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ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
Public Service Bldg. Room 310
Honolulu, Hawaii 96843

Generated 6/10/2024 2:18:54 PM

JOB DESCRIPTION

RED-HILL
525.2, 533, 537.1

JOB NUMBER

380-97746-1

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

See page two for job notes and contact information.

Job Notes

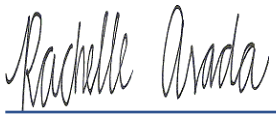
This report may not be reproduced except in full, and with written approval from the laboratory. The results relate only to the samples tested. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

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

Compliance Statement

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

Authorization



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Authorized for release by
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Table of Contents

Definitions/Glossary

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

Qualifiers

GC/MS Semi VOA

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.

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
B	Analyte was found in the field reagent blank.
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Job Narrative
380-97746-1

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

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

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

Receipt
The samples were received on 5/30/2024 9:40 AM. Unless otherwise noted below, the samples arrived in good condition, and, where required, properly preserved and on ice. The temperatures of the 2 coolers at receipt time were 2.8°C and 5.8°C.

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

PFAS
Method 537.1_DW_PREC: Analytes Perfluorooctanesulfonic acid (PFOS), Perfluorohexanoic acid (PFHxA), Perfluorooctanoic acid (PFOA) and Perfluorohexanesulfonic acid (PFHxS) detected greater than 1/3 MRL but less than MRL in field reagent blank . Container labels were checked to confirm that the FRB was not mislabeled. Concentration found in the FRB is similar to those found in the native sample. Native sample is ND for all target analytes. No impact on data.

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

Detection Summary

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS — Lab Sample ID: 380-97746-1

No Detections.

Client Sample ID: FB: MOANALUA WELLS — Lab Sample ID: 380-97746-2

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS
Date Collected: 05/28/24 10:30
Date Received: 05/30/24 09:40

Lab Sample ID: 380-97746-1
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
2,4'-DDD	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
2,4'-DDE	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
2,4'-DDT	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
2,4-Dinitrotoluene	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
2,6-Dinitrotoluene	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
2-Methylnaphthalene	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
4,4'-DDD	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
4,4'-DDE	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
4,4'-DDT	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Acenaphthene	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Acenaphthylene	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Acetochlor	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Alachlor	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
alpha-BHC	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
alpha-Chlordane	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Anthracene	<0.020		0.020		ug/L		06/01/24 14:55	06/04/24 12:17	1
Atrazine	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Benz(a)anthracene	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Benzo[a]pyrene	<0.020		0.020		ug/L		06/01/24 14:55	06/04/24 12:17	1
Benzo[b]fluoranthene	<0.020		0.020		ug/L		06/01/24 14:55	06/04/24 12:17	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Benzo[k]fluoranthene	<0.020		0.020		ug/L		06/01/24 14:55	06/04/24 12:17	1
beta-BHC	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59		ug/L		06/01/24 14:55	06/04/24 12:17	1
Bromacil	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Butachlor	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Butylbenzylphthalate	<0.49		0.49		ug/L		06/01/24 14:55	06/04/24 12:17	1
Chlorobenzilate	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Chloroneb	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Chlorpyrifos	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Chrysene	<0.020		0.020		ug/L		06/01/24 14:55	06/04/24 12:17	1
delta-BHC	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Di(2-ethylhexyl)adipate	<0.59		0.59		ug/L		06/01/24 14:55	06/04/24 12:17	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Dieldrin	<0.20		0.20		ug/L		06/01/24 14:55	06/04/24 12:17	1
Diethylphthalate	<0.49		0.49		ug/L		06/01/24 14:55	06/04/24 12:17	1
Dimethylphthalate	<0.49		0.49		ug/L		06/01/24 14:55	06/04/24 12:17	1
Di-n-butyl phthalate	<0.98		0.98		ug/L		06/01/24 14:55	06/04/24 12:17	1
Di-n-octyl phthalate	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Endosulfan I (Alpha)	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Endosulfan II (Beta)	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Endosulfan sulfate	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Endrin	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Endrin aldehyde	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
EPTC	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Fluoranthene	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS
Date Collected: 05/28/24 10:30
Date Received: 05/30/24 09:40

Lab Sample ID: 380-97746-1
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
gamma-Chlordane	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Heptachlor	<0.039		0.039		ug/L		06/01/24 14:55	06/04/24 12:17	1
Heptachlor epoxide (isomer B)	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Hexachlorobenzene	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Isophorone	<0.49		0.49		ug/L		06/01/24 14:55	06/04/24 12:17	1
Lindane	<0.039		0.039		ug/L		06/01/24 14:55	06/04/24 12:17	1
Malathion	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Methoxychlor	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Metolachlor	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Molinate	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Naphthalene	<0.29		0.29		ug/L		06/01/24 14:55	06/04/24 12:17	1
Parathion	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Pendimethalin (Penoxaline)	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Phenanthrene	<0.039		0.039		ug/L		06/01/24 14:55	06/04/24 12:17	1
Propachlor	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Pyrene	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Simazine	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Terbacil	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Terbuthylazine	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1
Thiobencarb	<0.20		0.20		ug/L		06/01/24 14:55	06/04/24 12:17	1
Total Permethrin (mixed isomers)	<0.20		0.20		ug/L		06/01/24 14:55	06/04/24 12:17	1
trans-Nonachlor	<0.049		0.049		ug/L		06/01/24 14:55	06/04/24 12:17	1
Trifluralin	<0.098		0.098		ug/L		06/01/24 14:55	06/04/24 12:17	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*			*N/A*	*06/01/24 14:55*	*06/04/24 12:17*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*97*		*70 - 130*	*06/01/24 14:55*	*06/04/24 12:17*	*1*
Perylene-d12	*79*		*70 - 130*	*06/01/24 14:55*	*06/04/24 12:17*	*1*
Triphenylphosphate	*108*		*70 - 130*	*06/01/24 14:55*	*06/04/24 12:17*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS
Date Collected: 05/28/24 10:30
Date Received: 05/30/24 09:40

Lab Sample ID: 380-97746-1
Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:03	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*74*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C6 PFDA	*73*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C5 PFHxA	*76*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C4 PFHpA	*78*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C8 PFOA	*75*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C9 PFNA	*75*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C7 PFUnA	*75*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C2 PFDoA	*79*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C4 PFBA	*82*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C5 PFPeA	*78*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C3 PFBS	*100*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C3 PFHxS	*98*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C8 PFOS	*99*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C2-4:2-FTS	*102*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C2-6:2-FTS	*96*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*
13C2-8:2-FTS	*94*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:03*	*1*

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1

Client Sample ID: MOANALUA WELLS

Date Collected: 05/28/24 10:30
Date Received: 05/30/24 09:40

Lab Sample ID: 380-97746-1

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
Perfluorotridecanoic acid (PFTrDA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*89*		*70 - 130*	*05/31/24 08:27*	*06/01/24 09:41*	*1*
13C2 PFHxA	*90*		*70 - 130*	*05/31/24 08:27*	*06/01/24 09:41*	*1*
13C2 PFDA	*90*		*70 - 130*	*05/31/24 08:27*	*06/01/24 09:41*	*1*
13C3-GenX	*88*		*70 - 130*	*05/31/24 08:27*	*06/01/24 09:41*	*1*

Client Sample ID: FB: MOANALUA WELLS

Date Collected: 05/28/24 10:30
Date Received: 05/30/24 09:40

Lab Sample ID: 380-97746-2

Matrix: Water

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluorohexanoic acid (PFHxA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluorooctanesulfonic acid (PFOS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluorooctanoic acid (PFOA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluorobutanoic acid (PFBA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB: MOANALUA WELLS
Date Collected: 05/28/24 10:30
Date Received: 05/30/24 09:40

Lab Sample ID: 380-97746-2
Matrix: Water

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		05/31/24 06:34	06/01/24 05:12	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	2 0		2 0		ng/L		05/31/24 06 34	06/01/24 05 12	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluoropentanoic acid (PFPeA)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.0		ng/L		05/31/24 06:34	06/01/24 05:12	1

