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ANALYTICAL REPORT

PREPARED FOR

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630 South Beretania Street
Public Service Bldg. Room 310
Honolulu, Hawaii 96843

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JOB DESCRIPTION

RED-HILL
RUSH Weekly Red Hill

JOB NUMBER

380-55393-1

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: 380-55393-1

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
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.

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: 380-55393-1

Job ID: 380-55393-1

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

Job Narrative 380-55393-1

Comments

No additional comments.

Receipt

The samples were received on 7/19/2023 10:00 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 2.5° C and 2.9° C.

GC/MS Semi VOA

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

LCMS

Method 533: IDA 13C3 HFPO-DA(44%) failed low in the method blank. IDAs 13C3 HFPO-DA(49%) & 13C4 PFBA(49%) failed low in the LCSD. Analyte Perfluoro-3,6-dioxaheptanoic acid failed low in the LCSD(66%). Limits are 70-130%. As a result, RPD is high(30%). Limit is less than 30%. Batch was re-analyzed with new calibration but got similar results. No backup bottle for re-extract. FB MOANALUA WELLS (380-55393-3)

Method 533: IDA-13C3 HFPO-DA recovered outside of method limits for sample: MOANALUA WELLS (380-55393-1). This sample was analyzed twice to confirm low IDA recovery. Sample already passed holding time to re-extract. Results are not acceptable per method. 533 Data excluded due to this QC failure, 537.1 data was reported as there were no noted QC issues.

No additional analytical or quality issues were noted, other than those described above or 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: 380-55393-1

Client Sample ID: MOANALUA WELLS
PWSID Number: HI0000331

Lab Sample ID: 380-55393-1

No Detections.

Client Sample ID: FB MOANALUA WELLS
PWSID Number: HI0000331

Lab Sample ID: 380-55393-3

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: 380-55393-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-55393-1

Date Collected: 07/17/23 11:30

Matrix: Drinking Water

Date Received: 07/19/23 10:00

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		07/21/23 14:06	07/23/23 13:10	1
2,4'-DDD	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
2,4'-DDE	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
2,4'-DDT	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
2-Methylnaphthalene	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
4,4'-DDD	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
4,4'-DDE	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
4,4'-DDT	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Acenaphthene	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Acenaphthylene	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Acetochlor	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Alachlor	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
alpha-BHC	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
alpha-Chlordane	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Anthracene	<0.020		0.020	ug/L		07/21/23 14:06	07/23/23 13:10	1
Atrazine	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Benz(a)anthracene	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Benzo[a]pyrene	<0.020		0.020	ug/L		07/21/23 14:06	07/23/23 13:10	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		07/21/23 14:06	07/23/23 13:10	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		07/21/23 14:06	07/23/23 13:10	1
beta-BHC	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		07/21/23 14:06	07/23/23 13:10	1
Bromacil	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Butachlor	<0.049	*+	0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Butylbenzylphthalate	<0.49	^3+	0.49	ug/L		07/21/23 14:06	07/23/23 13:10	1
Chlorobenzilate	<0.099	^3+	0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Chloroneb	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Chlorpyrifos	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Chrysene	<0.020		0.020	ug/L		07/21/23 14:06	07/23/23 13:10	1
delta-BHC	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		07/21/23 14:06	07/23/23 13:10	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Diclorvos (DDVP)	<0.049	^3+	0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Dieldrin	<0.20		0.20	ug/L		07/21/23 14:06	07/23/23 13:10	1
Diethylphthalate	<0.49		0.49	ug/L		07/21/23 14:06	07/23/23 13:10	1
Dimethylphthalate	<0.49		0.49	ug/L		07/21/23 14:06	07/23/23 13:10	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		07/21/23 14:06	07/23/23 13:10	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Endosulfan II (Beta)	<0.099	^3+	0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Endosulfan sulfate	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Endrin	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Endrin aldehyde	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
EPTC	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Fluoranthene	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1

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Client Sample Results

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

Job ID: 380-55393-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-55393-1

Date Collected: 07/17/23 11:30

Matrix: Drinking Water

Date Received: 07/19/23 10:00

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
gamma-Chlordane	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Heptachlor	<0.040		0.040	ug/L		07/21/23 14:06	07/23/23 13:10	1
Heptachlor epoxide (isomer B)	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Hexachlorobenzene	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Isophorone	<0.49		0.49	ug/L		07/21/23 14:06	07/23/23 13:10	1
Lindane	<0.040		0.040	ug/L		07/21/23 14:06	07/23/23 13:10	1
Malathion	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Methoxychlor	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Metolachlor	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Molinate	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Naphthalene	<0.30		0.30	ug/L		07/21/23 14:06	07/23/23 13:10	1
Parathion	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Phenanthrene	<0.040		0.040	ug/L		07/21/23 14:06	07/23/23 13:10	1
Propachlor	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Pyrene	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Simazine	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Terbacil	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Terbutylazine	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1
Thiobencarb	<0.20		0.20	ug/L		07/21/23 14:06	07/23/23 13:10	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		07/21/23 14:06	07/23/23 13:10	1
trans-Nonachlor	<0.049		0.049	ug/L		07/21/23 14:06	07/23/23 13:10	1
Trifluralin	<0.099		0.099	ug/L		07/21/23 14:06	07/23/23 13:10	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Tentatively Identified Compound	None		ug/L			N/A	07/21/23 14:06	07/23/23 13:10	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	102		70 - 130	07/21/23 14:06	07/23/23 13:10	1
Perylene-d12	92		70 - 130	07/21/23 14:06	07/23/23 13:10	1
Triphenylphosphate	117		70 - 130	07/21/23 14:06	07/23/23 13:10	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		07/24/23 06:53	08/02/23 15:46	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1

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Client Sample Results

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

Job ID: 380-55393-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-55393-1

Date Collected: 07/17/23 11:30

Matrix: Drinking Water

Date Received: 07/19/23 10:00

PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/24/23 06:53	08/02/23 15:46	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	113		70 - 130	07/24/23 06:53	08/02/23 15:46	1
13C2 PFHxA	126		70 - 130	07/24/23 06:53	08/02/23 15:46	1
13C2 PFDA	115		70 - 130	07/24/23 06:53	08/02/23 15:46	1
13C3-GenX	113		70 - 130	07/24/23 06:53	08/02/23 15:46	1

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-55393-3

Date Collected: 07/17/23 11:30

Matrix: Water

Date Received: 07/19/23 10:00

PWSID Number: HI0000331

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		07/24/23 09:48	08/02/23 10:00	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
N-methylperfluorooctanesulfonamidoa cetic acid (NMeFOSAA)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
N-ethylperfluorooctanesulfonamidoac etic acid (NEtFOSAA)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
Perfluorononanoic acid (PFNA)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
9-Chlorohexadecafluoro-3-oxanonan e-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
11-Chloroeicosafluoro-3-oxaundecan e-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0	ng/L		07/24/23 09:48	08/02/23 10:00	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	106		70 - 130	07/24/23 09:48	08/02/23 10:00	1
13C2 PFHxA	118		70 - 130	07/24/23 09:48	08/02/23 10:00	1
13C2 PFDA	107		70 - 130	07/24/23 09:48	08/02/23 10:00	1
13C3-GenX	105		70 - 130	07/24/23 09:48	08/02/23 10:00	1

Eurofins Eaton Analytical Pomona

Action Limit Summary

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

Job ID: 380-55393-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-55393-1

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	<0.049		ug/L	2	0.049	525.2	Total/NA
Atrazine	<0.049		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		ug/L	6	0.59	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.59		ug/L	400	0.59	525.2	Total/NA
Endrin	<0.099		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)	<0.049		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L	50	0.049	525.2	Total/NA
Lindane	<0.040		ug/L	0.2	0.040	525.2	Total/NA
Methoxychlor	<0.099		ug/L	40	0.099	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-55393-1

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)
380-55393-1	MOANALUA WELLS	102	92	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)
380-55418-AO-1-B MS	Matrix Spike	101	96	115
380-55418-AO-1-C MSD	Matrix Spike Duplicate	103	93	124
LCS 380-48256/23-A	Lab Control Sample	102	86	109
LCS 380-48256/24-A	Lab Control Sample Dup	104	90	115
MB 380-48256/21-A	Method Blank	106	86	120
MRL 380-48256/22-A	Lab Control Sample	106	88	114

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)
380-55393-1	MOANALUA WELLS	113	126	115	113

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)
380-55313-B-1-A MS	Matrix Spike	86	86	98	94
380-55313-C-1-A MSD	Matrix Spike Duplicate	91	91	109	101
380-55393-3	FB MOANALUA WELLS	106	118	107	105
380-55400-B-1-A MS	Matrix Spike	111	120	114	123
380-55400-C-1-A MSD	Matrix Spike Duplicate	115	117	111	112
LCS 380-48507/25-A	Lab Control Sample	102	114	102	100
LCS 380-48520/25-A	Lab Control Sample	97	119	103	108

