	J	ng/L		93	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	1.91	J	ng/L		95	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.00	1.81	J	ng/L		91	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	1.96	J	ng/L		98	50 - 150
Perfluorononanoic acid (PFNA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.00	1.77	J	ng/L		89	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	1.92	J	ng/L		96	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	1.80	J	ng/L		90	50 - 150
Perfluorobutanoic acid (PFBA)	2.00	2.01	J	ng/L		100	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.00	1.97	J	ng/L		98	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.00	1.75	J	ng/L		88	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.00	2.16	J	ng/L		108	50 - 150

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: MRL 380-54980/22-A
Matrix: Water
Analysis Batch: 55204

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 54980

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Nonafluoro-3,6-dioxahheptanoic acid (NFDHA)	2.00	1.71	J	ng/L		85	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	2.00	1.84	J	ng/L		92	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.00	2.01	J	ng/L		100	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.00	1.91	J	ng/L		95	50 - 150
Perfluoropentanoic acid (PFPeA)	2.00	1.98	J	ng/L		99	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.00	1.94	J	ng/L		97	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.00	1.79	J	ng/L		90	50 - 150

Isotope Dilution	MRL %Recovery	MRL Qualifier	Limits
13C3 HFPO-DA	83		50 - 200
13C6 PFDA	87		50 - 200
13C5 PFHxA	93		50 - 200
13C4 PFHpA	91		50 - 200
13C8 PFOA	91		50 - 200
13C9 PFNA	93		50 - 200
13C7 PFUnA	82		50 - 200
13C2 PFDoA	86		50 - 200
13C4 PFBA	92		50 - 200
13C5 PFPeA	96		50 - 200
13C3 PFBS	95		50 - 200
13C3 PFHxS	93		50 - 200
13C8 PFOS	93		50 - 200
13C2-4:2-FTS	95		50 - 200
13C2-6:2-FTS	92		50 - 200
13C2-8:2-FTS	83		50 - 200

Lab Sample ID: 380-60464-1 MS
Matrix: Drinking Water
Analysis Batch: 55204

Client Sample ID: MOANALUA WELLS
Prep Type: Total/NA
Prep Batch: 54980

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	55.3		ng/L		92	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.1	52.5		ng/L		87	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.1	55.8		ng/L		93	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.1	58.3		ng/L		97	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.1	53.3		ng/L		88	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		60.1	55.8		ng/L		93	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		60.1	55.5		ng/L		92	70 - 130

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QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: 380-60464-1 MS
Matrix: Drinking Water
Analysis Batch: 55204

Client Sample ID: MOANALUA WELLS
Prep Type: Total/NA
Prep Batch: 54980

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluoroheptanoic acid (PFHpA)	<2.0		60.1	58.1		ng/L		96	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.1	55.8		ng/L		91	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		60.1	53.7		ng/L		88	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		60.1	54.5		ng/L		91	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.1	55.0		ng/L		89	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		60.1	53.7		ng/L		88	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		60.1	54.5		ng/L		91	70 - 130
Perfluorobutanoic acid (PFBA)	<2.0		60.1	55.4		ng/L		89	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.1	60.0		ng/L		100	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.1	54.0		ng/L		90	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.1	60.4		ng/L		101	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.1	50.0		ng/L		83	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.1	54.0		ng/L		90	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.1	51.3		ng/L		85	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.1	53.0		ng/L		88	70 - 130
Perfluoropentanoic acid (PFPeA)	<2.0		60.1	55.9		ng/L		91	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.1	57.5		ng/L		96	70 - 130
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.1	53.4		ng/L		89	70 - 130

Isotope Dilution	MS %Recovery	MS Qualifier	MS Limits
13C3 HFPO-DA	93		50 - 200
13C6 PFDA	93		50 - 200
13C5 PFHxA	95		50 - 200
13C4 PFHpA	90		50 - 200
13C8 PFOA	97		50 - 200
13C9 PFNA	100		50 - 200
13C7 PFUnA	92		50 - 200
13C2 PFDoA	92		50 - 200
13C4 PFBA	97		50 - 200
13C5 PFPeA	102		50 - 200
13C3 PFBS	96		50 - 200
13C3 PFHxS	94		50 - 200
13C8 PFOS	95		50 - 200
13C2-4:2-FTS	89		50 - 200
13C2-6:2-FTS	87		50 - 200
13C2-8:2-FTS	80		50 - 200