Isotope Dilution	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*79*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C6 PFDA	*85*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C5 PFHxA	*88*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C4 PFHpA	*78*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C8 PFOA	*83*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C9 PFNA	*87*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C7 PFUnA	*87*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C2 PFDoA	*88*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C4 PFBA	*81*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C5 PFPeA	*79*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C3 PFBS	*99*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C3 PFHxS	*94*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C8 PFOS	*93*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C2-4:2-FTS	*101*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C2-6:2-FTS	*92*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*1*
13C2-8:2-FTS	*86*		*50 - 200*	*05/31/24 06:34*	*06/01/24 05:12*	*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		05/31/24 08:27	06/01/24 09:50	1
Perfluorooctanesulfonic acid (PFOS)	<2.0	B	2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
Perfluoroundecanoic acid (PFUnA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
Perfluorohexanoic acid (PFHxA)	<2.0	B	2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
Perfluorododecanoic acid (PFDoA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
Perfluorooctanoic acid (PFOA)	<2.0	B	2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
Perfluorodecanoic acid (PFDA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
Perfluorohexanesulfonic acid (PFHxS)	<2.0	B	2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
Perfluorobutanesulfonic acid (PFBS)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
Perfluoroheptanoic acid (PFHpA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
Perfluorononanoic acid (PFNA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
Perfluorotetradecanoic acid (PFTA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

Client Sample ID: FB: MOANALUA WELLS
Date Collected: 05/28/24 10:30
Date Received: 05/30/24 09:40

Lab Sample ID: 380-97746-2
Matrix: Water

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		05/31/24 08:27	06/01/24 09:50	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.0		ng/L		05/31/24 08:27	06/01/24 09:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
d5-NEtFOSAA	*94*		*70 - 130*	*05/31/24 08:27*	*06/01/24 09:50*	*1*
13C2 PFHxA	*89*		*70 - 130*	*05/31/24 08:27*	*06/01/24 09:50*	*1*
13C2 PFDA	*94*		*70 - 130*	*05/31/24 08:27*	*06/01/24 09:50*	*1*
13C3-GenX	*89*		*70 - 130*	*05/31/24 08:27*	*06/01/24 09:50*	*1*

Action Limit Summary

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS — Lab Sample ID: 380-97746-1

Compliance Check

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

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

Client Sample ID: FB: MOANALUA WELLS — Lab Sample ID: 380-97746-2

Compliance Check

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

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

Surrogate Summary

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	PRY	TPP
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-97746-1	MOANALUA WELLS	97	79	108
810-106147-B-1-A DU	Duplicate	107	86	95
810-106147-B-6-A MS	Matrix Spike	105	98	106
LCS 380-93149/23-A	Lab Control Sample	99	93	101
MB 380-93149/21-A	Method Blank	105	93	96
MRL 380-93149/22-A	Lab Control Sample	103	90	92

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)			
		d5NEFOS	PFHxA	PFDA	GenX
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)	(70-130)
380-97746-1	MOANALUA WELLS	89	90	90	88
380-97746-2	FB: MOANALUA WELLS	94	89	94	89
380-97770-B-9-A MS	Matrix Spike	92	102	96	94
380-97770-C-9-A MSD	Matrix Spike Duplicate	89	94	91	89
LCS 380-92982/23-A	Lab Control Sample	90	93	93	88
MBL 380-92982/21-A	Method Blank	89	88	97	85
MRL 380-92982/22-A	Lab Control Sample	89	87	88	80

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: 380-97746-1
SDG: 525.2, 533, 537.1

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

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

		Percent Isotope Dilution Recovery (Acceptance Limits)							
Lab Sample ID	Client Sample ID	HFPODA (50-200)	C6PFDA (50-200)	13C5PHA (50-200)	C4PFHA (50-200)	C8PFOA (50-200)	C9PFNA (50-200)	13C7PUA (50-200)	PFDoA (50-200)
380-97746-1	MOANALUA WELLS	74	73	76	78	75	75	75	79
380-97746-2	FB: MOANALUA WELLS	79	85	88	78	83	87	87	88
380-97770-E-9-A LMS	Matrix Spike	81	75	86	81	80	77	73	74
380-97770-F-9-A LMSD	Matrix Spike Duplicate	75	74	82	75	73	75	75	74
LCS 380-92976/24-A	Lab Control Sample	96	93	93	94	95	90	91	92
MBL 380-92976/22-A	Method Blank	86	87	95	89	91	86	86	87
MRL 380-92976/23-A	Lab Control Sample	94	89	99	93	90	97	91	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)
380-97746-1	MOANALUA WELLS	82	78	100	98	99	102	96	94
380-97746-2	FB: MOANALUA WELLS	81	79	99	94	93	101	92	86
380-97770-E-9-A LMS	Matrix Spike	91	109	102	97	93	113	96	86
380-97770-F-9-A LMSD	Matrix Spike Duplicate	87	93	102	95	93	108	96	93
LCS 380-92976/24-A	Lab Control Sample	91	93	95	91	88	88	89	88
MBL 380-92976/22-A	Method Blank	90	85	97	92	86	92	87	86
MRL 380-92976/23-A	Lab Control Sample	93	91	100	95	94	94	88	84

Surrogate Legend

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

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

Lab Sample ID: MB 380-93149/21-A
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 93149

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
2,4'-DDD	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
2,4'-DDE	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
2,4'-DDT	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
2,4-Dinitrotoluene	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
2,6-Dinitrotoluene	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
2-Methylnaphthalene	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
4,4'-DDD	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
4,4'-DDE	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
4,4'-DDT	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Acenaphthene	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Acenaphthylene	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Acetochlor	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Alachlor	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
alpha-BHC	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
alpha-Chlordane	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Anthracene	<0.019		0.019		ug/L		06/01/24 14:55	06/03/24 14:57	1
Atrazine	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Benz(a)anthracene	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Benzo[a]pyrene	<0.019		0.019		ug/L		06/01/24 14:55	06/03/24 14:57	1
Benzo[b]fluoranthene	<0.019		0.019		ug/L		06/01/24 14:55	06/03/24 14:57	1
Benzo[g,h,i]perylene	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Benzo[k]fluoranthene	<0.019		0.019		ug/L		06/01/24 14:55	06/03/24 14:57	1
beta-BHC	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Bis(2-ethylhexyl) phthalate	<0.58		0.58		ug/L		06/01/24 14:55	06/03/24 14:57	1
Bromacil	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Butachlor	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Butylbenzylphthalate	<0.49		0.49		ug/L		06/01/24 14:55	06/03/24 14:57	1
Chlorobenzilate	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Chloroneb	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Chlorothalonil (Draconil, Bravo)	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Chlorpyrifos	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Chrysene	<0.019		0.019		ug/L		06/01/24 14:55	06/03/24 14:57	1
delta-BHC	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Di(2-ethylhexyl)adipate	<0.58		0.58		ug/L		06/01/24 14:55	06/03/24 14:57	1
Dibenz(a,h)anthracene	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Diclorvos (DDVP)	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Dieldrin	<0.19		0.19		ug/L		06/01/24 14:55	06/03/24 14:57	1
Diethylphthalate	<0.49		0.49		ug/L		06/01/24 14:55	06/03/24 14:57	1
Dimethylphthalate	<0.49		0.49		ug/L		06/01/24 14:55	06/03/24 14:57	1
Di-n-butyl phthalate	<0.97		0.97		ug/L		06/01/24 14:55	06/03/24 14:57	1
Di-n-octyl phthalate	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Endosulfan I (Alpha)	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Endosulfan II (Beta)	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Endosulfan sulfate	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Endrin	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Endrin aldehyde	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
EPTC	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1

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

Lab Sample ID: MB 380-93149/21-A
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 93149