Surrogate Summary

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

Job ID: 380-55393-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	d5NEFOS (70-130)	PFHxA (70-130)	PFDA (70-130)	GenX (70-130)
LCSD 380-48507/26-A	Lab Control Sample Dup	106	118	112	106
LCSD 380-48520/26-A	Lab Control Sample Dup	97	115	107	104
MBL 380-48507/23-A	Method Blank	103	114	106	98
MBL 380-48520/23-A	Method Blank	113	118	109	104
MRL 380-48507/24-A	Lab Control Sample	109	113	107	107
MRL 380-48520/24-A	Lab Control Sample	105	113	103	104

Surrogate Legend

d5NEFOS = d5-NEtFOSAA

PFHxA = 13C2 PFHxA

PFDA = 13C2 PFDA

GenX = 13C3-GenX

Isotope Dilution Summary

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

Job ID: 380-55393-1

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

Matrix: Drinking Water

Prep Type: Total/NA

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-55393-1	MOANALUA WELLS	48 *5-	69	55	52	63	71	70	77

		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)
380-55393-1	MOANALUA WELLS	59	54	80	72	87	75	71	79

Surrogate Legend

- HFPODA = 13C3 HFPO-DA
- C6PFDA = 13C6 PFDA
- 13C5PHA = 13C5 PFHxA
- C4PFHA = 13C4 PFHpA
- C8PFOA = 13C8 PFOA
- C9PFNA = 13C9 PFNA
- 13C7PUA = 13C7 PFUnA
- PFDoA = 13C2 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)	PFDoA (50-200)
380-55024-B-1-B LMS	Matrix Spike	79	90	91	92	93	93	89	91
380-55024-C-1-B LMSD	Matrix Spike Duplicate	81	93	94	89	93	96	90	94
380-55024-C-2-A MS	Matrix Spike	85	91	81	81	81	90	89	91
380-55024-C-3-A DU	Duplicate	69	86	78	77	81	87	86	89
380-55393-3	FB MOANALUA WELLS	90	93	92	96	95	94	92	93
LCS 380-49997/23-A	Lab Control Sample	65	86	70	76	82	85	86	89
LCS 380-51505/20-A	Lab Control Sample	91	86	87	81	84	90	91	91
LCSD 380-49997/24-A	Lab Control Sample Dup	49 *5-	89	61	65	74	85	91	92
LCSD 380-51505/21-A	Lab Control Sample Dup	92	87	85	79	82	88	89	93
MBL 380-49997/21-A	Method Blank	44 *5-	79	55	58	66	72	72	81
MBL 380-51505/18-A	Method Blank	79	88	82	79	85	92	88	91
MRL 380-49997/22-A	Lab Control Sample	60	88	73	76	82	85	84	88
MRL 380-51505/19-A	Lab Control Sample	76	83	84	76	82	85	80	81

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-55024-B-1-B LMS	Matrix Spike	93	100	101	99	96	107	107	106
380-55024-C-1-B LMSD	Matrix Spike Duplicate	96	101	96	91	93	104	105	101
380-55024-C-2-A MS	Matrix Spike	80	82	77	74	81	74	74	87
380-55024-C-3-A DU	Duplicate	82	85	77	75	84	85	75	94

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Isotope Dilution Summary

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

Job ID: 380-55393-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Isotope Dilution Recovery (Acceptance Limits)							
		PFBA (50-200)	PFPeA (50-200)	C3PFBS (50-200)	C3PFHS (50-200)	C8PFOS (50-200)	42FTS (50-200)	62FTS (50-200)	82FTS (50-200)
380-55393-3	FB MOANALUA WELLS	96	101	104	99	98	109	108	105
LCS 380-49997/23-A	Lab Control Sample	69	72	92	93	92	98	100	104
LCS 380-51505/20-A	Lab Control Sample	85	83	76	75	82	67	72	90
LCS 380-49997/24-A	Lab Control Sample Dup	49 *5-	58	96	94	97	101	100	105
LCS 380-51505/21-A	Lab Control Sample Dup	87	82	73	74	80	70	73	85
MBL 380-49997/21-A	Method Blank	53	56	83	84	84	94	97	123
MBL 380-51505/18-A	Method Blank	87	84	76	77	86	78	82	103
MRL 380-49997/22-A	Lab Control Sample	69	74	93	90	91	99	98	103
MRL 380-51505/19-A	Lab Control Sample	86	80	71	72	81	69	71	85

Surrogate Legend

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

QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: MB 380-48256/21-A
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 48256

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
2,4'-DDD	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
2,4'-DDE	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
2,4'-DDT	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
2-Methylnaphthalene	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
4,4'-DDD	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
4,4'-DDE	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
4,4'-DDT	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Acenaphthene	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Acenaphthylene	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Acetochlor	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Alachlor	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
alpha-BHC	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
alpha-Chlordane	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Anthracene	<0.020		0.020	ug/L		07/21/23 12:36	07/23/23 11:09	1
Atrazine	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Benz(a)anthracene	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Benzo[a]pyrene	<0.020		0.020	ug/L		07/21/23 12:36	07/23/23 11:09	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		07/21/23 12:36	07/23/23 11:09	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		07/21/23 12:36	07/23/23 11:09	1
beta-BHC	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		07/21/23 12:36	07/23/23 11:09	1
Bromacil	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Butachlor	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Butylbenzylphthalate	<0.49		0.49	ug/L		07/21/23 12:36	07/23/23 11:09	1
Chlorobenzilate	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Chloroneb	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Chlorpyrifos	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Chrysene	<0.020		0.020	ug/L		07/21/23 12:36	07/23/23 11:09	1
delta-BHC	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		07/21/23 12:36	07/23/23 11:09	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Dieldrin	<0.20		0.20	ug/L		07/21/23 12:36	07/23/23 11:09	1
Diethylphthalate	<0.49		0.49	ug/L		07/21/23 12:36	07/23/23 11:09	1
Dimethylphthalate	<0.49		0.49	ug/L		07/21/23 12:36	07/23/23 11:09	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		07/21/23 12:36	07/23/23 11:09	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Endosulfan sulfate	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Endrin	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Endrin aldehyde	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
EPTC	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1

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QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: MB 380-48256/21-A
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 48256

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Fluorene	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
gamma-Chlordane	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Heptachlor	<0.039		0.039	ug/L		07/21/23 12:36	07/23/23 11:09	1
Heptachlor epoxide (isomer B)	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Hexachlorobenzene	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Isophorone	<0.49		0.49	ug/L		07/21/23 12:36	07/23/23 11:09	1
Lindane	<0.039		0.039	ug/L		07/21/23 12:36	07/23/23 11:09	1
Malathion	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Methoxychlor	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Metolachlor	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Molinate	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Naphthalene	<0.29		0.29	ug/L		07/21/23 12:36	07/23/23 11:09	1
Parathion	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Phenanthrene	<0.039		0.039	ug/L		07/21/23 12:36	07/23/23 11:09	1
Propachlor	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Pyrene	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Simazine	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Terbacil	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Terbutylazine	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1
Thiobencarb	<0.20		0.20	ug/L		07/21/23 12:36	07/23/23 11:09	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		07/21/23 12:36	07/23/23 11:09	1
trans-Nonachlor	<0.049		0.049	ug/L		07/21/23 12:36	07/23/23 11:09	1
Trifluralin	<0.098		0.098	ug/L		07/21/23 12:36	07/23/23 11:09	1

Tentatively Identified Compound	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Ethyl 3-acetoxybutyrate	0.530	T J N	ug/L		2.79	27846-49-7	07/21/23 12:36	07/23/23 11:09	1
n-Hexadecanoic acid	0.984	T J N	ug/L		5.88	57-10-3	07/21/23 12:36	07/23/23 11:09	1
Octadecanoic acid	0.723	T J N	ug/L		6.57	57-11-4	07/21/23 12:36	07/23/23 11:09	1
Hexadecanamide	0.540	T J N	ug/L		6.73	629-54-9	07/21/23 12:36	07/23/23 11:09	1
9-Octadecenamide, (Z)-	5.76	T J N	ug/L		7.59	301-02-0	07/21/23 12:36	07/23/23 11:09	1
13-Docosenamide, (Z)-	0.492	T J N	ug/L		10.25	112-84-5	07/21/23 12:36	07/23/23 11:09	1
tri(2-Ethylhexyl) trimellitate	1.23	T J N	ug/L		15.22	3319-31-1	07/21/23 12:36	07/23/23 11:09	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	106		70 - 130	07/21/23 12:36	07/23/23 11:09	1
Perylene-d12	86		70 - 130	07/21/23 12:36	07/23/23 11:09	1
Triphenylphosphate	120		70 - 130	07/21/23 12:36	07/23/23 11:09	1