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: 380-60464-1 MSD
Matrix: Drinking Water
Analysis Batch: 55204

Client Sample ID: MOANALUA WELLS
Prep Type: Total/NA
Prep Batch: 54980

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		60.1	54.5		ng/L		91	70 - 130	1	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		60.1	52.4		ng/L		87	70 - 130	0	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		60.1	55.9		ng/L		93	70 - 130	0	30
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		60.1	60.1		ng/L		100	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		60.1	55.9		ng/L		92	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	<2.0		60.1	57.6		ng/L		96	70 - 130	3	30
Perfluorododecanoic acid (PFDoA)	<2.0		60.1	54.8		ng/L		91	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		60.1	55.8		ng/L		92	70 - 130	4	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		60.1	57.7		ng/L		94	70 - 130	3	30
Perfluorohexanoic acid (PFHxA)	<2.0		60.1	55.3		ng/L		90	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		60.1	58.2		ng/L		97	70 - 130	7	30
Perfluorooctanesulfonic acid (PFOS)	<2.0		60.1	55.8		ng/L		90	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		60.1	55.6		ng/L		91	70 - 130	4	30
Perfluoroundecanoic acid (PFUnA)	<2.0		60.1	54.2		ng/L		90	70 - 130	0	30
Perfluorobutanoic acid (PFBA)	<2.0		60.1	56.5		ng/L		91	70 - 130	2	30
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		60.1	59.2		ng/L		98	70 - 130	1	30
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		60.1	56.6		ng/L		94	70 - 130	5	30
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		60.1	58.3		ng/L		97	70 - 130	4	30
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		60.1	50.3		ng/L		84	70 - 130	1	30
Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)	<2.0		60.1	55.2		ng/L		92	70 - 130	2	30
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		60.1	52.8		ng/L		88	70 - 130	3	30
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		60.1	53.3		ng/L		89	70 - 130	1	30
Perfluoropentanoic acid (PFPeA)	<2.0		60.1	55.2		ng/L		90	70 - 130	1	30
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		60.1	56.3		ng/L		94	70 - 130	2	30
Perfluoropentanesulfonic acid (PFPeS)	<2.0		60.1	59.7		ng/L		99	70 - 130	11	30

Isotope Dilution	MSD	MSD	Limits
	%Recovery	Qualifier	
13C3 HFPO-DA	89		50 - 200
13C6 PFDA	90		50 - 200
13C5 PFHxA	92		50 - 200
13C4 PFHpA	90		50 - 200
13C8 PFOA	93		50 - 200
13C9 PFNA	94		50 - 200

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: 380-60464-1 MSD
Matrix: Drinking Water
Analysis Batch: 55204

Client Sample ID: MOANALUA WELLS
Prep Type: Total/NA
Prep Batch: 54980

Isotope Dilution	MSD		Limits
	%Recovery	Qualifier	
13C7 PFUnA	88		50 - 200
13C2 PFDoA	90		50 - 200
13C4 PFBA	92		50 - 200
13C5 PFPeA	102		50 - 200
13C3 PFBS	95		50 - 200
13C3 PFHxS	93		50 - 200
13C8 PFOS	97		50 - 200
13C2-4:2-FTS	88		50 - 200
13C2-6:2-FTS	86		50 - 200
13C2-8:2-FTS	83		50 - 200

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

Lab Sample ID: MBL 380-53874/23-A
Matrix: Water
Analysis Batch: 54136

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 53874

Analyte	MBL		RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		08/31/23 08:16	09/01/23 16:45	1

Surrogate	MBL		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
d5-NEtFOSAA	115		70 - 130	08/31/23 08:16	09/01/23 16:45	1
13C2 PFHxA	106		70 - 130	08/31/23 08:16	09/01/23 16:45	1
13C2 PFDA	120		70 - 130	08/31/23 08:16	09/01/23 16:45	1
13C3-GenX	104		70 - 130	08/31/23 08:16	09/01/23 16:45	1

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: LCS 380-53874/25-A
Matrix: Water
Analysis Batch: 54136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53874