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Fluorene	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
gamma-Chlordane	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Heptachlor	<0.039		0.039		ug/L		06/01/24 14:55	06/03/24 14:57	1
Heptachlor epoxide (isomer B)	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Hexachlorobenzene	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Hexachlorocyclopentadiene	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Isophorone	<0.49		0.49		ug/L		06/01/24 14:55	06/03/24 14:57	1
Lindane	<0.039		0.039		ug/L		06/01/24 14:55	06/03/24 14:57	1
Malathion	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Methoxychlor	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Metolachlor	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Molinate	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Naphthalene	<0.29		0.29		ug/L		06/01/24 14:55	06/03/24 14:57	1
Parathion	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Pendimethalin (Penoxaline)	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Phenanthrene	<0.039		0.039		ug/L		06/01/24 14:55	06/03/24 14:57	1
Propachlor	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Pyrene	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Simazine	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Terbacil	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Terbuthylazine	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1
Thiobencarb	<0.19		0.19		ug/L		06/01/24 14:55	06/03/24 14:57	1
Total Permethrin (mixed isomers)	<0.19		0.19		ug/L		06/01/24 14:55	06/03/24 14:57	1
trans-Nonachlor	<0.049		0.049		ug/L		06/01/24 14:55	06/03/24 14:57	1
Trifluralin	<0.097		0.097		ug/L		06/01/24 14:55	06/03/24 14:57	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclopentasiloxane, decamethyl-	*0.810*	*T J N*	*ug/L*		*2.66*	*541-02-6*	*06/01/24 14:55*	*06/03/24 14:57*	*1*
Cyclohexasiloxane, dodecamethyl-	*0.704*	*T J N*	*ug/L*		*3.21*	*540-97-6*	*06/01/24 14:55*	*06/03/24 14:57*	*1*
Unknown	*0.656*	*T J*	*ug/L*		*9.75*	*N/A*	*06/01/24 14:55*	*06/03/24 14:57*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*105*		*70 - 130*	*06/01/24 14:55*	*06/03/24 14:57*	*1*
Perylene-d12	*93*		*70 - 130*	*06/01/24 14:55*	*06/03/24 14:57*	*1*
Triphenylphosphate	*96*		*70 - 130*	*06/01/24 14:55*	*06/03/24 14:57*	*1*

Lab Sample ID: LCS 380-93149/23-A
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 93149

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.95	2.18		ug/L		112	70 - 130
2,4'-DDD	1.95	2.25		ug/L		116	70 - 130
2,4'-DDE	1.95	2.21		ug/L		114	70 - 130
2,4'-DDT	1.95	2.13		ug/L		109	70 - 130
2,4-Dinitrotoluene	1.95	1.77		ug/L		91	70 - 130

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

Lab Sample ID: LCS 380-93149/23-A
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 93149

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,6-Dinitrotoluene	1.95	1.98		ug/L		102	70 - 130
2-Methylnaphthalene	1.95	2.17		ug/L		112	70 - 130
4,4'-DDD	1.95	2.12		ug/L		109	70 - 130
4,4'-DDE	1.95	2.16		ug/L		111	70 - 130
4,4'-DDT	1.95	2.19		ug/L		113	70 - 130
Acenaphthene	1.95	2.12		ug/L		109	70 - 130
Acenaphthylene	1.95	2.14		ug/L		110	70 - 130
Acetochlor	1.95	2.05		ug/L		105	70 - 130
Alachlor	1.95	2.15		ug/L		110	70 - 130
alpha-BHC	1.95	2.04		ug/L		105	70 - 130
alpha-Chlordane	1.95	1.95		ug/L		100	70 - 130
Anthracene	1.95	1.37		ug/L		70	70 - 130
Atrazine	1.95	2.16		ug/L		111	70 - 130
Benz(a)anthracene	1.95	2.01		ug/L		103	70 - 130
Benzo[a]pyrene	1.95	1.67		ug/L		86	70 - 130
Benzo[b]fluoranthene	1.95	2.25		ug/L		115	70 - 130
Benzo[g,h,i]perylene	1.95	2.28		ug/L		117	70 - 130
Benzo[k]fluoranthene	1.95	2.42		ug/L		124	70 - 130
beta-BHC	1.95	2.18		ug/L		112	70 - 130
Bis(2-ethylhexyl) phthalate	1.95	2.38		ug/L		122	70 - 130
Bromacil	1.95	2.06		ug/L		106	70 - 130
Butachlor	1.95	2.27		ug/L		117	70 - 130
Butylbenzylphthalate	1.95	2.31		ug/L		119	70 - 130
Chlorobenzilate	1.95	2.09		ug/L		107	70 - 130
Chloroneb	1.95	2.06		ug/L		106	70 - 130
Chlorothalonil (Draconil, Bravo)	1.95	2.35		ug/L		120	70 - 130
Chlorpyrifos	1.95	2.10		ug/L		108	70 - 130
Chrysene	1.95	2.22		ug/L		114	70 - 130
delta-BHC	1.95	2.30		ug/L		118	70 - 130
Di(2-ethylhexyl)adipate	1.95	2.22		ug/L		114	70 - 130
Dibenz(a,h)anthracene	1.95	2.29		ug/L		117	70 - 130
Diclorvos (DDVP)	1.95	2.36		ug/L		121	70 - 130
Dieldrin	1.95	2.19		ug/L		112	70 - 130
Diethylphthalate	1.95	1.96		ug/L		101	70 - 130
Dimethylphthalate	1.95	2.17		ug/L		112	70 - 130
Di-n-butyl phthalate	3.90	4.55		ug/L		117	70 - 130
Di-n-octyl phthalate	1.95	2.13		ug/L		110	70 - 130
Endosulfan I (Alpha)	1.95	2.26		ug/L		116	70 - 130
Endosulfan II (Beta)	1.95	2.34		ug/L		120	70 - 130
Endosulfan sulfate	1.95	2.10		ug/L		108	70 - 130
Endrin	1.95	2.11		ug/L		108	70 - 130
Endrin aldehyde	1.95	1.76		ug/L		91	60 - 130
EPTC	1.95	2.34		ug/L		120	70 - 130
Fluoranthene	1.95	2.31		ug/L		118	70 - 130
Fluorene	1.95	2.18		ug/L		112	70 - 130
gamma-Chlordane	1.95	1.97		ug/L		101	70 - 130
Heptachlor	1.95	2.16		ug/L		111	70 - 130
Heptachlor epoxide (isomer B)	1.95	2.00		ug/L		103	70 - 130
Hexachlorobenzene	1.95	1.74		ug/L		89	70 - 130

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

Lab Sample ID: LCS 380-93149/23-A
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 93149

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexachlorocyclopentadiene	1.95	2.25		ug/L		115	70 - 130
Indeno[1,2,3-cd]pyrene	1.95	2.35		ug/L		121	70 - 130
Isophorone	1.95	2.23		ug/L		114	70 - 130
Lindane	1.95	2.21		ug/L		114	70 - 130
Malathion	1.95	2.06		ug/L		106	70 - 130
Methoxychlor	1.95	2.22		ug/L		114	70 - 130
Metolachlor	1.95	2.23		ug/L		115	70 - 130
Molinate	1.95	2.19		ug/L		112	70 - 130
Naphthalene	1.95	2.06		ug/L		106	70 - 130
Parathion	1.95	2.18		ug/L		112	70 - 130
Pendimethalin (Penoxaline)	1.95	2.16		ug/L		111	70 - 130
Phenanthrene	1.95	2.19		ug/L		112	70 - 130
Propachlor	1.95	2.04		ug/L		105	70 - 130
Pyrene	1.95	2.26		ug/L		116	70 - 130
Simazine	1.95	2.05		ug/L		105	70 - 130
Terbacil	1.95	1.98		ug/L		101	70 - 130
Terbuthylazine	1.95	2.09		ug/L		107	70 - 130
Thiobencarb	1.95	2.33		ug/L		119	70 - 130
trans-Nonachlor	1.95	2.07		ug/L		106	70 - 130
Trifluralin	1.95	1.93		ug/L		99	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*99*		*70 - 130*
Perylene-d12	*93*		*70 - 130*
Triphenylphosphate	*101*		*70 - 130*

Lab Sample ID: MRL 380-93149/22-A
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 93149