Lab Sample ID: LCS 380-48256/23-A
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.96	2.03		ug/L		104	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: LCS 380-48256/23-A
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.96	2.14		ug/L		109	70 - 130
2,4'-DDE	1.96	2.07		ug/L		106	70 - 130
2,4'-DDT	1.96	2.14		ug/L		109	70 - 130
2,4-Dinitrotoluene	1.96	2.14		ug/L		109	70 - 130
2,6-Dinitrotoluene	1.96	2.06		ug/L		105	70 - 130
2-Methylnaphthalene	1.96	2.05		ug/L		105	70 - 130
4,4'-DDD	1.96	2.05		ug/L		105	70 - 130
4,4'-DDE	1.96	1.98		ug/L		101	70 - 130
4,4'-DDT	1.96	2.15		ug/L		110	70 - 130
Acenaphthene	1.96	1.99		ug/L		102	70 - 130
Acenaphthylene	1.96	2.03		ug/L		104	70 - 130
Acetochlor	1.96	2.27		ug/L		116	70 - 130
Alachlor	1.96	2.38		ug/L		122	70 - 130
alpha-BHC	1.96	2.24		ug/L		115	70 - 130
alpha-Chlordane	1.96	2.01		ug/L		103	70 - 130
Anthracene	1.96	2.07		ug/L		106	70 - 130
Atrazine	1.96	2.29		ug/L		117	70 - 130
Benz(a)anthracene	1.96	2.06		ug/L		105	70 - 130
Benzo[a]pyrene	1.96	1.88		ug/L		96	70 - 130
Benzo[b]fluoranthene	1.96	2.07		ug/L		106	70 - 130
Benzo[g,h,i]perylene	1.96	2.08		ug/L		107	70 - 130
Benzo[k]fluoranthene	1.96	1.95		ug/L		100	70 - 130
beta-BHC	1.96	2.32		ug/L		119	70 - 130
Bis(2-ethylhexyl) phthalate	1.96	2.13		ug/L		109	70 - 130
Bromacil	1.96	2.21		ug/L		113	70 - 130
Butachlor	1.96	2.57	*+	ug/L		131	70 - 130
Butylbenzylphthalate	1.96	2.29		ug/L		117	70 - 130
Chlorobenzilate	1.96	2.25		ug/L		115	70 - 130
Chloroneb	1.96	2.05		ug/L		105	70 - 130
Chlorothalonil (Draconil, Bravo)	1.96	2.21		ug/L		113	70 - 130
Chlorpyrifos	1.96	2.26		ug/L		115	70 - 130
Chrysene	1.96	2.05		ug/L		105	70 - 130
delta-BHC	1.96	2.08		ug/L		106	70 - 130
Di(2-ethylhexyl)adipate	1.96	2.24		ug/L		114	70 - 130
Dibenz(a,h)anthracene	1.96	2.06		ug/L		105	70 - 130
Diclorvos (DDVP)	1.96	2.19		ug/L		112	70 - 130
Dieldrin	1.96	2.09		ug/L		107	70 - 130
Diethylphthalate	1.96	2.30		ug/L		118	70 - 130
Dimethylphthalate	1.96	2.26		ug/L		115	70 - 130
Di-n-butyl phthalate	3.91	4.34		ug/L		111	70 - 130
Di-n-octyl phthalate	1.96	1.92		ug/L		98	70 - 130
Endosulfan I (Alpha)	1.96	1.98		ug/L		101	70 - 130
Endosulfan II (Beta)	1.96	2.20		ug/L		112	70 - 130
Endosulfan sulfate	1.96	2.09		ug/L		107	70 - 130
Endrin	1.96	2.47		ug/L		126	70 - 130
Endrin aldehyde	1.96	1.46		ug/L		75	70 - 130
EPTC	1.96	2.22		ug/L		114	70 - 130
Fluoranthene	1.96	2.28		ug/L		116	70 - 130
Fluorene	1.96	2.22		ug/L		113	70 - 130

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QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: LCS 380-48256/23-A
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48256

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
gamma-Chlordane	1.96	2.08		ug/L		106	70 - 130
Heptachlor	1.96	2.13		ug/L		109	70 - 130
Heptachlor epoxide (isomer B)	1.96	2.19		ug/L		112	70 - 130
Hexachlorobenzene	1.96	2.18		ug/L		111	70 - 130
Hexachlorocyclopentadiene	1.96	2.21		ug/L		113	70 - 130
Indeno[1,2,3-cd]pyrene	1.96	2.04		ug/L		105	70 - 130
Isophorone	1.96	2.09		ug/L		107	70 - 130
Lindane	1.96	2.31		ug/L		118	70 - 130
Malathion	1.96	2.29		ug/L		117	70 - 130
Methoxychlor	1.96	2.28		ug/L		117	70 - 130
Metolachlor	1.96	2.43		ug/L		124	70 - 130
Molinate	1.96	2.30		ug/L		118	70 - 130
Naphthalene	1.96	1.89		ug/L		97	70 - 130
Parathion	1.96	2.50		ug/L		128	70 - 130
Pendimethalin (Penoxaline)	1.96	2.23		ug/L		114	70 - 130
Phenanthrene	1.96	1.98		ug/L		101	70 - 130
Propachlor	1.96	2.38		ug/L		121	70 - 130
Pyrene	1.96	2.28		ug/L		117	70 - 130
Simazine	1.96	2.29		ug/L		117	70 - 130
Terbacil	1.96	2.32		ug/L		118	70 - 130
Terbutylazine	1.96	2.49		ug/L		127	70 - 130
Thiobencarb	1.96	2.17		ug/L		111	70 - 130
trans-Nonachlor	1.96	1.85		ug/L		95	70 - 130
Trifluralin	1.96	2.21		ug/L		113	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	102		70 - 130
Perylene-d12	86		70 - 130
Triphenylphosphate	109		70 - 130

Lab Sample ID: LCSD 380-48256/24-A
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 48256

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	1.96	2.06		ug/L		105	70 - 130	2	20
2,4'-DDD	1.96	2.09		ug/L		107	70 - 130	3	20
2,4'-DDE	1.96	2.09		ug/L		107	70 - 130	1	20
2,4'-DDT	1.96	2.17		ug/L		111	70 - 130	1	20
2,4-Dinitrotoluene	1.96	1.98		ug/L		101	70 - 130	8	20
2,6-Dinitrotoluene	1.96	1.97		ug/L		101	70 - 130	4	20
2-Methylnaphthalene	1.96	2.06		ug/L		105	70 - 130	1	20
4,4'-DDD	1.96	2.10		ug/L		107	70 - 130	2	20
4,4'-DDE	1.96	2.01		ug/L		103	70 - 130	1	20
4,4'-DDT	1.96	2.22		ug/L		113	70 - 130	3	20
Acenaphthene	1.96	1.99		ug/L		102	70 - 130	0	20
Acenaphthylene	1.96	2.02		ug/L		103	70 - 130	0	20
Acetochlor	1.96	2.37		ug/L		121	70 - 130	4	20

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QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: LCSD 380-48256/24-A
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 48256

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
Alachlor	1.96	2.47		ug/L		126	70 - 130	4	20	
alpha-BHC	1.96	2.23		ug/L		114	70 - 130	1	20	
alpha-Chlordane	1.96	2.06		ug/L		105	70 - 130	3	20	
Anthracene	1.96	1.97		ug/L		100	70 - 130	5	20	
Atrazine	1.96	2.25		ug/L		115	70 - 130	2	20	
Benz(a)anthracene	1.96	2.17		ug/L		111	70 - 130	5	20	
Benzo[a]pyrene	1.96	2.01		ug/L		103	70 - 130	7	20	
Benzo[b]fluoranthene	1.96	2.15		ug/L		110	70 - 130	4	20	
Benzo[g,h,i]perylene	1.96	2.22		ug/L		113	70 - 130	6	20	
Benzo[k]fluoranthene	1.96	2.19		ug/L		112	70 - 130	11	20	
beta-BHC	1.96	2.25		ug/L		115	70 - 130	3	20	
Bis(2-ethylhexyl) phthalate	1.96	2.11		ug/L		108	70 - 130	1	20	
Bromacil	1.96	2.27		ug/L		116	70 - 130	3	20	
Butachlor	1.96	2.66	*+	ug/L		136	70 - 130	4	20	
Butylbenzylphthalate	1.96	2.41		ug/L		123	70 - 130	5	20	
Chlorobenzilate	1.96	2.25		ug/L		115	70 - 130	0	20	
Chloroneb	1.96	2.15		ug/L		110	70 - 130	5	20	
Chlorothalonil (Draconil, Bravo)	1.96	2.17		ug/L		111	70 - 130	2	20	
Chlorpyrifos	1.96	2.32		ug/L		119	70 - 130	3	20	
Chrysene	1.96	2.04		ug/L		104	70 - 130	0	20	
delta-BHC	1.96	2.09		ug/L		106	70 - 130	0	20	
Di(2-ethylhexyl)adipate	1.96	2.29		ug/L		117	70 - 130	2	20	
Dibenz(a,h)anthracene	1.96	2.30		ug/L		117	70 - 130	11	20	
Diclorvos (DDVP)	1.96	2.22		ug/L		113	70 - 130	1	20	
Dieldrin	1.96	2.15		ug/L		110	70 - 130	3	20	
Diethylphthalate	1.96	2.32		ug/L		118	70 - 130	1	20	
Dimethylphthalate	1.96	2.29		ug/L		117	70 - 130	1	20	
Di-n-butyl phthalate	3.92	4.46		ug/L		114	70 - 130	3	20	
Di-n-octyl phthalate	1.96	2.08		ug/L		106	70 - 130	8	20	
Endosulfan I (Alpha)	1.96	2.04		ug/L		104	70 - 130	3	20	
Endosulfan II (Beta)	1.96	2.28		ug/L		116	70 - 130	4	20	
Endosulfan sulfate	1.96	2.17		ug/L		111	70 - 130	4	20	
Endrin	1.96	2.53		ug/L		129	70 - 130	3	20	
Endrin aldehyde	1.96	1.58		ug/L		81	70 - 130	8	20	
EPTC	1.96	2.27		ug/L		116	70 - 130	2	20	
Fluoranthene	1.96	2.29		ug/L		117	70 - 130	0	20	
Fluorene	1.96	2.20		ug/L		112	70 - 130	1	20	
gamma-Chlordane	1.96	2.11		ug/L		108	70 - 130	2	20	
Heptachlor	1.96	2.19		ug/L		112	70 - 130	3	20	
Heptachlor epoxide (isomer B)	1.96	2.20		ug/L		112	70 - 130	0	20	
Hexachlorobenzene	1.96	2.14		ug/L		109	70 - 130	2	20	
Hexachlorocyclopentadiene	1.96	2.14		ug/L		109	70 - 130	3	20	
Indeno[1,2,3-cd]pyrene	1.96	2.27		ug/L		116	70 - 130	10	20	
Isophorone	1.96	2.10		ug/L		107	70 - 130	1	20	
Lindane	1.96	2.21		ug/L		113	70 - 130	4	20	
Malathion	1.96	2.29		ug/L		117	70 - 130	0	20	
Methoxychlor	1.96	2.36		ug/L		121	70 - 130	3	20	
Metolachlor	1.96	2.50		ug/L		128	70 - 130	3	20	
Molinate	1.96	2.36		ug/L		120	70 - 130	2	20	