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.1	48.0		ng/L		96	70 - 130
Perfluorooctanesulfonic acid (PFOS)	46.4	49.5		ng/L		107	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.1	50.2		ng/L		100	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.1	51.9		ng/L		104	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.1	51.1		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	50.1	53.3		ng/L		106	70 - 130
Perfluorododecanoic acid (PFDoA)	50.1	49.6		ng/L		99	70 - 130
Perfluorooctanoic acid (PFOA)	50.1	52.5		ng/L		105	70 - 130
Perfluorodecanoic acid (PFDA)	50.1	51.6		ng/L		103	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	45.7	50.3		ng/L		110	70 - 130
Perfluorobutanesulfonic acid (PFBS)	44.3	48.1		ng/L		109	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.1	52.6		ng/L		105	70 - 130
Perfluorononanoic acid (PFNA)	50.1	52.8		ng/L		105	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.1	47.9		ng/L		96	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.1	50.2		ng/L		100	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	46.8	48.4		ng/L		103	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47.3	48.7		ng/L		103	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.3	48.1		ng/L		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	106		70 - 130
13C2 PFHxA	111		70 - 130
13C2 PFDA	108		70 - 130
13C3-GenX	109		70 - 130

Lab Sample ID: LCSD 380-53874/26-A
Matrix: Water
Analysis Batch: 54136

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53874

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.2	48.3		ng/L		96	70 - 130	0	30
Perfluorooctanesulfonic acid (PFOS)	46.5	49.1		ng/L		106	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	50.2	52.6		ng/L		105	70 - 130	5	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.2	52.2		ng/L		104	70 - 130	1	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: LCSD 380-53874/26-A
Matrix: Water
Analysis Batch: 54136

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 53874

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	50.2	50.5		ng/L		101	70 - 130	1	30
Perfluorohexanoic acid (PFHxA)	50.2	52.7		ng/L		105	70 - 130	1	30
Perfluorododecanoic acid (PFDoA)	50.2	53.0		ng/L		106	70 - 130	7	30
Perfluorooctanoic acid (PFOA)	50.2	55.3		ng/L		110	70 - 130	5	30
Perfluorodecanoic acid (PFDA)	50.2	53.3		ng/L		106	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	45.8	48.9		ng/L		107	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	44.4	47.0		ng/L		106	70 - 130	2	30
Perfluoroheptanoic acid (PFHpA)	50.2	51.4		ng/L		102	70 - 130	2	30
Perfluorononanoic acid (PFNA)	50.2	53.8		ng/L		107	70 - 130	2	30
Perfluorotetradecanoic acid (PFTA)	50.2	50.8		ng/L		101	70 - 130	6	30
Perfluorotridecanoic acid (PFTrDA)	50.2	53.3		ng/L		106	70 - 130	6	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	46.9	49.4		ng/L		105	70 - 130	2	30
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47.4	48.3		ng/L		102	70 - 130	1	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.4	51.1		ng/L		108	70 - 130	6	30

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
d5-NEtFOSAA	112		70 - 130
13C2 PFHxA	119		70 - 130
13C2 PFDA	114		70 - 130
13C3-GenX	116		70 - 130

Lab Sample ID: MRL 380-53874/24-A
Matrix: Water
Analysis Batch: 54136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53874

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.00	2.00	J	ng/L		100	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.86	2.11	J	ng/L		114	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.00	2.19	J	ng/L		109	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.00	2.01	J	ng/L		100	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NETFOSAA)	2.00	2.16	J	ng/L		108	50 - 150
Perfluorohexanoic acid (PFHxA)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorododecanoic acid (PFDoA)	2.00	2.15	J	ng/L		107	50 - 150
Perfluorooctanoic acid (PFOA)	2.00	2.39	J	ng/L		119	50 - 150
Perfluorodecanoic acid (PFDA)	2.00	2.24	J	ng/L		112	50 - 150

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QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: MRL 380-53874/24-A
Matrix: Water
Analysis Batch: 54136

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 53874

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorohexanesulfonic acid (PFHxS)	1.83	2.20	J	ng/L		120	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.77	1.82	J	ng/L		103	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.00	2.24	J	ng/L		112	50 - 150
Perfluorononanoic acid (PFNA)	2.00	2.31	J	ng/L		115	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.00	2.14	J	ng/L		107	50 - 150
Perfluorotridecanoic acid (PFTTrDA)	2.00	2.15	J	ng/L		108	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.87	2.04	J	ng/L		109	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.89	2.01	J	ng/L		106	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.89	2.16	J	ng/L		114	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	MRL Limits
d5-NEtFOSAA	112		70 - 130
13C2 PFHxA	115		70 - 130
13C2 PFDA	114		70 - 130
13C3-GenX	108		70 - 130