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0970	0.115		ug/L		119	50 - 150
2,4'-DDD	0.0970	0.118		ug/L		122	50 - 150
2,4'-DDE	0.0970	0.111		ug/L		114	50 - 150
2,4'-DDT	0.0970	0.111		ug/L		115	50 - 150
2,4-Dinitrotoluene	0.0970	0.0805	J	ug/L		83	50 - 150
2,6-Dinitrotoluene	0.0970	0.108		ug/L		112	50 - 150
2-Methylnaphthalene	0.0970	0.108		ug/L		111	50 - 150
4,4'-DDD	0.0970	0.113		ug/L		117	50 - 150
4,4'-DDE	0.0970	0.0964	J	ug/L		99	50 - 150
4,4'-DDT	0.0970	0.110		ug/L		113	50 - 150
Acenaphthene	0.0970	0.0972		ug/L		100	50 - 150
Acenaphthylene	0.0970	0.0915	J	ug/L		94	50 - 150
Acetochlor	0.0485	0.0566	J	ug/L		117	50 - 150
Alachlor	0.0485	0.0501		ug/L		103	50 - 150
alpha-BHC	0.0970	0.0986		ug/L		102	50 - 150
alpha-Chlordane	0.0242	<0.028		ug/L		113	50 - 150
Anthracene	0.0194	<0.018		ug/L		59	50 - 150

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

Lab Sample ID: MRL 380-93149/22-A
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 93149

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Atrazine	0.0485	<0.047		ug/L		87	50 - 150
Benz(a)anthracene	0.0485	0.0501		ug/L		103	50 - 150
Benzo[a]pyrene	0.0194	0.0151	J	ug/L		78	50 - 150
Benzo[b]fluoranthene	0.0194	0.0209		ug/L		108	50 - 150
Benzo[g,h,i]perylene	0.0485	0.0472	J	ug/L		97	50 - 150
Benzo[k]fluoranthene	0.0194	0.0214		ug/L		110	50 - 150
beta-BHC	0.0970	0.0945	J	ug/L		97	50 - 150
Bis(2-ethylhexyl) phthalate	0.582	0.703		ug/L		121	50 - 150
Bromacil	0.0970	0.112		ug/L		115	50 - 150
Butachlor	0.0485	0.0607		ug/L		125	50 - 150
Butylbenzylphthalate	0.145	0.151	J	ug/L		103	50 - 150
Chlorobenzilate	0.0970	0.0954	J	ug/L		98	50 - 150
Chloroneb	0.0970	0.0986		ug/L		102	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0970	0.0926	J	ug/L		95	50 - 150
Chlorpyrifos	0.0485	0.0539		ug/L		111	50 - 150
Chrysene	0.0194	0.0211		ug/L		109	50 - 150
delta-BHC	0.0970	0.113		ug/L		116	50 - 150
Di(2-ethylhexyl)adipate	0.291	0.295	J	ug/L		101	50 - 150
Dibenz(a,h)anthracene	0.0485	0.0418	J	ug/L		86	50 - 150
Diclorvos (DDVP)	0.0485	0.0656		ug/L		135	50 - 150
Dieldrin	0.0970	0.124	J	ug/L		128	50 - 150
Diethylphthalate	0.145	0.159	J	ug/L		110	50 - 150
Dimethylphthalate	0.291	0.308	J	ug/L		106	50 - 150
Di-n-butyl phthalate	0.291	0.363	J	ug/L		125	49 - 243
Di-n-octyl phthalate	0.0970	0.102		ug/L		106	50 - 150
Endosulfan I (Alpha)	0.0970	0.112		ug/L		116	50 - 150
Endosulfan II (Beta)	0.0970	0.139		ug/L		143	50 - 150
Endosulfan sulfate	0.0970	0.120		ug/L		123	50 - 150
Endrin	0.0970	0.0913	J	ug/L		94	50 - 150
Endrin aldehyde	0.0970	0.112		ug/L		116	50 - 150
EPTC	0.0970	0.102		ug/L		105	50 - 150
Fluoranthene	0.0485	0.0547	J	ug/L		113	50 - 150
Fluorene	0.0485	<0.048		ug/L		98	50 - 150
gamma-Chlordane	0.0242	0.0270	J	ug/L		111	50 - 150
Heptachlor	0.0388	0.0440		ug/L		113	50 - 150
Heptachlor epoxide (isomer B)	0.0485	0.0587		ug/L		121	50 - 150
Hexachlorobenzene	0.0485	0.0422	J	ug/L		87	50 - 150
Hexachlorocyclopentadiene	0.0485	0.0457	J	ug/L		94	50 - 150
Indeno[1,2,3-cd]pyrene	0.0485	0.0463	J	ug/L		95	50 - 150
Isophorone	0.0970	0.123	J	ug/L		127	50 - 150
Lindane	0.0388	0.0367	J	ug/L		95	50 - 150
Malathion	0.0970	0.109		ug/L		112	50 - 150
Methoxychlor	0.0970	0.107		ug/L		110	50 - 150
Metolachlor	0.0485	0.0603		ug/L		124	50 - 150
Molinate	0.0970	0.104		ug/L		107	50 - 150
Naphthalene	0.0970	0.113	J	ug/L		117	50 - 150
Parathion	0.0970	0.111		ug/L		115	50 - 150
Pendimethalin (Penoxaline)	0.0970	0.0890	J	ug/L		92	50 - 150
Phenanthrene	0.0194	0.0205	J	ug/L		106	50 - 150

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

Lab Sample ID: MRL 380-93149/22-A
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 93149

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Propachlor	0.0485	0.0457	J	ug/L		94	50 - 150
Pyrene	0.0485	0.0535		ug/L		110	50 - 150
Simazine	0.0485	0.0430	J	ug/L		89	50 - 150
Terbacil	0.0970	0.121		ug/L		124	50 - 150
Terbuthylazine	0.0970	0.101		ug/L		104	50 - 150
Thiobencarb	0.0970	0.112	J	ug/L		115	50 - 150
trans-Nonachlor	0.0242	0.0326	J	ug/L		135	50 - 150
Trifluralin	0.0970	0.0923	J	ug/L		95	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*103*		*70 - 130*
Perylene-d12	*90*		*70 - 130*
Triphenylphosphate	*92*		*70 - 130*

Lab Sample ID: 810-106147-B-6-A MS
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 93149

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.097		1.96	2.28		ug/L		117	70 - 130
2,4'-DDD	<0.097		1.96	2.36		ug/L		121	70 - 130
2,4'-DDE	<0.097		1.96	2.29		ug/L		117	70 - 130
2,4'-DDT	<0.097		1.96	2.20		ug/L		112	70 - 130
2,4-Dinitrotoluene	<0.097		1.96	1.76		ug/L		90	70 - 130
2,6-Dinitrotoluene	<0.097		1.96	1.71		ug/L		87	70 - 130
2-Methylnaphthalene	<0.097		1.96	2.29		ug/L		117	70 - 130
4,4'-DDD	<0.097		1.96	2.21		ug/L		113	70 - 130
4,4'-DDE	<0.097		1.96	2.20		ug/L		112	70 - 130
4,4'-DDT	<0.097		1.96	2.25		ug/L		115	70 - 130
Acenaphthene	<0.097		1.96	2.07		ug/L		106	70 - 130
Acenaphthylene	<0.097		1.96	2.08		ug/L		106	70 - 130
Acetochlor	<0.097		1.96	2.26		ug/L		115	70 - 130
Alachlor	<0.048		1.96	2.28		ug/L		117	70 - 130
alpha-BHC	<0.097		1.96	2.18		ug/L		111	70 - 130
alpha-Chlordane	<0.048		1.96	2.09		ug/L		107	70 - 130
Anthracene	<0.019		1.96	1.86		ug/L		95	70 - 130
Atrazine	<0.048		1.96	1.97		ug/L		100	70 - 130
Benz(a)anthracene	<0.048		1.96	2.23		ug/L		114	70 - 130
Benzo[a]pyrene	<0.019		1.96	2.02		ug/L		103	70 - 130
Benzo[b]fluoranthene	<0.019		1.96	2.27		ug/L		116	70 - 130
Benzo[g,h,i]perylene	<0.048		1.96	2.35		ug/L		120	70 - 130
Benzo[k]fluoranthene	<0.019		1.96	2.47		ug/L		126	70 - 130
beta-BHC	<0.097		1.96	2.27		ug/L		116	70 - 130
Bis(2-ethylhexyl) phthalate	<0.58		1.96	2.37		ug/L		121	70 - 130
Bromacil	<0.097		1.96	1.97		ug/L		101	70 - 130
Butachlor	<0.048		1.96	2.37		ug/L		121	70 - 130
Butylbenzylphthalate	<0.48		1.96	2.45		ug/L		125	70 - 130
Chlorobenzilate	<0.097		1.96	2.52		ug/L		129	70 - 130