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QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: LCSD 380-48256/24-A
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 48256

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Naphthalene	1.96	1.94		ug/L		99	70 - 130	2	20
Parathion	1.96	2.52		ug/L		129	70 - 130	1	20
Pendimethalin (Penoxaline)	1.96	2.26		ug/L		116	70 - 130	1	20
Phenanthrene	1.96	1.94		ug/L		99	70 - 130	2	20
Propachlor	1.96	2.37		ug/L		121	70 - 130	0	20
Pyrene	1.96	2.29		ug/L		117	70 - 130	0	20
Simazine	1.96	2.21		ug/L		113	70 - 130	4	20
Terbacil	1.96	2.42		ug/L		124	70 - 130	4	20
Terbutylazine	1.96	2.44		ug/L		125	70 - 130	2	20
Thiobencarb	1.96	2.21		ug/L		113	70 - 130	2	20
trans-Nonachlor	1.96	1.90		ug/L		97	70 - 130	3	20
Trifluralin	1.96	2.26		ug/L		115	70 - 130	2	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Nitro-m-xylene	104		70 - 130
Perylene-d12	90		70 - 130
Triphenylphosphate	115		70 - 130

Lab Sample ID: MRL 380-48256/22-A
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48256

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0978	0.118		ug/L		121	50 - 150
2,4'-DDD	0.0978	0.129		ug/L		132	50 - 150
2,4'-DDE	0.0978	0.106		ug/L		109	50 - 150
2,4'-DDT	0.0978	0.121		ug/L		124	50 - 150
2,4-Dinitrotoluene	0.0978	0.117		ug/L		119	50 - 150
2,6-Dinitrotoluene	0.0978	0.106		ug/L		109	50 - 150
2-Methylnaphthalene	0.0978	0.115		ug/L		117	50 - 150
4,4'-DDD	0.0978	0.116		ug/L		118	50 - 150
4,4'-DDE	0.0978	0.101		ug/L		104	50 - 150
4,4'-DDT	0.0978	0.138		ug/L		141	50 - 150
Acenaphthene	0.0978	0.102		ug/L		105	50 - 150
Acenaphthylene	0.0978	0.0990		ug/L		101	50 - 150
Acetochlor	0.0489	0.0545	J	ug/L		112	50 - 150
Alachlor	0.0489	0.0615		ug/L		126	50 - 150
alpha-BHC	0.0978	0.105		ug/L		108	50 - 150
alpha-Chlordane	0.0244	<0.028		ug/L		105	50 - 150
Anthracene	0.0196	0.0192	J	ug/L		98	50 - 150
Atrazine	0.0489	0.0704		ug/L		144	50 - 150
Benz(a)anthracene	0.0489	0.0557		ug/L		114	50 - 150
Benzo[a]pyrene	0.0196	0.0190	J	ug/L		97	50 - 150
Benzo[b]fluoranthene	0.0196	0.0203		ug/L		104	50 - 150
Benzo[g,h,i]perylene	0.0489	0.0419	J	ug/L		86	50 - 150
Benzo[k]fluoranthene	0.0196	0.0180	J	ug/L		92	50 - 150
beta-BHC	0.0978	0.105		ug/L		107	50 - 150
Bis(2-ethylhexyl) phthalate	0.587	0.830		ug/L		141	50 - 150

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QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: MRL 380-48256/22-A
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48256

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Bromacil	0.0978	0.141		ug/L		144	50 - 150
Butachlor	0.0489	0.0659		ug/L		135	50 - 150
Butylbenzylphthalate	0.147	0.229	J ^3+	ug/L		156	50 - 150
Chlorobenzilate	0.0978	0.177	^3+	ug/L		181	50 - 150
Chloroneb	0.0978	0.103		ug/L		105	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0978	0.125		ug/L		128	50 - 150
Chlorpyrifos	0.0489	0.0632		ug/L		129	50 - 150
Chrysene	0.0196	0.0213		ug/L		109	50 - 150
delta-BHC	0.0978	0.121		ug/L		124	50 - 150
Di(2-ethylhexyl)adipate	0.293	0.430	J	ug/L		147	50 - 150
Dibenz(a,h)anthracene	0.0489	0.0445	J	ug/L		91	50 - 150
Diclorvos (DDVP)	0.0489	0.0826	^3+	ug/L		169	50 - 150
Dieldrin	0.0978	0.103	J	ug/L		105	50 - 150
Diethylphthalate	0.147	0.203	J	ug/L		138	50 - 150
Dimethylphthalate	0.293	0.329	J	ug/L		112	50 - 150
Di-n-butyl phthalate	0.293	0.386	J	ug/L		131	49 - 243
Di-n-octyl phthalate	0.0978	0.130		ug/L		133	50 - 150
Endosulfan I (Alpha)	0.0978	0.0988		ug/L		101	50 - 150
Endosulfan II (Beta)	0.0978	0.363	^3+	ug/L		372	50 - 150
Endosulfan sulfate	0.0978	0.110		ug/L		112	50 - 150
Endrin	0.0978	0.128		ug/L		131	50 - 150
Endrin aldehyde	0.0978	0.146		ug/L		150	50 - 150
EPTC	0.0978	0.108		ug/L		111	50 - 150
Fluoranthene	0.0489	0.0588	J	ug/L		120	50 - 150
Fluorene	0.0489	0.0546		ug/L		112	50 - 150
gamma-Chlordane	0.0244	0.0273	J	ug/L		112	50 - 150
Heptachlor	0.0391	0.0552		ug/L		141	50 - 150
Heptachlor epoxide (isomer B)	0.0489	0.0514		ug/L		105	50 - 150
Hexachlorobenzene	0.0489	0.0416	J	ug/L		85	50 - 150
Hexachlorocyclopentadiene	0.0489	0.0520		ug/L		106	50 - 150
Indeno[1,2,3-cd]pyrene	0.0489	0.0425	J	ug/L		87	50 - 150
Isophorone	0.0978	0.119	J	ug/L		122	50 - 150
Lindane	0.0391	0.0429		ug/L		110	50 - 150
Malathion	0.0978	0.130		ug/L		133	50 - 150
Methoxychlor	0.0978	0.143		ug/L		147	50 - 150
Metolachlor	0.0489	0.0671		ug/L		137	50 - 150
Molinate	0.0978	0.113		ug/L		116	50 - 150
Naphthalene	0.0978	0.115	J	ug/L		118	50 - 150
Parathion	0.0978	0.139		ug/L		143	50 - 150
Pendimethalin (Penoxaline)	0.0978	0.121		ug/L		123	50 - 150
Phenanthrene	0.0196	0.0227	J	ug/L		116	50 - 150
Propachlor	0.0489	0.0576		ug/L		118	50 - 150
Pyrene	0.0489	0.0569		ug/L		116	50 - 150
Simazine	0.0489	0.0576		ug/L		118	50 - 150
Terbacil	0.0978	0.136		ug/L		139	50 - 150
Terbutylazine	0.0978	0.113		ug/L		116	50 - 150
Thiobencarb	0.0978	0.129	J	ug/L		132	50 - 150
trans-Nonachlor	0.0244	0.0258	J	ug/L		105	50 - 150
Trifluralin	0.0978	0.108		ug/L		110	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-55393-1

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

<i>Surrogate</i>	<i>MRL</i> <i>%Recovery</i>	<i>MRL</i> <i>Qualifier</i>	<i>Limits</i>
2-Nitro-m-xylene	106		70 - 130
Perylene-d12	88		70 - 130
Triphenylphosphate	114		70 - 130

Lab Sample ID: 380-55418-AO-1-B MS
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 48256