Lab Sample ID: 380-60875-BD-1-A MS
Matrix: Water
Analysis Batch: 54136

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53874

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.2	46.8		ng/L		93	70 - 130
Perfluorooctanesulfonic acid (PFOS)	4.3		46.5	55.3		ng/L		110	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	52.3		ng/L		104	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	50.1		ng/L		100	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	51.0		ng/L		102	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	53.9		ng/L		106	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	50.8		ng/L		101	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		50.2	55.5		ng/L		108	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		50.2	52.2		ng/L		104	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		45.8	52.1		ng/L		110	70 - 130
Perfluorobutanesulfonic acid (PFBS)	<2.0		44.4	47.7		ng/L		106	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	53.3		ng/L		106	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		50.2	53.6		ng/L		107	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	49.4		ng/L		98	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: 380-60875-BD-1-A MS
Matrix: Water
Analysis Batch: 54136

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 53874

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.2	51.7		ng/L		103	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		46.9	48.8		ng/L		104	70 - 130
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		47.4	48.2		ng/L		102	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		47.4	51.0		ng/L		108	70 - 130
Surrogate		MS %Recovery	MS Qualifier		Limits				
d5-NEtFOSAA		103			70 - 130				
13C2 PFHxA		113			70 - 130				
13C2 PFDA		111			70 - 130				
13C3-GenX		111			70 - 130				

Lab Sample ID: 380-60875-BE-1-A MSD
Matrix: Water
Analysis Batch: 54136

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 53874

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.2	49.5		ng/L		99	70 - 130	6	30
Perfluorooctanesulfonic acid (PFOS)	4.3		46.5	53.8		ng/L		106	70 - 130	3	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	52.4		ng/L		104	70 - 130	0	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	50.9		ng/L		101	70 - 130	2	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.2	51.9		ng/L		103	70 - 130	2	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.2	52.7		ng/L		104	70 - 130	2	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.2	51.1		ng/L		102	70 - 130	1	30
Perfluorooctanoic acid (PFOA)	<2.0		50.2	56.4		ng/L		110	70 - 130	2	30
Perfluorodecanoic acid (PFDA)	<2.0		50.2	53.7		ng/L		107	70 - 130	3	30
Perfluorohexanesulfonic acid (PFHxS)	<2.0		45.8	51.2		ng/L		108	70 - 130	2	30
Perfluorobutanesulfonic acid (PFBS)	<2.0		44.4	49.8		ng/L		111	70 - 130	4	30
Perfluoroheptanoic acid (PFHpA)	<2.0		50.2	54.9		ng/L		109	70 - 130	3	30
Perfluorononanoic acid (PFNA)	<2.0		50.2	55.7		ng/L		111	70 - 130	4	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.2	50.1		ng/L		100	70 - 130	1	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.2	54.6		ng/L		109	70 - 130	5	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		46.9	50.9		ng/L		108	70 - 130	4	30
11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		47.4	48.5		ng/L		102	70 - 130	1	30

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-60464-1

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

Lab Sample ID: 380-60875-BE-1-A MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 54136

Prep Batch: 53874

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		47.4	51.1		ng/L		108	70 - 130	0	30
Surrogate	%Recovery	MSD Qualifier	MSD Limits								
d5-NEtFOSAA	103		70 - 130								
13C2 PFHxA	116		70 - 130								
13C2 PFDA	108		70 - 130								
13C3-GenX	109		70 - 130								

QC Association Summary

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

Job ID: 380-60464-1

GC/MS Semi VOA

Prep Batch: 53334

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60464-1	MOANALUA WELLS	Total/NA	Drinking Water	525.2	
MB 380-53334/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-53334/23-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-53334/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-53334/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-60192-M-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-60205-AF-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 53407

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60464-1	MOANALUA WELLS	Total/NA	Drinking Water	525.2	53334
MB 380-53334/21-A	Method Blank	Total/NA	Water	525.2	53334
LCS 380-53334/23-A	Lab Control Sample	Total/NA	Water	525.2	53334
LCSD 380-53334/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	53334
MRL 380-53334/22-A	Lab Control Sample	Total/NA	Water	525.2	53334
380-60192-M-1-A MS	Matrix Spike	Total/NA	Water	525.2	53334
380-60205-AF-1-A DU	Duplicate	Total/NA	Water	525.2	53334