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

Lab Sample ID: 810-106147-B-6-A MS
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 93149

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chloroneb	<0.097		1.96	1.85		ug/L		95	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.097		1.96	2.29		ug/L		117	70 - 130
Chlorpyrifos	<0.048		1.96	2.17		ug/L		111	70 - 130
Chrysene	<0.019		1.96	2.21		ug/L		113	70 - 130
delta-BHC	<0.097		1.96	2.37		ug/L		121	70 - 130
Di(2-ethylhexyl)adipate	<0.58		1.96	2.34		ug/L		120	70 - 130
Dibenz(a,h)anthracene	<0.048		1.96	2.47		ug/L		126	70 - 130
Diclorvos (DDVP)	<0.048		1.96	2.42		ug/L		123	70 - 130
Dieldrin	<0.19		1.96	2.30		ug/L		117	70 - 130
Diethylphthalate	<0.48		1.96	2.10		ug/L		107	70 - 130
Dimethylphthalate	<0.48		1.96	1.95		ug/L		100	70 - 130
Di-n-butyl phthalate	<0.97		3.92	4.84		ug/L		119	70 - 130
Di-n-octyl phthalate	<0.097		1.96	2.16		ug/L		110	70 - 130
Endosulfan I (Alpha)	<0.097		1.96	2.40		ug/L		123	70 - 130
Endosulfan II (Beta)	<0.097		1.96	2.41		ug/L		123	70 - 130
Endosulfan sulfate	<0.097		1.96	2.08		ug/L		106	70 - 130
Endrin	<0.097		1.96	2.00		ug/L		102	70 - 130
Endrin aldehyde	<0.097		1.96	1.70		ug/L		87	60 - 130
EPTC	<0.097		1.96	2.38		ug/L		122	70 - 130
Fluoranthene	<0.097		1.96	2.37		ug/L		121	70 - 130
Fluorene	<0.048		1.96	1.96		ug/L		100	70 - 130
gamma-Chlordane	<0.048		1.96	2.10		ug/L		107	70 - 130
Heptachlor	<0.039		1.96	2.40		ug/L		122	70 - 130
Heptachlor epoxide (isomer B)	<0.048		1.96	2.10		ug/L		107	70 - 130
Hexachlorobenzene	<0.048		1.96	1.76		ug/L		90	70 - 130
Hexachlorocyclopentadiene	<0.048		1.96	2.33		ug/L		119	70 - 130
Indeno[1,2,3-cd]pyrene	<0.048		1.96	2.44		ug/L		124	70 - 130
Isophorone	<0.48		1.96	2.36		ug/L		120	70 - 130
Lindane	<0.039		1.96	2.31		ug/L		118	70 - 130
Malathion	<0.097		1.96	2.16		ug/L		110	70 - 130
Methoxychlor	<0.097		1.96	2.18		ug/L		111	70 - 130
Metolachlor	<0.048		1.96	2.33		ug/L		119	70 - 130
Molinate	<0.097		1.96	1.93		ug/L		99	70 - 130
Naphthalene	<0.29		1.96	2.18		ug/L		111	70 - 130
Parathion	<0.097		1.96	2.33		ug/L		119	70 - 130
Pendimethalin (Penoxaline)	<0.097		1.96	2.23		ug/L		114	70 - 130
Phenanthrene	<0.039		1.96	2.18		ug/L		111	70 - 130
Propachlor	<0.048		1.96	2.31		ug/L		118	70 - 130
Pyrene	<0.048		1.96	2.35		ug/L		120	70 - 130
Simazine	<0.048		1.96	2.01		ug/L		102	70 - 130
Terbacil	<0.097		1.96	2.03		ug/L		103	70 - 130
Terbuthylazine	<0.097		1.96	2.01		ug/L		103	70 - 130
Thiobencarb	<0.19		1.96	2.31		ug/L		118	70 - 130
trans-Nonachlor	<0.048		1.96	2.16		ug/L		110	70 - 130
Trifluralin	<0.097		1.96	2.12		ug/L		108	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*105*		*70 - 130*

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

Lab Sample ID: 810-106147-B-6-A MS
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 93149

Surrogate	MS %Recovery	MS Qualifier	Limits
Perylene-d12	*98*		*70 - 130*
Triphenylphosphate	*106*		*70 - 130*

Lab Sample ID: 810-106147-B-1-A DU
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 93149

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
1-Methylnaphthalene	<0.10		<0.098		ug/L		NC	20
2,4'-DDD	<0.10		<0.098		ug/L		NC	20
2,4'-DDE	<0.10		<0.098		ug/L		NC	20
2,4'-DDT	<0.10		<0.098		ug/L		NC	20
2,4-Dinitrotoluene	<0.10		<0.098		ug/L		NC	20
2,6-Dinitrotoluene	<0.10		<0.098		ug/L		NC	20
2-Methylnaphthalene	<0.10		<0.098		ug/L		NC	20
4,4'-DDD	<0.10		<0.098		ug/L		NC	20
4,4'-DDE	<0.10		<0.098		ug/L		NC	20
4,4'-DDT	<0.10		<0.098		ug/L		NC	20
Acenaphthene	<0.10		<0.098		ug/L		NC	20
Acenaphthylene	<0.10		<0.098		ug/L		NC	20
Acetochlor	<0.10		<0.098		ug/L		NC	20
Alachlor	<0.050		<0.049		ug/L		NC	20
alpha-BHC	<0.10		<0.098		ug/L		NC	20
alpha-Chlordane	<0.050		<0.049		ug/L		NC	20
Anthracene	<0.020		<0.020		ug/L		NC	20
Atrazine	<0.050		<0.049		ug/L		NC	20
Benz(a)anthracene	<0.050		<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	<0.050		<0.049		ug/L		NC	20
Benzo[k]fluoranthene	<0.020		<0.020		ug/L		NC	20
beta-BHC	<0.10		<0.098		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.60		<0.59		ug/L		NC	20
Bromacil	<0.10		<0.098		ug/L		NC	20
Butachlor	<0.050		<0.049		ug/L		NC	20
Butylbenzylphthalate	<0.50		<0.49		ug/L		NC	20
Chlorobenzilate	<0.10		<0.098		ug/L		NC	20
Chloroneb	<0.10		<0.098		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.10		<0.098		ug/L		NC	20
Chlorpyrifos	<0.050		<0.049		ug/L		NC	20
Chrysene	<0.020		<0.020		ug/L		NC	20
delta-BHC	<0.10		<0.098		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.60		<0.59		ug/L		NC	20
Dibenz(a,h)anthracene	<0.050		<0.049		ug/L		NC	20
Diclorvos (DDVP)	<0.050		<0.049		ug/L		NC	20
Dieldrin	<0.20		<0.20		ug/L		NC	20
Diethylphthalate	<0.50		<0.49		ug/L		NC	20
Dimethylphthalate	<0.50		<0.49		ug/L		NC	20