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.099		1.97	2.05		ug/L		104	70 - 130
2,4'-DDD	<0.099		1.97	2.15		ug/L		109	70 - 130
2,4'-DDE	<0.099		1.97	2.09		ug/L		106	70 - 130
2,4'-DDT	<0.099		1.97	2.20		ug/L		112	70 - 130
2,4-Dinitrotoluene	<0.099		1.97	2.23		ug/L		113	70 - 130
2,6-Dinitrotoluene	<0.099		1.97	2.16		ug/L		110	70 - 130
2-Methylnaphthalene	<0.099		1.97	2.09		ug/L		106	70 - 130
4,4'-DDD	<0.099		1.97	2.08		ug/L		106	70 - 130
4,4'-DDE	<0.099		1.97	2.04		ug/L		104	70 - 130
4,4'-DDT	<0.099		1.97	2.24		ug/L		114	70 - 130
Acenaphthene	<0.099		1.97	1.97		ug/L		100	70 - 130
Acenaphthylene	<0.099		1.97	2.15		ug/L		109	70 - 130
Acetochlor	<0.099		1.97	2.39		ug/L		121	70 - 130
Alachlor	<0.049		1.97	2.51		ug/L		127	70 - 130
alpha-BHC	<0.099		1.97	2.30		ug/L		117	70 - 130
alpha-Chlordane	<0.049		1.97	2.04		ug/L		104	70 - 130
Anthracene	<0.020		1.97	1.97		ug/L		100	70 - 130
Atrazine	<0.049		1.97	2.29		ug/L		116	70 - 130
Benz(a)anthracene	<0.049		1.97	2.17		ug/L		110	70 - 130
Benzo[a]pyrene	<0.020		1.97	2.03		ug/L		103	70 - 130
Benzo[b]fluoranthene	<0.020		1.97	2.18		ug/L		111	70 - 130
Benzo[g,h,i]perylene	<0.049		1.97	2.24		ug/L		114	70 - 130
Benzo[k]fluoranthene	<0.020		1.97	2.15		ug/L		109	70 - 130
beta-BHC	<0.099		1.97	2.21		ug/L		112	70 - 130
Bis(2-ethylhexyl) phthalate	<0.59		1.97	2.04		ug/L		104	70 - 130
Bromacil	<0.099	F1	1.97	2.58	F1	ug/L		131	70 - 130
Butachlor	<0.049	*+ F1	1.97	2.65	F1	ug/L		134	70 - 130
Butylbenzylphthalate	<0.49	^3+	1.97	2.26		ug/L		115	70 - 130
Chlorobenzilate	<0.099	^3+ F1	1.97	2.46		ug/L		125	70 - 130
Chloroneb	<0.099		1.97	2.13		ug/L		108	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.099		1.97	2.19		ug/L		111	70 - 130
Chlorpyrifos	<0.049		1.97	2.34		ug/L		119	70 - 130
Chrysene	<0.020		1.97	2.02		ug/L		102	70 - 130
delta-BHC	<0.099		1.97	2.06		ug/L		104	70 - 130
Di(2-ethylhexyl)adipate	<0.59		1.97	2.29		ug/L		116	70 - 130
Dibenz(a,h)anthracene	<0.049		1.97	2.32		ug/L		118	70 - 130
Diclorvos (DDVP)	<0.049	^3+	1.97	2.24		ug/L		114	70 - 130
Dieldrin	<0.20		1.97	2.12		ug/L		108	70 - 130
Diethylphthalate	<0.49		1.97	2.36		ug/L		120	70 - 130
Dimethylphthalate	<0.49		1.97	2.19		ug/L		111	70 - 130
Di-n-butyl phthalate	<0.99		3.94	4.76		ug/L		114	70 - 130
Di-n-octyl phthalate	<0.099		1.97	2.12		ug/L		108	70 - 130

QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: 380-55418-AO-1-B MS
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 48256

Analyte	Sample	Sample Qualifier	Spike Added	MS	MS	Unit	D	%Rec	%Rec Limits
	Result			Result	Qualifier				
Endosulfan I (Alpha)	<0.099		1.97	1.98		ug/L		101	70 - 130
Endosulfan II (Beta)	<0.099	^3+	1.97	2.31		ug/L		117	70 - 130
Endosulfan sulfate	<0.099		1.97	2.13		ug/L		108	70 - 130
Endrin	<0.099	F1	1.97	2.66	F1	ug/L		135	70 - 130
Endrin aldehyde	<0.099		1.97	1.55		ug/L		79	70 - 130
EPTC	<0.099		1.97	2.33		ug/L		118	70 - 130
Fluoranthene	<0.099		1.97	2.28		ug/L		116	70 - 130
Fluorene	<0.049		1.97	2.24		ug/L		114	70 - 130
gamma-Chlordane	<0.049		1.97	2.11		ug/L		107	70 - 130
Heptachlor	<0.040		1.97	2.17		ug/L		110	70 - 130
Heptachlor epoxide (isomer B)	<0.049		1.97	2.21		ug/L		112	70 - 130
Hexachlorobenzene	<0.049		1.97	2.19		ug/L		111	70 - 130
Hexachlorocyclopentadiene	<0.049		1.97	2.17		ug/L		110	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.97	2.26		ug/L		115	70 - 130
Isophorone	<0.49		1.97	2.08		ug/L		106	70 - 130
Lindane	<0.040		1.97	2.21		ug/L		112	70 - 130
Malathion	<0.099		1.97	2.35		ug/L		119	70 - 130
Methoxychlor	<0.099		1.97	2.31		ug/L		117	70 - 130
Metolachlor	<0.049		1.97	2.49		ug/L		126	70 - 130
Molinate	<0.099	F1	1.97	2.52		ug/L		128	70 - 130
Naphthalene	<0.30		1.97	1.92		ug/L		96	70 - 130
Parathion	<0.099	F1	1.97	2.52		ug/L		128	70 - 130
Pendimethalin (Penoxaline)	<0.099	F1	1.97	2.45		ug/L		125	70 - 130
Phenanthrene	<0.040		1.97	1.95		ug/L		99	70 - 130
Propachlor	<0.049		1.97	2.39		ug/L		122	70 - 130
Pyrene	<0.049		1.97	2.27		ug/L		115	70 - 130
Simazine	<0.049		1.97	2.34		ug/L		119	70 - 130
Terbacil	<0.099		1.97	2.42		ug/L		123	70 - 130
Terbutylazine	<0.099		1.97	2.43		ug/L		123	70 - 130
Thiobencarb	<0.20		1.97	2.21		ug/L		112	70 - 130
trans-Nonachlor	<0.049		1.97	1.93		ug/L		98	70 - 130
Trifluralin	<0.099		1.97	2.42		ug/L		123	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	101		70 - 130
Perylene-d12	96		70 - 130
Triphenylphosphate	115		70 - 130

Lab Sample ID: 380-55418-AO-1-C MSD
Matrix: Water
Analysis Batch: 48488

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 48256

Analyte	Sample	Sample Qualifier	Spike Added	MSD	MSD	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
	Result			Result	Qualifier						
1-Methylnaphthalene	<0.099		1.97	2.05		ug/L		104	70 - 130	0	20
2,4'-DDD	<0.099		1.97	2.22		ug/L		113	70 - 130	4	20
2,4'-DDE	<0.099		1.97	2.17		ug/L		110	70 - 130	4	20
2,4'-DDT	<0.099		1.97	2.30		ug/L		117	70 - 130	4	20
2,4-Dinitrotoluene	<0.099		1.97	2.35		ug/L		119	70 - 130	5	20

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QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: 380-55418-AO-1-C MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 48488