LCMS

Prep Batch: 53874

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60464-1	MOANALUA WELLS	Total/NA	Drinking Water	537.1 DW	
380-60464-3	FB: MOANALUA WELLS	Total/NA	Water	537.1 DW	
MBL 380-53874/23-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-53874/25-A	Lab Control Sample	Total/NA	Water	537.1 DW	
LCSD 380-53874/26-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	
MRL 380-53874/24-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-60875-BD-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-60875-BE-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 54136

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60464-1	MOANALUA WELLS	Total/NA	Drinking Water	537.1	53874
380-60464-3	FB: MOANALUA WELLS	Total/NA	Water	537.1	53874
MBL 380-53874/23-A	Method Blank	Total/NA	Water	537.1	53874
LCS 380-53874/25-A	Lab Control Sample	Total/NA	Water	537.1	53874
LCSD 380-53874/26-A	Lab Control Sample Dup	Total/NA	Water	537.1	53874
MRL 380-53874/24-A	Lab Control Sample	Total/NA	Water	537.1	53874
380-60875-BD-1-A MS	Matrix Spike	Total/NA	Water	537.1	53874
380-60875-BE-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	53874

Prep Batch: 54980

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60464-1	MOANALUA WELLS	Total/NA	Drinking Water	533	
380-60464-3	FB: MOANALUA WELLS	Total/NA	Water	533	
MBL 380-54980/21-A	Method Blank	Total/NA	Water	533	
LCS 380-54980/23-A	Lab Control Sample	Total/NA	Water	533	
LCSD 380-54980/24-A	Lab Control Sample Dup	Total/NA	Water	533	
MRL 380-54980/22-A	Lab Control Sample	Total/NA	Water	533	
380-60464-1 MS	MOANALUA WELLS	Total/NA	Drinking Water	533	

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-60464-1

LCMS (Continued)

Prep Batch: 54980 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60464-1 MSD	MOANALUA WELLS	Total/NA	Drinking Water	533	

Analysis Batch: 55204

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-60464-1	MOANALUA WELLS	Total/NA	Drinking Water	533	54980
380-60464-3	FB: MOANALUA WELLS	Total/NA	Water	533	54980
MBL 380-54980/21-A	Method Blank	Total/NA	Water	533	54980
LCS 380-54980/23-A	Lab Control Sample	Total/NA	Water	533	54980
LCSD 380-54980/24-A	Lab Control Sample Dup	Total/NA	Water	533	54980
MRL 380-54980/22-A	Lab Control Sample	Total/NA	Water	533	54980
380-60464-1 MS	MOANALUA WELLS	Total/NA	Drinking Water	533	54980
380-60464-1 MSD	MOANALUA WELLS	Total/NA	Drinking Water	533	54980

Lab Chronicle

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

Job ID: 380-60464-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-60464-1

Date Collected: 08/22/23 12:00

Matrix: Drinking Water

Date Received: 08/24/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			53334	OTM3	EA POM	08/26/23 07:45
Total/NA	Analysis	525.2		1	53407	Q8LA	EA POM	08/27/23 17:42
Total/NA	Prep	533			54980	UMV1	EA POM	09/08/23 11:01
Total/NA	Analysis	533		1	55204	UKYM	EA POM	09/11/23 14:11
Total/NA	Prep	537.1 DW			53874	US1B	EA POM	08/31/23 08:16
Total/NA	Analysis	537.1		1	54136	UKYM	EA POM	09/01/23 19:10

Client Sample ID: FB: MOANALUA WELLS

Lab Sample ID: 380-60464-3

Date Collected: 08/22/23 12:00

Matrix: Water

Date Received: 08/24/23 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			54980	UMV1	EA POM	09/08/23 11:01
Total/NA	Analysis	533		1	55204	UKYM	EA POM	09/11/23 14:40
Total/NA	Prep	537.1 DW			53874	US1B	EA POM	08/31/23 08:16
Total/NA	Analysis	537.1		1	54136	UKYM	EA POM	09/01/23 19:31