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

Lab Sample ID: 810-106147-B-1-A DU
Matrix: Water
Analysis Batch: 93298

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 93149

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Di-n-butyl phthalate	<1.0			<0.98		ug/L				NC	20
Di-n-octyl phthalate	<0.10			<0.098		ug/L				NC	20
Endosulfan I (Alpha)	<0.10			<0.098		ug/L				NC	20
Endosulfan II (Beta)	<0.10			<0.098		ug/L				NC	20
Endosulfan sulfate	<0.10			<0.098		ug/L				NC	20
Endrin	<0.10			<0.098		ug/L				NC	20
Endrin aldehyde	<0.10			<0.098		ug/L				NC	20
EPTC	<0.10			<0.098		ug/L				NC	20
Fluoranthene	<0.10			<0.098		ug/L				NC	20
Fluorene	<0.050			<0.049		ug/L				NC	20
gamma-Chlordane	<0.050			<0.049		ug/L				NC	20
Heptachlor	<0.040			<0.039		ug/L				NC	20
Heptachlor epoxide (isomer B)	<0.050			<0.049		ug/L				NC	20
Hexachlorobenzene	<0.050			<0.049		ug/L				NC	20
Hexachlorocyclopentadiene	<0.050			<0.049		ug/L				NC	20
Indeno[1,2,3-cd]pyrene	<0.050			<0.049		ug/L				NC	20
Isophorone	<0.50			<0.49		ug/L				NC	20
Lindane	<0.040			<0.039		ug/L				NC	20
Malathion	<0.10			<0.098		ug/L				NC	20
Methoxychlor	<0.10			<0.098		ug/L				NC	20
Metolachlor	<0.050			<0.049		ug/L				NC	20
Molinate	<0.10			<0.098		ug/L				NC	20
Naphthalene	<0.30			<0.29		ug/L				NC	20
Parathion	<0.10			<0.098		ug/L				NC	20
Pendimethalin (Penoxaline)	<0.10			<0.098		ug/L				NC	20
Phenanthrene	<0.040			<0.039		ug/L				NC	20
Propachlor	<0.050			<0.049		ug/L				NC	20
Pyrene	<0.050			<0.049		ug/L				NC	20
Simazine	<0.050			<0.049		ug/L				NC	20
Terbacil	<0.10			<0.098		ug/L				NC	20
Terbuthylazine	<0.10			<0.098		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	<0.050			<0.049		ug/L				NC	20
Trifluralin	<0.10			<0.098		ug/L				NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
2-Nitro-m-xylene	*107*		*70 - 130*
Perylene-d12	*86*		*70 - 130*
Triphenylphosphate	*95*		*70 - 130*

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

Lab Sample ID: MBL 380-92976/22-A
Matrix: Water
Analysis Batch: 93081

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 92976

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluorobutanoic acid (PFBA)	<0.69		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<0.38		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<0.37		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<0.48		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<0.47		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<0.25		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluoro-3-methoxypropanoic acid (PFMPA)	<0.46		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluoro-4-methoxybutanoic acid (PFMBA)	<0.15		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluoropentanoic acid (PFPeA)	<0.38		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluoroheptanesulfonic acid (PFHpS)	<0.36		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1
Perfluoropentanesulfonic acid (PFPeS)	<0.39		2.0		ng/L		05/31/24 06:34	06/01/24 03:44	1

Isotope Dilution	*MBL %Recovery*	*MBL Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
13C3 HFPO-DA	*86*		*50 - 200*	*05/31/24 06:34*	*06/01/24 03:44*	*1*
13C6 PFDA	*87*		*50 - 200*	*05/31/24 06:34*	*06/01/24 03:44*	*1*
13C5 PFHxA	*95*		*50 - 200*	*05/31/24 06:34*	*06/01/24 03:44*	*1*
13C4 PFHpA	*89*		*50 - 200*	*05/31/24 06:34*	*06/01/24 03:44*	*1*
13C8 PFOA	*91*		*50 - 200*	*05/31/24 06:34*	*06/01/24 03:44*	*1*
13C9 PFNA	*86*		*50 - 200*	*05/31/24 06:34*	*06/01/24 03:44*	*1*
13C7 PFUnA	*86*		*50 - 200*	*05/31/24 06:34*	*06/01/24 03:44*	*1*
13C2 PFDoA	*87*		*50 - 200*	*05/31/24 06:34*	*06/01/24 03:44*	*1*
13C4 PFBA	*90*		*50 - 200*	*05/31/24 06:34*	*06/01/24 03:44*	*1*
13C5 PFPeA	*85*		*50 - 200*	*05/31/24 06:34*	*06/01/24 03:44*	*1*
13C3 PFBS	*97*		*50 - 200*	*05/31/24 06:34*	*06/01/24 03:44*	*1*
13C3 PFHxS	*92*		*50 - 200*	*05/31/24 06:34*	*06/01/24 03:44*	*1*

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

Lab Sample ID: MBL 380-92976/22-A
Matrix: Water
Analysis Batch: 93081

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 92976

Isotope Dilution	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C8 PFOS	86		50 - 200	05/31/24 06:34	06/01/24 03:44	1
13C2-4:2-FTS	92		50 - 200	05/31/24 06:34	06/01/24 03:44	1
13C2-6:2-FTS	87		50 - 200	05/31/24 06:34	06/01/24 03:44	1
13C2-8:2-FTS	86		50 - 200	05/31/24 06:34	06/01/24 03:44	1

Lab Sample ID: LCS 380-92976/24-A
Matrix: Water
Analysis Batch: 93081

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 92976

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	121	118		ng/L		98	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	121	120		ng/L		99	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	121	121		ng/L		100	70 - 130
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	121	118		ng/L		97	70 - 130
Perfluorobutanesulfonic acid (PFBS)	121	116		ng/L		96	70 - 130
Perfluorodecanoic acid (PFDA)	121	121		ng/L		100	70 - 130
Perfluorododecanoic acid (PFDoA)	121	119		ng/L		98	70 - 130
Perfluoroheptanoic acid (PFHpA)	121	123		ng/L		102	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	121	122		ng/L		101	70 - 130
Perfluorohexanoic acid (PFHxA)	121	120		ng/L		99	70 - 130
Perfluorononanoic acid (PFNA)	121	125		ng/L		104	70 - 130
Perfluorooctanesulfonic acid (PFOS)	121	124		ng/L		103	70 - 130
Perfluorooctanoic acid (PFOA)	121	118		ng/L		97	70 - 130
Perfluoroundecanoic acid (PFUnA)	121	119		ng/L		99	70 - 130
Perfluorobutanoic acid (PFBA)	121	118		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	121	118		ng/L		98	70 - 130
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	121	127		ng/L		105	70 - 130
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	121	122		ng/L		101	70 - 130
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	121	119		ng/L		99	70 - 130
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	121	117		ng/L		97	70 - 130
Perfluoro-3-methoxypropanoic acid (PFMPA)	121	118		ng/L		98	70 - 130
Perfluoro-4-methoxybutanoic acid (PFMBA)	121	118		ng/L		98	70 - 130
Perfluoropentanoic acid (PFPeA)	121	118		ng/L		98	70 - 130
Perfluoroheptanesulfonic acid (PFHpS)	121	126		ng/L		104	70 - 130

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

Lab Sample ID: LCS 380-92976/24-A
Matrix: Water
Analysis Batch: 93081

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 92976

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Perfluoropentanesulfonic acid (PFPeS)			121	120		ng/L		100	70 - 130		

Isotope Dilution	*LCS %Recovery*	*LCS Qualifier*	*Limits*
13C3 HFPO-DA	*96*		*50 - 200*
13C6 PFDA	*93*		*50 - 200*
13C5 PFHxA	*93*		*50 - 200*
13C4 PFHpA	*94*		*50 - 200*
13C8 PFOA	*95*		*50 - 200*
13C9 PFNA	*90*		*50 - 200*
13C7 PFUnA	*91*		*50 - 200*
13C2 PFDoA	*92*		*50 - 200*
13C4 PFBA	*91*		*50 - 200*
13C5 PFPeA	*93*		*50 - 200*
13C3 PFBS	*95*		*50 - 200*
13C3 PFHxS	*91*		*50 - 200*
13C8 PFOS	*88*		*50 - 200*
13C2-4:2-FTS	*88*		*50 - 200*
13C2-6:2-FTS	*89*		*50 - 200*
13C2-8:2-FTS	*88*		*50 - 200*