Prep Batch: 48256

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	RPD
	Result	Qualifier	Added	Result	Qualifier				Limits		Limit
2,6-Dinitrotoluene	<0.099		1.97	2.30		ug/L		117	70 - 130	6	20
2-Methylnaphthalene	<0.099		1.97	2.11		ug/L		107	70 - 130	1	20
4,4'-DDD	<0.099		1.97	2.19		ug/L		111	70 - 130	5	20
4,4'-DDE	<0.099		1.97	2.13		ug/L		108	70 - 130	4	20
4,4'-DDT	<0.099		1.97	2.37		ug/L		121	70 - 130	6	20
Acenaphthene	<0.099		1.97	1.98		ug/L		100	70 - 130	0	20
Acenaphthylene	<0.099		1.97	2.17		ug/L		110	70 - 130	1	20
Acetochlor	<0.099		1.97	2.46		ug/L		125	70 - 130	3	20
Alachlor	<0.049		1.97	2.49		ug/L		126	70 - 130	1	20
alpha-BHC	<0.099		1.97	2.40		ug/L		122	70 - 130	4	20
alpha-Chlordane	<0.049		1.97	2.11		ug/L		107	70 - 130	3	20
Anthracene	<0.020		1.97	2.00		ug/L		102	70 - 130	2	20
Atrazine	<0.049		1.97	2.36		ug/L		120	70 - 130	3	20
Benz(a)anthracene	<0.049		1.97	2.28		ug/L		116	70 - 130	5	20
Benzo[a]pyrene	<0.020		1.97	1.99		ug/L		101	70 - 130	2	20
Benzo[b]fluoranthene	<0.020		1.97	2.15		ug/L		109	70 - 130	2	20
Benzo[g,h,i]perylene	<0.049		1.97	2.21		ug/L		112	70 - 130	1	20
Benzo[k]fluoranthene	<0.020		1.97	2.15		ug/L		109	70 - 130	0	20
beta-BHC	<0.099		1.97	2.25		ug/L		114	70 - 130	2	20
Bis(2-ethylhexyl) phthalate	<0.59		1.97	2.11		ug/L		107	70 - 130	3	20
Bromacil	<0.099	F1	1.97	2.69	F1	ug/L		137	70 - 130	4	20
Butachlor	<0.049	*+ F1	1.97	2.79	F1	ug/L		142	70 - 130	5	20
Butylbenzylphthalate	<0.49	^3+	1.97	2.41		ug/L		123	70 - 130	7	20
Chlorobenzilate	<0.099	^3+ F1	1.97	2.77	F1	ug/L		141	70 - 130	12	20
Chloroneb	<0.099		1.97	2.21		ug/L		112	70 - 130	4	20
Chlorothalonil (Draconil, Bravo)	<0.099		1.97	2.27		ug/L		115	70 - 130	3	20
Chlorpyrifos	<0.049		1.97	2.41		ug/L		122	70 - 130	3	20
Chrysene	<0.020		1.97	1.96		ug/L		99	70 - 130	3	20
delta-BHC	<0.099		1.97	2.07		ug/L		105	70 - 130	1	20
Di(2-ethylhexyl)adipate	<0.59		1.97	2.47		ug/L		126	70 - 130	8	20
Dibenz(a,h)anthracene	<0.049		1.97	2.33		ug/L		118	70 - 130	0	20
Diclorvos (DDVP)	<0.049	^3+	1.97	2.32		ug/L		118	70 - 130	4	20
Dieldrin	<0.20		1.97	2.23		ug/L		113	70 - 130	5	20
Diethylphthalate	<0.49		1.97	2.37		ug/L		120	70 - 130	0	20
Dimethylphthalate	<0.49		1.97	2.21		ug/L		112	70 - 130	1	20
Di-n-butyl phthalate	<0.99		3.94	5.04		ug/L		121	70 - 130	6	20
Di-n-octyl phthalate	<0.099		1.97	2.21		ug/L		112	70 - 130	4	20
Endosulfan I (Alpha)	<0.099		1.97	2.02		ug/L		103	70 - 130	2	20
Endosulfan II (Beta)	<0.099	^3+	1.97	2.41		ug/L		122	70 - 130	4	20
Endosulfan sulfate	<0.099		1.97	2.31		ug/L		117	70 - 130	8	20
Endrin	<0.099	F1	1.97	2.88	F1	ug/L		146	70 - 130	8	20
Endrin aldehyde	<0.099		1.97	1.69		ug/L		86	70 - 130	9	20
EPTC	<0.099		1.97	2.45		ug/L		125	70 - 130	5	20
Fluoranthene	<0.099		1.97	2.35		ug/L		119	70 - 130	3	20
Fluorene	<0.049		1.97	2.24		ug/L		114	70 - 130	0	20
gamma-Chlordane	<0.049		1.97	2.17		ug/L		110	70 - 130	3	20
Heptachlor	<0.040		1.97	2.19		ug/L		111	70 - 130	1	20
Heptachlor epoxide (isomer B)	<0.049		1.97	2.27		ug/L		115	70 - 130	2	20
Hexachlorobenzene	<0.049		1.97	2.21		ug/L		112	70 - 130	1	20

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QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: 380-55418-AO-1-C MSD

Client Sample ID: Matrix Spike Duplicate

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 48488

Prep Batch: 48256

Analyte	Sample	Sample	Spike	MSD	MSD	Unit	D	%Rec	%Rec	RPD	Limit
	Result	Qualifier	Added	Result	Qualifier				Limits		
Hexachlorocyclopentadiene	<0.049		1.97	2.13		ug/L		108	70 - 130	2	20
Indeno[1,2,3-cd]pyrene	<0.049		1.97	2.28		ug/L		116	70 - 130	1	20
Isophorone	<0.49		1.97	2.10		ug/L		107	70 - 130	1	20
Lindane	<0.040		1.97	2.18		ug/L		111	70 - 130	1	20
Malathion	<0.099		1.97	2.46		ug/L		125	70 - 130	4	20
Methoxychlor	<0.099		1.97	2.33		ug/L		118	70 - 130	1	20
Metolachlor	<0.049		1.97	2.53		ug/L		128	70 - 130	2	20
Molinate	<0.099	F1	1.97	2.59	F1	ug/L		132	70 - 130	3	20
Naphthalene	<0.30		1.97	1.93		ug/L		97	70 - 130	1	20
Parathion	<0.099	F1	1.97	2.58	F1	ug/L		131	70 - 130	2	20
Pendimethalin (Penoxaline)	<0.099	F1	1.97	2.58	F1	ug/L		131	70 - 130	5	20
Phenanthrene	<0.040		1.97	1.98		ug/L		100	70 - 130	1	20
Propachlor	<0.049		1.97	2.50		ug/L		127	70 - 130	4	20
Pyrene	<0.049		1.97	2.36		ug/L		120	70 - 130	4	20
Simazine	<0.049		1.97	2.43		ug/L		124	70 - 130	4	20
Terbacil	<0.099		1.97	2.53		ug/L		128	70 - 130	4	20
Terbutylazine	<0.099		1.97	2.51		ug/L		128	70 - 130	3	20
Thiobencarb	<0.20		1.97	2.25		ug/L		114	70 - 130	2	20
trans-Nonachlor	<0.049		1.97	2.01		ug/L		102	70 - 130	4	20
Trifluralin	<0.099		1.97	2.52		ug/L		128	70 - 130	4	20
		MSD	MSD								
Surrogate	%Recovery	Qualifier	Limits								
2-Nitro-m-xylene	103		70 - 130								
Perylene-d12	93		70 - 130								
Triphenylphosphate	124		70 - 130								

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

Lab Sample ID: MBL 380-48507/23-A

Client Sample ID: Method Blank

Matrix: Water

Prep Type: Total/NA

Analysis Batch: 49933

Prep Batch: 48507

Analyte	MBL	MBL	RL	Unit	D	Prepared	Analyzed	Dil Fac
	Result	Qualifier						
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	<0.58		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	<0.42		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
Perfluorohexanesulfonic acid (PFHxS)	0.360	J	2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
Perfluorononanoic acid (PFNA)	<0.40		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: MBL 380-48507/23-A
Matrix: Water
Analysis Batch: 49933

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 48507

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		07/24/23 06:53	08/02/23 12:24	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	103		70 - 130	07/24/23 06:53	08/02/23 12:24	1
13C2 PFHxA	114		70 - 130	07/24/23 06:53	08/02/23 12:24	1
13C2 PFDA	106		70 - 130	07/24/23 06:53	08/02/23 12:24	1
13C3-GenX	98		70 - 130	07/24/23 06:53	08/02/23 12:24	1

Lab Sample ID: LCS 380-48507/25-A
Matrix: Water
Analysis Batch: 49933

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	21.3		ng/L		85	70 - 130
Perfluorooctanesulfonic acid (PFOS)	23.2	22.4		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	25.1	22.1		ng/L		88	70 - 130
N-methylperfluorooctanesulfonamideacetic acid (NMeFOSAA)	25.1	23.3		ng/L		93	70 - 130
N-ethylperfluorooctanesulfonamideacetic acid (NEtFOSAA)	25.1	22.4		ng/L		89	70 - 130
Perfluorohexanoic acid (PFHxA)	25.1	24.9		ng/L		99	70 - 130
Perfluorododecanoic acid (PFDoA)	25.1	23.2		ng/L		92	70 - 130
Perfluorooctanoic acid (PFOA)	25.1	24.7		ng/L		98	70 - 130
Perfluorodecanoic acid (PFDA)	25.1	24.4		ng/L		97	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	22.9	20.3		ng/L		89	70 - 130
Perfluorobutanesulfonic acid (PFBS)	22.2	21.3		ng/L		96	70 - 130
Perfluoroheptanoic acid (PFHpA)	25.1	22.7		ng/L		91	70 - 130
Perfluorononanoic acid (PFNA)	25.1	26.7		ng/L		106	70 - 130
Perfluorotetradecanoic acid (PFTA)	25.1	23.2		ng/L		93	70 - 130
Perfluorotridecanoic acid (PFTrDA)	25.1	23.1		ng/L		92	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	23.5	23.8		ng/L		101	70 - 130
11-Chloroeicosfluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	23.7	21.0		ng/L		88	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	23.7	23.4		ng/L		99	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-55393-1

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

<i>Surrogate</i>	<i>LCS LCS</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
<i>d5-NEtFOSAA</i>	102		70 - 130
<i>13C2 PFHxA</i>	114		70 - 130
<i>13C2 PFDA</i>	102		70 - 130
<i>13C3-GenX</i>	100		70 - 130