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: 380-60464-1

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	01-31-24

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

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

Accreditation/Certification Summary

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

Job ID: 380-60464-1

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

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

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

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Molinate
525.2	525.2	Drinking Water	Naphthalene
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Phenanthrene
525.2	525.2	Drinking Water	Pyrene
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	Terbutylazine
525.2	525.2	Drinking Water	Thiobencarb
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor
525.2	525.2	Drinking Water	Trifluralin
533	533	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
533	533	Drinking Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
533	533	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
533	533	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)
533	533	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
533	533	Drinking Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
533	533	Drinking Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
533	533	Drinking Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
533	533	Drinking Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
533	533	Drinking Water	Perfluorobutanoic acid (PFBA)
533	533	Drinking Water	Perfluoroheptanesulfonic acid (PFHpS)
533	533	Drinking Water	Perfluoropentanesulfonic acid (PFPeS)
533	533	Drinking Water	Perfluoropentanoic acid (PFPeA)
533	533	Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
533	533	Water	1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)
533	533	Water	1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)
533	533	Water	1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)
533	533	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
533	533	Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)

Accreditation/Certification Summary

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

Job ID: 380-60464-1

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

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

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
533	533	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
533	533	Water	Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)
533	533	Water	Perfluoro (2-ethoxyethane) sulfonic acid (PFEEESA)
533	533	Water	Perfluoro-3-methoxypropanoic acid (PFMPA)
533	533	Water	Perfluoro-4-methoxybutanoic acid (PFMBA)
533	533	Water	Perfluorobutanoic acid (PFBA)
533	533	Water	Perfluoroheptanesulfonic acid (PFHpS)
533	533	Water	Perfluoropentanesulfonic acid (PFPeS)
533	533	Water	Perfluoropentanoic acid (PFPeA)
537.1	537.1 DW	Drinking Water	11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
537.1	537.1 DW	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)
537.1	537.1 DW	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
537.1	537.1 DW	Water	11-Chloroeicosafuoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
537.1	537.1 DW	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)
537.1	537.1 DW	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)

Method Summary

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

Job ID: 380-60464-1

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

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Sample Summary

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

Job ID: 380-60464-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-60464-1	MOANALUA WELLS	Drinking Water	08/22/23 12:00	08/24/23 10:20	HI0000331
380-60464-3	FB: MOANALUA WELLS	Water	08/22/23 12:00	08/24/23 10:20	HI0000331

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Chain of Custody Record

Client Information		Lab PM Arada, Rachelle		Camera Tracking No(s)		COC No 380-27941-2757 2	
Client Contact: Dr Ron Fenstermacher		E-Mail Rachelle.Arada@ret.eurofins.com		State of Origin		Page Page 2 of 2	
Company City & County of Honolulu		PWSID		Job #		Job #	
Address 630 South Beretania Street; Chemistry Lab		Due Date Requested:		Analysis Requested		Total Number of Containers <input checked="" type="checkbox"/>	
City: Honolulu		TAT Requested (days):					
State, Zip HI, 96843		Compliance Project: Δ No					
Phone 808-748-5091 (tel)		PO # C20525101 exp 05312023					
Email rfenstermacher@hbws.org		WO #		SUBCONTRACT - 625 PAH Physits LL (EAL) + TICS		SUBCONTRACT - 6015 Gas (Purgeable) LL (EAL)	
Project Name RED-HILL/HBWS sites Event Desc. RUSH Weekly Red Hill		Project # 38001111		SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil		SUBCONTRACT - (MOD) 525plus PLUS TICs	
Site		SSOW#		SUBCONTRACT - 9915 Diesel LL (EAL) and Motor Oil		SUBCONTRACT - 9915 Diesel LL (EAL) and Motor Oil	
Sample Identification		Sample Date		Sample Time		Sample Type	
MOANALUA WELLS		8/22/2023		1200		G	
AIEA GULCH WELLS PUMP2							
AIEA WELLS PUMPS 1&2 (260)							
HALAWA WELLS UNITS 1&2							
FB MOANALUA WELLS		8/22/2023		1200			
FB AIEA GULCH WELLS PUMP2							
FB AIEA WELLS PUMPS 1&2 (260)							
FB HALAWA WELLS UNITS 1&2							
Possible Hazard Identification		<input type="checkbox"/> Non-Hazard		<input type="checkbox"/> Flammable		<input type="checkbox"/> Skin Irritant	
Deliverable Requested: I, II, III, IV, Other (specify)		<input type="checkbox"/> Poison B		<input type="checkbox"/> Unknown		<input type="checkbox"/> Radiological	
Empty Kit Relinquished by:		Date:		Time		Special Instructions/QC Requirements	
Relinquished by: [Redacted]		8/22/2023		1253		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Relinquished by:		Date/Time:		Date/Time:		Method of Shipment: <u>FED EX</u> <u>500014421</u>	
Relinquished by:		Date/Time:		Date/Time:		Company: <u>EEAF</u>	
Relinquished by:		Date/Time:		Date/Time:		Company: _____	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <u>GEL-FROZEN (751A) 0.1.0.2-0.8 / 2 3.7-0.2-3.5</u>		Ver 01/16/2019	