Lab Sample ID: MRL 380-92976/23-A
Matrix: Water
Analysis Batch: 93081

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 92976

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)			2.01	2.08	J	ng/L		104	50 - 150		
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)			2.01	1.89	J	ng/L		94	50 - 150		
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)			2.01	2.27	J	ng/L		113	50 - 150		
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)			2.01	2.06	J	ng/L		103	50 - 150		
Perfluorobutanesulfonic acid (PFBS)			2.01	1.94	J	ng/L		97	50 - 150		
Perfluorodecanoic acid (PFDA)			2.01	2.18	J	ng/L		109	50 - 150		
Perfluorododecanoic acid (PFDoA)			2.01	2.25	J	ng/L		112	50 - 150		
Perfluoroheptanoic acid (PFHpA)			2.01	2.30	J	ng/L		115	50 - 150		
Perfluorohexanesulfonic acid (PFHxS)			2.01	2.19	J	ng/L		109	50 - 150		
Perfluorohexanoic acid (PFHxA)			2.01	1.99	J	ng/L		99	50 - 150		
Perfluorononanoic acid (PFNA)			2.01	2.21	J	ng/L		110	50 - 150		
Perfluorooctanesulfonic acid (PFOS)			2.01	2.12	J	ng/L		105	50 - 150		
Perfluorooctanoic acid (PFOA)			2.01	2.19	J	ng/L		109	50 - 150		
Perfluoroundecanoic acid (PFUnA)			2.01	2.13	J	ng/L		106	50 - 150		
Perfluorobutanoic acid (PFBA)			2.01	2.20	J	ng/L		109	50 - 150		

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

Lab Sample ID: MRL 380-92976/23-A
Matrix: Water
Analysis Batch: 93081

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 92976

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	2.01	2.23	J	ng/L		111	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	2.01	2.12	J	ng/L		105	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	2.01	2.64	J	ng/L		132	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	2.01	2.12	J	ng/L		106	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	2.01	1.87	J	ng/L		93	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	2.01	2.09	J	ng/L		104	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	2.01	2.16	J	ng/L		107	50 - 150
Perfluoropentanoic acid (PFPeA)	2.01	2.30	J	ng/L		114	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	2.01	2.04	J	ng/L		102	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	2.01	1.87	J	ng/L		93	50 - 150

Isotope Dilution	*MRL %Recovery*	*MRL Qualifier*	*Limits*
13C3 HFPO-DA	*94*		*50 - 200*
13C6 PFDA	*89*		*50 - 200*
13C5 PFHxA	*99*		*50 - 200*
13C4 PFHpA	*93*		*50 - 200*
13C8 PFOA	*90*		*50 - 200*
13C9 PFNA	*97*		*50 - 200*
13C7 PFUnA	*91*		*50 - 200*
13C2 PFDoA	*90*		*50 - 200*
13C4 PFBA	*93*		*50 - 200*
13C5 PFPeA	*91*		*50 - 200*
13C3 PFBS	*100*		*50 - 200*
13C3 PFHxS	*95*		*50 - 200*
13C8 PFOS	*94*		*50 - 200*
13C2-4:2-FTS	*94*		*50 - 200*
13C2-6:2-FTS	*88*		*50 - 200*
13C2-8:2-FTS	*84*		*50 - 200*

Lab Sample ID: 380-97770-E-9-A LMS
Matrix: Water
Analysis Batch: 93081

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 92976

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.02	1.96	J	ng/L		97	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.02	1.98	J	ng/L		98	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.02	1.99	J	ng/L		98	50 - 150

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

Lab Sample ID: 380-97770-E-9-A LMS
Matrix: Water
Analysis Batch: 93081

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 92976

Analyte	Sample Result	Sample Qualifier	Spike Added	LMS Result	LMS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.02	2.03		ng/L		101	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.6		2.02	4.56		ng/L		96	50 - 150
Perfluorodecanoic acid (PFDA)	<2.0		2.02	2.25		ng/L		111	50 - 150
Perfluorododecanoic acid (PFDoA)	<2.0		2.02	2.09		ng/L		103	50 - 150
Perfluoroheptanoic acid (PFHpA)	<2.0		2.02	2.41		ng/L		96	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.02	3.48		ng/L		100	50 - 150
Perfluorohexanoic acid (PFHxA)	<2.0		2.02	2.51		ng/L		94	50 - 150
Perfluorononanoic acid (PFNA)	<2.0		2.02	2.27		ng/L		112	50 - 150
Perfluorooctanesulfonic acid (PFOS)	5.6		2.02	7.65		ng/L		103	50 - 150
Perfluorooctanoic acid (PFOA)	<2.0		2.02	3.47		ng/L		98	50 - 150
Perfluoroundecanoic acid (PFUnA)	<2.0		2.02	2.07		ng/L		103	50 - 150
Perfluorobutanoic acid (PFBA)	<2.0		2.02	2.43		ng/L		120	50 - 150
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.02	2.38		ng/L		118	50 - 150
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.02	2.31		ng/L		114	50 - 150
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.02	2.45		ng/L		121	50 - 150
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.02	2.04		ng/L		101	50 - 150
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.02	1.90	J	ng/L		94	50 - 150
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.02	2.18		ng/L		108	50 - 150
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.02	1.89	J	ng/L		94	50 - 150
Perfluoropentanoic acid (PFPeA)	<2.0		2.02	2.49		ng/L		95	50 - 150
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.02	2.02		ng/L		100	50 - 150
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.02	2.18		ng/L		108	50 - 150

Isotope Dilution	*LMS %Recovery*	*LMS Qualifier*	*Limits*
13C3 HFPO-DA	*81*		*50 - 200*
13C6 PFDA	*75*		*50 - 200*
13C5 PFHxA	*86*		*50 - 200*
13C4 PFHpA	*81*		*50 - 200*
13C8 PFOA	*80*		*50 - 200*
13C9 PFNA	*77*		*50 - 200*
13C7 PFUnA	*73*		*50 - 200*
13C2 PFDoA	*74*		*50 - 200*
13C4 PFBA	*91*		*50 - 200*
13C5 PFPeA	*109*		*50 - 200*
13C3 PFBS	*102*		*50 - 200*
13C3 PFHxS	*97*		*50 - 200*
13C8 PFOS	*93*		*50 - 200*

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

Lab Sample ID: 380-97770-E-9-A LMS
Matrix: Water
Analysis Batch: 93081

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 92976

Isotope Dilution	LMS %Recovery	LMS Qualifier	Limits
13C2-4:2-FTS	113		50 - 200
13C2-6:2-FTS	96		50 - 200
13C2-8:2-FTS	86		50 - 200

Lab Sample ID: 380-97770-F-9-A LMSD
Matrix: Water
Analysis Batch: 93081

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 92976

Analyte	Sample Result	Sample Qualifier	Spike Added	LMSD Result	LMSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		2.02	2.04		ng/L		101	50 - 150	4	50
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		2.02	2.01		ng/L		100	50 - 150	2	50
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		2.02	1.89	J	ng/L		94	50 - 150	5	50
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		2.02	1.98	J	ng/L		98	50 - 150	3	50
Perfluorobutanesulfonic acid (PFBS)	2.6		2.02	4.78		ng/L		107	50 - 150	5	50
Perfluorodecanoic acid (PFDA)	<2.0		2.02	2.12		ng/L		105	50 - 150	6	50
Perfluorododecanoic acid (PFDoA)	<2.0		2.02	2.07		ng/L		102	50 - 150	1	50
Perfluoroheptanoic acid (PFHpA)	<2.0		2.02	2.51		ng/L		101	50 - 150	4	50
Perfluorohexanesulfonic acid (PFHxS)	<2.0		2.02	3.48		ng/L		100	50 - 150	0	50
Perfluorohexanoic acid (PFHxA)	<2.0		2.02	2.57		ng/L		97	50 - 150	3	50
Perfluorononanoic acid (PFNA)	<2.0		2.02	2.25		ng/L		112	50 - 150	1	50
Perfluorooctanesulfonic acid (PFOS)	5.6		2.02	7.86		ng/L		114	50 - 150	3	50
Perfluorooctanoic acid (PFOA)	<2.0		2.02	3.52		ng/L		100	50 - 150	1	50
Perfluoroundecanoic acid (PFUnA)	<2.0		2.02	2.01		ng/L		99	50 - 150	3	50
Perfluorobutanoic acid (PFBA)	<2.0		2.02	2.38		ng/L		118	50 - 150	2	50
1H,1H,2H,2H-Perfluorodecane sulfonic acid (8:2 FTS)	<2.0		2.02	2.12		ng/L		105	50 - 150	12	50
1H,1H,2H,2H-Perfluorohexane sulfonic acid (4:2 FTS)	<2.0		2.02	2.25		ng/L		112	50 - 150	3	50
1H,1H,2H,2H-Perfluorooctane sulfonic acid (6:2 FTS)	<2.0		2.02	2.40		ng/L		119	50 - 150	2	50
Nonafluoro-3,6-dioxaheptanoic acid (NFDHA)	<2.0		2.02	2.08		ng/L		103	50 - 150	2	50
Perfluoro (2-ethoxyethane) sulfonic acid (PFEESA)	<2.0		2.02	1.85	J	ng/L		91	50 - 150	3	50
Perfluoro-3-methoxypropanoic acid (PFMPA)	<2.0		2.02	1.99	J	ng/L		99	50 - 150	9	50
Perfluoro-4-methoxybutanoic acid (PFMBA)	<2.0		2.02	1.92	J	ng/L		95	50 - 150	2	50
Perfluoropentanoic acid (PFPeA)	<2.0		2.02	2.69		ng/L		105	50 - 150	8	50
Perfluoroheptanesulfonic acid (PFHpS)	<2.0		2.02	2.04		ng/L		101	50 - 150	1	50
Perfluoropentanesulfonic acid (PFPeS)	<2.0		2.02	2.32		ng/L		115	50 - 150	6	50