Lab Sample ID: LCSD 380-48507/26-A
Matrix: Water
Analysis Batch: 49933

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 48507

<i>Analyte</i>	<i>Spike Added</i>	<i>LCSD LCSD</i>		<i>Unit</i>	<i>D</i>	<i>%Rec</i>	<i>%Rec</i>		<i>RPD</i>	<i>Limit</i>
		<i>Result</i>	<i>Qualifier</i>				<i>Limits</i>	<i>RPD</i>		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	25.1	23.3		ng/L		93	70 - 130	9	30	
Perfluorooctanesulfonic acid (PFOS)	23.2	22.7		ng/L		98	70 - 130	1	30	
Perfluoroundecanoic acid (PFUnA)	25.1	23.9		ng/L		95	70 - 130	8	30	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	25.1	23.5		ng/L		94	70 - 130	1	30	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	25.1	23.0		ng/L		92	70 - 130	3	30	
Perfluorohexanoic acid (PFHxA)	25.1	25.9		ng/L		103	70 - 130	4	30	
Perfluorododecanoic acid (PFDoA)	25.1	23.9		ng/L		95	70 - 130	3	30	
Perfluorooctanoic acid (PFOA)	25.1	25.5		ng/L		102	70 - 130	4	30	
Perfluorodecanoic acid (PFDA)	25.1	25.1		ng/L		100	70 - 130	3	30	
Perfluorohexanesulfonic acid (PFHxS)	22.9	21.5		ng/L		94	70 - 130	6	30	
Perfluorobutanesulfonic acid (PFBS)	22.2	22.3		ng/L		100	70 - 130	5	30	
Perfluoroheptanoic acid (PFHpA)	25.1	25.6		ng/L		102	70 - 130	12	30	
Perfluorononanoic acid (PFNA)	25.1	27.8		ng/L		111	70 - 130	4	30	
Perfluorotetradecanoic acid (PFTA)	25.1	24.9		ng/L		99	70 - 130	7	30	
Perfluorotridecanoic acid (PFTrDA)	25.1	24.0		ng/L		96	70 - 130	4	30	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	23.5	23.6		ng/L		101	70 - 130	1	30	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	23.7	21.5		ng/L		91	70 - 130	3	30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	23.7	25.5		ng/L		108	70 - 130	9	30	

<i>Surrogate</i>	<i>LCSD LCSD</i>		<i>Limits</i>
	<i>%Recovery</i>	<i>Qualifier</i>	
<i>d5-NEtFOSAA</i>	106		70 - 130
<i>13C2 PFHxA</i>	118		70 - 130
<i>13C2 PFDA</i>	112		70 - 130
<i>13C3-GenX</i>	106		70 - 130

QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: MRL 380-48507/24-A
Matrix: Water
Analysis Batch: 49933

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48507

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.82	J	ng/L		90	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.86	1.71	J	ng/L		92	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	1.72	J	ng/L		86	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	1.74	J	ng/L		87	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	1.77	J	ng/L		88	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	1.97	J	ng/L		98	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	1.80	J	ng/L		90	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.20	J	ng/L		109	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	1.85	J	ng/L		92	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.83	2.20	J	ng/L		120	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.78	2.23	J	ng/L		125	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.10	J	ng/L		105	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.05	J	ng/L		102	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.88	J	ng/L		93	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	1.84	J	ng/L		92	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	1.88	1.80	J	ng/L		96	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.90	1.67	J	ng/L		88	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.90	1.93	J	ng/L		102	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
d5-NEtFOSAA	109		70 - 130
13C2 PFHxA	113		70 - 130
13C2 PFDA	107		70 - 130
13C3-GenX	107		70 - 130

Lab Sample ID: 380-55400-B-1-A MS
Matrix: Water
Analysis Batch: 49933

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 48507

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		2.00	<2.0		ng/L		97	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		1.86	3.51		ng/L		96	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		2.00	<2.0		ng/L		95	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.00	<2.0		ng/L		95	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: MBL 380-48520/23-A
Matrix: Water
Analysis Batch: 49931

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 48520

Analyte	MBL Result	MBL Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0	ng/L		07/24/23 09:48	08/02/23 07:46	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	113		70 - 130	07/24/23 09:48	08/02/23 07:46	1
13C2 PFHxA	118		70 - 130	07/24/23 09:48	08/02/23 07:46	1
13C2 PFDA	109		70 - 130	07/24/23 09:48	08/02/23 07:46	1
13C3-GenX	104		70 - 130	07/24/23 09:48	08/02/23 07:46	1

Lab Sample ID: LCS 380-48520/25-A
Matrix: Water
Analysis Batch: 49931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48520

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.1	44.9		ng/L		90	70 - 130
Perfluorooctanesulfonic acid (PFOS)	46.4	40.7		ng/L		88	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.1	41.4		ng/L		83	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.1	42.4		ng/L		85	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.1	41.1		ng/L		82	70 - 130
Perfluorohexanoic acid (PFHxA)	50.1	48.1		ng/L		96	70 - 130
Perfluorododecanoic acid (PFDoA)	50.1	40.8		ng/L		81	70 - 130
Perfluorooctanoic acid (PFOA)	50.1	45.9		ng/L		92	70 - 130
Perfluorodecanoic acid (PFDA)	50.1	45.5		ng/L		91	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	45.7	40.6		ng/L		89	70 - 130
Perfluorobutanesulfonic acid (PFBS)	44.3	41.4		ng/L		93	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.1	43.8		ng/L		87	70 - 130
Perfluorononanoic acid (PFNA)	50.1	47.8		ng/L		95	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.1	39.1		ng/L		78	70 - 130
Perfluorotridecanoic acid (PFTTrDA)	50.1	40.5		ng/L		81	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	46.8	42.5		ng/L		91	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47.3	39.2		ng/L		83	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.3	44.2		ng/L		93	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	97		70 - 130
13C2 PFHxA	119		70 - 130
13C2 PFDA	103		70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: LCS 380-48520/25-A
Matrix: Water
Analysis Batch: 49931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48520

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
13C3-GenX	108		70 - 130

Lab Sample ID: LCSD 380-48520/26-A
Matrix: Water
Analysis Batch: 49931

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 48520

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	Limit
							Limits	RPD		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.2	41.4		ng/L		83	70 - 130	8	30	
Perfluorooctanesulfonic acid (PFOS)	46.5	42.5		ng/L		91	70 - 130	4	30	
Perfluoroundecanoic acid (PFUnA)	50.2	41.4		ng/L		83	70 - 130	0	30	
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.2	43.3		ng/L		86	70 - 130	2	30	
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.2	40.6		ng/L		81	70 - 130	1	30	
Perfluorohexanoic acid (PFHxA)	50.2	46.3		ng/L		92	70 - 130	4	30	
Perfluorododecanoic acid (PFDoA)	50.2	42.1		ng/L		84	70 - 130	3	30	
Perfluorooctanoic acid (PFOA)	50.2	44.7		ng/L		89	70 - 130	3	30	
Perfluorodecanoic acid (PFDA)	50.2	44.0		ng/L		88	70 - 130	3	30	
Perfluorohexanesulfonic acid (PFHxS)	45.8	40.2		ng/L		88	70 - 130	1	30	
Perfluorobutanesulfonic acid (PFBS)	44.4	38.7		ng/L		87	70 - 130	7	30	
Perfluoroheptanoic acid (PFHpA)	50.2	43.1		ng/L		86	70 - 130	2	30	
Perfluorononanoic acid (PFNA)	50.2	47.3		ng/L		94	70 - 130	1	30	
Perfluorotetradecanoic acid (PFTA)	50.2	39.7		ng/L		79	70 - 130	1	30	
Perfluorotridecanoic acid (PFTrDA)	50.2	40.5		ng/L		81	70 - 130	0	30	
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	46.9	44.1		ng/L		94	70 - 130	4	30	
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	47.4	39.8		ng/L		84	70 - 130	2	30	
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	47.4	42.6		ng/L		90	70 - 130	4	30	

Surrogate	LCSD LCSD		Limits
	%Recovery	Qualifier	
d5-NEtFOSAA	97		70 - 130
13C2 PFHxA	115		70 - 130
13C2 PFDA	107		70 - 130
13C3-GenX	104		70 - 130

QC Sample Results

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

Job ID: 380-55393-1

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

Lab Sample ID: MRL 380-48520/24-A
Matrix: Water
Analysis Batch: 49931

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 48520

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	1.80	J	ng/L		90	50 - 150
Perfluorooctanesulfonic acid (PFOS)	1.86	1.76	J	ng/L		95	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	1.84	J	ng/L		92	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	1.97	J	ng/L		98	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	1.88	J	ng/L		94	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.04	J	ng/L		102	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	1.83	J	ng/L		91	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.30	J	ng/L		115	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	1.99	J	ng/L		99	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	1.83	2.29	J	ng/L		125	50 - 150
Perfluorobutanesulfonic acid (PFBS)	1.78	2.34	J	ng/L		132	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.23	J	ng/L		111	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.20	J	ng/L		110	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	1.81	J	ng/L		90	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	1.92	J	ng/L		96	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid (9Cl-PF3ONS)	1.88	1.90	J	ng/L		101	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	1.90	1.64	J	ng/L		87	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	1.90	2.04	J	ng/L		108	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	MRL Limits
d5-NEtFOSAA	105		70 - 130
13C2 PFHxA	113		70 - 130
13C2 PFDA	103		70 - 130
13C3-GenX	104		70 - 130