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

Chain of Custody Record

Client Information		Lab PM Arada, Rachelle		Carrier Tracking No(s)		COC No 380-27941-2757 2	
Client Contact Dr Ron Fenstermacher		E-Mail Rachelle.Arada@et.euronisus.com		State of Origin		Page Page 2 of 2	
Company City & County of Honolulu		PWSID#		Analysis Requested		Job #	
Address 630 South Beretania Street, Chemistry Lab		Due Date Requested:		Perform MS/MSD (Yes or No)		Total Number of containers	
City Honolulu		TAT Requested (days):		Field Filtered Sample (Yes or No)		Preservation Codes:	
State, Zip HI, 96843		Compliance Project: Δ No		SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs		A - HCL B - NaOH C - Zn Acetate D - Nitric Acid E - NaHSO4 F - MeOH G - Amchlor H - Ascorbic Acid I - Ice J - DI Water K - EDTA L - EDA Other:	
Phone 808-748-5091 (tel)		PO # C20525101 exp 05312023		SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)		M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2SSO3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)	
Email rfenstermacher@hbws.org		WO #		SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil		Special Instructions/Note:	
Project Name RED-HILL/HBWS sites Event Desc. RUSH Weekly Red Hill		Project # 38001111		SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)		Pump 2	
Site		SSOW#		SUBCONTRACT - (MOD) 525plus PLUS TICs			
Sample Identification		Sample Date		SUBCONTRACT - 537.1 DW_PREC - 537.1 Full List		53 - All Analytes	
MOANALUA WELLS		8/22/2023		RA Y N			
AIEA GULCH WELLS PUMP2		1200		RA Y N			
AIEA WELLS PUMPS 1&2 (260)				RA Y N			
HALAWA WELLS UNITS 1&2				RA Y N			
FB MOANALUA WELLS		9/22/2023		RA Y N			
FB AIEA GULCH WELLS PUMP2				RA Y N			
FB AIEA WELLS PUMPS 1&2 (260)				RA Y N			
FB HALAWA WELLS UNITS 1&2				RA Y N			
Possible Hazard Identification		Sample Time		RA Y N		Special Instructions/Note:	
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological		Preservation Code:		RA Y N		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)	
Deliverable Requested I, II, III, IV, Other (specify)		Matrix (W=water, S=solid, O=water, BI=BT Tissue, A=Air)		RA Y N		Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	
Empty Kit Relinquished by:		Sample Date		RA Y N		Special Instructions/QC Requirements:	
Relinquished by: <i>Bryson Nadeimob</i>		8/22/2023		RA Y N		Method of Shipment: ① 773150014421	
Relinquished by:		Sample Time		RA Y N		Date/Time: FEB EX ② 773150014421	
Relinquished by:		1200		RA Y N		Date/Time: 08/24/2023 10:20	
Custody Seals Intact: Δ Yes Δ No		Date/Time		RA Y N		Company	
Custody Seal No.:		Date/Time		RA Y N		Company	
Cooler Temperature(s) °C and Other Remarks		Date/Time		RA Y N		Company	
GOL FROZEN (75A) ① 10-02-05 = ② 3.7-0.2 = 3.5		Date/Time		RA Y N		Company	