Lab Sample ID: 380-55313-B-1-A MS
Matrix: Water
Analysis Batch: 49931

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 48520

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	F1	50.2	35.0		ng/L		70	70 - 130
Perfluorooctanesulfonic acid (PFOS)	<2.0		46.5	40.5		ng/L		86	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.2	38.3		ng/L		76	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.2	41.8		ng/L		83	70 - 130

Eurofins Eaton Analytical Pomona

QC Association Summary

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

Job ID: 380-55393-1

GC/MS Semi VOA

Prep Batch: 48256

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-55393-1	MOANALUA WELLS	Total/NA	Drinking Water	525.2	
MB 380-48256/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-48256/23-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-48256/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-48256/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-55418-AO-1-B MS	Matrix Spike	Total/NA	Water	525.2	
380-55418-AO-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	525.2	

Analysis Batch: 48488

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-55393-1	MOANALUA WELLS	Total/NA	Drinking Water	525.2	48256
MB 380-48256/21-A	Method Blank	Total/NA	Water	525.2	48256
LCS 380-48256/23-A	Lab Control Sample	Total/NA	Water	525.2	48256
LCSD 380-48256/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	48256
MRL 380-48256/22-A	Lab Control Sample	Total/NA	Water	525.2	48256
380-55418-AO-1-B MS	Matrix Spike	Total/NA	Water	525.2	48256
380-55418-AO-1-C MSD	Matrix Spike Duplicate	Total/NA	Water	525.2	48256

LCMS

Prep Batch: 48507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-55393-1	MOANALUA WELLS	Total/NA	Drinking Water	537.1 DW	
MBL 380-48507/23-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-48507/25-A	Lab Control Sample	Total/NA	Water	537.1 DW	
LCSD 380-48507/26-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	
MRL 380-48507/24-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-55400-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-55400-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Prep Batch: 48520

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-55393-3	FB MOANALUA WELLS	Total/NA	Water	537.1 DW	
MBL 380-48520/23-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-48520/25-A	Lab Control Sample	Total/NA	Water	537.1 DW	
LCSD 380-48520/26-A	Lab Control Sample Dup	Total/NA	Water	537.1 DW	
MRL 380-48520/24-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-55313-B-1-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-55313-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 49931

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-55393-3	FB MOANALUA WELLS	Total/NA	Water	537.1	48520
MBL 380-48520/23-A	Method Blank	Total/NA	Water	537.1	48520
LCS 380-48520/25-A	Lab Control Sample	Total/NA	Water	537.1	48520
LCSD 380-48520/26-A	Lab Control Sample Dup	Total/NA	Water	537.1	48520
MRL 380-48520/24-A	Lab Control Sample	Total/NA	Water	537.1	48520
380-55313-B-1-A MS	Matrix Spike	Total/NA	Water	537.1	48520
380-55313-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	48520

QC Association Summary

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

Job ID: 380-55393-1

LCMS

Analysis Batch: 49933

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-55393-1	MOANALUA WELLS	Total/NA	Drinking Water	537.1	48507
MBL 380-48507/23-A	Method Blank	Total/NA	Water	537.1	48507
LCS 380-48507/25-A	Lab Control Sample	Total/NA	Water	537.1	48507
LCSD 380-48507/26-A	Lab Control Sample Dup	Total/NA	Water	537.1	48507
MRL 380-48507/24-A	Lab Control Sample	Total/NA	Water	537.1	48507
380-55400-B-1-A MS	Matrix Spike	Total/NA	Water	537.1	48507
380-55400-C-1-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	48507

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- 17

Lab Chronicle

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

Job ID: 380-55393-1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-55393-1

Date Collected: 07/17/23 11:30

Matrix: Drinking Water

Date Received: 07/19/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			48256	N8NE	EA POM	07/21/23 14:06
Total/NA	Analysis	525.2		1	48488	Q8LA	EA POM	07/23/23 13:10
Total/NA	Prep	537.1 DW			48507	US1B	EA POM	07/24/23 06:53
Total/NA	Analysis	537.1		1	49933	UKDT	EA POM	08/02/23 15:46

Client Sample ID: FB MOANALUA WELLS

Lab Sample ID: 380-55393-3

Date Collected: 07/17/23 11:30

Matrix: Water

Date Received: 07/19/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	537.1 DW			48520	US1B	EA POM	07/24/23 09:48
Total/NA	Analysis	537.1		1	49931	Y7BM	EA POM	08/02/23 10:00

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: 380-55393-1

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: 380-55393-1

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

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

Authority	Program	Identification Number	Expiration Date
The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.			
Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Molinate
525.2	525.2	Drinking Water	Naphthalene
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Phenanthrene
525.2	525.2	Drinking Water	Pyrene
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	Terbutylazine
525.2	525.2	Drinking Water	Thiobencarb
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor
525.2	525.2	Drinking Water	Trifluralin
537.1	537.1 DW	Drinking Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
537.1	537.1 DW	Drinking Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Drinking Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)
537.1	537.1 DW	Drinking Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)
537.1	537.1 DW	Water	11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)
537.1	537.1 DW	Water	4,8-Dioxa-3H-perfluorononanoic acid (ADONA)
537.1	537.1 DW	Water	9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)
537.1	537.1 DW	Water	Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)

Method Summary

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

Job ID: 380-55393-1

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA POM
537.1	Perfluorinated Alkyl Acids (LC/MS)	EPA	EA POM
525.2	Extraction of Semivolatile Compounds	EPA	EA POM
537.1 DW	Extraction of Perfluorinated Alkyl Acids	EPA	EA POM

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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



Sample Summary

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

Job ID: 380-55393-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-55393-1	MOANALUA WELLS	Drinking Water	07/17/23 11:30	07/19/23 10:00	HI0000331
380-55393-3	FB MOANALUA WELLS	Water	07/17/23 11:30	07/19/23 10:00	HI0000331

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- 16
- 17

Monrovia, CA (Suite 100)

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

Chain of Custody Record



Client Information		Sampler: <i>Bryson Nakamoto</i>		Lab PM: Arada, Rachele		Carrier Tracking No(s):		COC No: 380-27941-2757.2																							
Client Contact: Dr. Ron Fenstermacher		Phone: 808-748-5840		E-Mail: Rachele.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:		<table border="1"> <tr> <td>Field Filtered Sample (Yes or No)</td> <td>Perform MS/MSD (Yes or No)</td> <td>SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs</td> <td>SUBCONTRACT - 8015 Gas (Purgable) LL (EAL)</td> <td>SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil</td> <td>626.2_PREC - (MOD) 525plus PLUS TICs</td> <td>SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)</td> <td>637.1_DW_PREC - 537.1 Full List</td> <td>633 - All Analytes</td> <td>Total Number of containers</td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table>						Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	SUBCONTRACT - 8015 Gas (Purgable) LL (EAL)	SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil	626.2_PREC - (MOD) 525plus PLUS TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	637.1_DW_PREC - 537.1 Full List	633 - All Analytes	Total Number of containers											Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify)	
Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	SUBCONTRACT - 8015 Gas (Purgable) LL (EAL)							SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil	626.2_PREC - (MOD) 525plus PLUS TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	637.1_DW_PREC - 537.1 Full List	633 - All Analytes	Total Number of containers																
City: Honolulu		TAT Requested (days):								Compliance Project: Δ No		PO #:		C20525101 exp 05312023		Other:															
State, Zip: HI, 96843		Compliance Project: Δ No								Project #:		WO #:		38001111		Special Instructions/Note:															
Phone: 808-748-5091 (tel)		Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill		SSOW#:		Site:																									
Email: r Fenstermacher@hbws.org		Sample Identification		Sample Date		Sample Time		Sample Type (C=Comp, G=grab)		Matrix (W=water, S=solid, O=waste/ot, BT=Tissue, A=Air)																					
		MOANALUA WELLS		7/17/2023		1130		W		Water																					
		AIEA GULCH WELLS PUMP2								Water																					
		AIEA WELLS PUMPS 1&2 (260)								Water																					
		HALAWA WELLS UNITS 1&2								Water																					
		FB MOANALUA WELLS		7/17/2023						Water																					
		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		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		Deliverable Requested: I, II, III, IV, Other (specify)		Special Instructions/QC Requirements: <i>① 7727 7063 6630</i>																					
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment: <i>FEDEX ① 7727 7063 6354</i>		Relinquished by: <i>Bryson Nakamoto</i>		Date/Time: <i>7/17/2023 1300</i>																					
Relinquished by:		Date/Time:		Company:		Received by: <i>G. RETNER</i>		Date/Time: <i>07/19/2023 10:00</i>		Company: <i>ESAP</i>																					
Relinquished by:		Date/Time:		Company:		Received by:		Date/Time:		Company:																					
Custody Seals Intact: Δ Yes Δ No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: <i>GEL-FROZEN (752A) ① 3.1°-0.2°-2.9° ② 2.9°-0.2°-2.5°</i>																											

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-55393-1

Login Number: 55393
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	