Chain of Custody Record

Client Information		Lab PM		COC No													
Client Contact: Dr Ron Fenstermacher		Arada, Rachelle		380-27941-2757 2													
Company: City & County of Honolulu		E-Mail: Rachelle.Arada@ret.eurofins.com		Page Page 2 of 2													
Address: 630 South Beretania Street; Chemistry Lab		State of Origin		Job #													
City: Honolulu		PWSID		Preservation Codes:													
State, Zip HI, 96843		Due Date Requested:		M - Hexane N - None O - AsNaO2 P - Na2OxMS Q - Na2SO3 R - Na2SO4 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 Y - Trizma Z - other (specify)													
Phone 808-748-5091 (tel)		TAT Requested (days):		Other:													
Email rfenstermacher@hbws.org		Compliance Project: Δ No		Total Number of Containers													
Project Name RED-HILL/HBWS sites Event Desc. RUSH Weekly Red Hill		PO # C20525101 exp 05312023		Special Instructions/Note: <i>Pump 2</i>													
Site RED-HILL/HBWS sites Event Desc. RUSH Weekly Red Hill		WO #															
		Project # 38001111															
		SSOW#															
Sample Identification	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=wastefl, BT=tissue, A=air)	Analysis Requested	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physits LL (EAL) + TICS	SUBCONTRACT - 6015 Gas (Purgeable) LL (EAL)	SUBCONTRACT - (MOD) 525plus PLUS TICS	SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil	SUBCONTRACT - 6015 Gas (Purgeable) LL (EAL)	SUBCONTRACT - 6015 Gas (Purgeable) LL (EAL)	SUBCONTRACT - 537.1 Full List	SUBCONTRACT - 537.1 DW_PREC - 537.1 Full List	533 - All Analytes	
MOANALUA WELLS	8/22/2023	1200	G	Water		X	X	2	4	2	2	2	2	2	2	2	2
AIEA GULCH WELLS PUMP2				Water													
AIEA WELLS PUMPS 1&2 (260)				Water													
HALAWA WELLS UNITS 1&2				Water													
FB MOANALUA WELLS	8/22/2023	1200		Water				2									
FB AIEA GULCH WELLS PUMP2				Water													
FB AIEA WELLS PUMPS 1&2 (260)				Water													
FB HALAWA WELLS UNITS 1&2				Water													
Possible Hazard Identification <input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological Deliverable Requested: I, II, III, IV, Other (specify)																	
Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months Special Instructions/QC Requirements																	
Empty Kit Relinquished by: Relinquished by: [Redacted] Date: 8/22/2023 Relinquished by: [Redacted] Date: 8/22/2023 Relinquished by: [Redacted] Date: 8/22/2023																	
Custody Seals Intact: Δ Yes Δ No																	



Chain of Custody Record

Client Information		Lab PM		Carrier Tracking No(s)		COC No	
Client Contact Dr Ron Fenstermacher		Arada, Rachelle		State of Origin		380-27941-2757 2	
Company City & County of Honolulu		E-Mail Rachelle.Arada@et.euronisus.com		Page		Page 2 of 2	
Address 630 South Beretania Street, Chemistry Lab		PWSID#		Job #			
City Honolulu		Due Date Requested:		Analysis Requested			
State, Zip HI, 96843		TAT Requested (days):					
Phone 808-748-5091 (tel)		Compliance Project: Δ No					
Email rfenstermacher@hbws.org		PO # C20525101 exp 05312023					
Project Name RED-HILL/HBWS sites Event Desc. RUSH Weekly Red Hill		WO #					
Site		Project # 38001111					
		SSOW#					
Sample Identification		Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)		SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	
		Sample Date		Sample Time		Sample Preservation Code:	
MOANALUA WELLS		8/22/2023		1200		G	
AIEA GULCH WELLS PUMP2							
AIEA WELLS PUMPS 1&2 (260)							
HALAWA WELLS UNITS 1&2							
FB MOANALUA WELLS		8/22/2023		1200			
FB AIEA GULCH WELLS PUMP2							
FB AIEA WELLS PUMPS 1&2 (260)							
FB HALAWA WELLS UNITS 1&2							
Possible Hazard Identification		Poison B <input type="checkbox"/>		Unknown <input type="checkbox"/>		Radiological <input type="checkbox"/>	
Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/>		Deliverable Requested I, II, III, IV, Other (specify)		Return To Client <input type="checkbox"/>		Disposal By Lab <input type="checkbox"/>	
Empty Kit Relinquished by:		Date/Time		Date/Time		Method of Shipment:	
Relinquished by <i>Bryson Nadeimob</i>		8/22/2023 1253		8/24/2023 1020		① 773150014421	
Relinquished by		Date/Time		Date/Time		Company	
Relinquished by		Date/Time		Date/Time		Company	
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks		Special Instructions/QC Requirements:	
				GOL-FROZEN (75A) ① 10-02-05-2 ② 3.7-0.2-0.5-3.5		Sample Disposal (A fee may be assessed if samples are retained longer than 1 month) <input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months	



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-60464-1

Login Number: 60464
List Number: 1
Creator: Elyas, Matthew

List Source: Eurofins Eaton Analytical Pomona

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