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

Isotope Dilution	LMSD %Recovery	LMSD Qualifier	Limits
13C3 HFPO-DA	75		50 - 200
13C6 PFDA	74		50 - 200
13C5 PFHxA	82		50 - 200
13C4 PFHpA	75		50 - 200
13C8 PFOA	73		50 - 200
13C9 PFNA	75		50 - 200
13C7 PFUnA	75		50 - 200
13C2 PFDoA	74		50 - 200
13C4 PFBA	87		50 - 200
13C5 PFPeA	93		50 - 200
13C3 PFBS	102		50 - 200
13C3 PFHxS	95		50 - 200
13C8 PFOS	93		50 - 200
13C2-4:2-FTS	108		50 - 200
13C2-6:2-FTS	96		50 - 200
13C2-8:2-FTS	93		50 - 200

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

Lab Sample ID: MBL 380-92982/21-A
Matrix: Water
Analysis Batch: 93116

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 92982

Analyte	MBL Result	MBL Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<1.0		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
Perfluorooctanesulfonic acid (PFOS)	<0.43		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
Perfluoroundecanoic acid (PFUnA)	<0.42		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<0.58		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<0.42		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
Perfluorohexanoic acid (PFHxA)	<0.46		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
Perfluorododecanoic acid (PFDoA)	<0.54		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
Perfluorooctanoic acid (PFOA)	<0.38		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
Perfluorodecanoic acid (PFDA)	<0.31		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
Perfluorohexanesulfonic acid (PFHxS)	<0.32		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
Perfluorobutanesulfonic acid (PFBS)	<0.37		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
Perfluoroheptanoic acid (PFHpA)	<0.39		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
Perfluorononanoic acid (PFNA)	<0.40		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
Perfluorotetradecanoic acid (PFTA)	<0.54		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
Perfluorotridecanoic acid (PFTrDA)	<0.36		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<0.30		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<0.30		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<0.60		2.0		ng/L		05/31/24 08:27	06/01/24 08:41	1

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
d5-NEtFOSAA	89		70 - 130	05/31/24 08:27	06/01/24 08:41	1
13C2 PFHxA	88		70 - 130	05/31/24 08:27	06/01/24 08:41	1
13C2 PFDA	97		70 - 130	05/31/24 08:27	06/01/24 08:41	1

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

Lab Sample ID: MBL 380-92982/21-A
Matrix: Water
Analysis Batch: 93116

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 92982

Surrogate	MBL %Recovery	MBL Qualifier	Limits	Prepared	Analyzed	Dil Fac
13C3-GenX	85		70 - 130	05/31/24 08:27	06/01/24 08:41	1

Lab Sample ID: LCS 380-92982/23-A
Matrix: Water
Analysis Batch: 93116

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 92982

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	50.0	51.0		ng/L		102	70 - 130
Perfluorooctanesulfonic acid (PFOS)	50.0	54.8		ng/L		110	70 - 130
Perfluoroundecanoic acid (PFUnA)	50.0	56.2		ng/L		112	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	50.0	52.5		ng/L		105	70 - 130
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	50.0	54.3		ng/L		109	70 - 130
Perfluorohexanoic acid (PFHxA)	50.0	52.6		ng/L		105	70 - 130
Perfluorododecanoic acid (PFDoA)	50.0	53.8		ng/L		108	70 - 130
Perfluorooctanoic acid (PFOA)	50.0	54.1		ng/L		108	70 - 130
Perfluorodecanoic acid (PFDA)	50.0	56.1		ng/L		112	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	50.0	54.0		ng/L		108	70 - 130
Perfluorobutanesulfonic acid (PFBS)	50.0	48.2		ng/L		96	70 - 130
Perfluoroheptanoic acid (PFHpA)	50.0	53.5		ng/L		107	70 - 130
Perfluorononanoic acid (PFNA)	50.0	52.6		ng/L		105	70 - 130
Perfluorotetradecanoic acid (PFTA)	50.0	50.5		ng/L		101	70 - 130
Perfluorotridecanoic acid (PFTrDA)	50.0	52.5		ng/L		105	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	50.0	53.5		ng/L		107	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	50.0	52.0		ng/L		104	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	50.0	52.9		ng/L		106	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
d5-NEtFOSAA	90		70 - 130
13C2 PFHxA	93		70 - 130
13C2 PFDA	93		70 - 130
13C3-GenX	88		70 - 130

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

Lab Sample ID: MRL 380-92982/22-A
Matrix: Water
Analysis Batch: 93116

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 92982

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	2.01	2.19	J	ng/L		109	50 - 150
Perfluorooctanesulfonic acid (PFOS)	2.01	2.37	J	ng/L		118	50 - 150
Perfluoroundecanoic acid (PFUnA)	2.01	2.36	J	ng/L		118	50 - 150
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	2.01	2.49	J	ng/L		124	50 - 150
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	2.01	2.46	J	ng/L		122	50 - 150
Perfluorohexanoic acid (PFHxA)	2.01	2.17	J	ng/L		108	50 - 150
Perfluorododecanoic acid (PFDoA)	2.01	2.25	J	ng/L		112	50 - 150
Perfluorooctanoic acid (PFOA)	2.01	2.38	J	ng/L		119	50 - 150
Perfluorodecanoic acid (PFDA)	2.01	2.32	J	ng/L		116	50 - 150
Perfluorohexanesulfonic acid (PFHxS)	2.01	2.37	J	ng/L		118	50 - 150
Perfluorobutanesulfonic acid (PFBS)	2.01	2.14	J	ng/L		107	50 - 150
Perfluoroheptanoic acid (PFHpA)	2.01	2.26	J	ng/L		113	50 - 150
Perfluorononanoic acid (PFNA)	2.01	2.28	J	ng/L		114	50 - 150
Perfluorotetradecanoic acid (PFTA)	2.01	2.23	J	ng/L		111	50 - 150
Perfluorotridecanoic acid (PFTrDA)	2.01	2.19	J	ng/L		109	50 - 150
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	2.01	2.34	J	ng/L		117	50 - 150
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	2.01	2.34	J	ng/L		117	50 - 150
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	2.01	2.37	J	ng/L		118	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
d5-NEtFOSAA	*89*		*70 - 130*
13C2 PFHxA	*87*		*70 - 130*
13C2 PFDA	*88*		*70 - 130*
13C3-GenX	*80*		*70 - 130*

Lab Sample ID: 380-97770-B-9-A MS
Matrix: Water
Analysis Batch: 93116

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 92982

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Hexafluoropropylene Oxide Dimer Acid (HFPO-DA/GenX)	<2.0		50.3	53.5		ng/L		106	70 - 130
Perfluorooctanesulfonic acid (PFOS)	5.5		50.3	59.5		ng/L		107	70 - 130
Perfluoroundecanoic acid (PFUnA)	<2.0		50.3	55.3		ng/L		110	70 - 130
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.3	55.6		ng/L		111	70 - 130

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

Lab Sample ID: 380-97770-B-9-A MS
Matrix: Water
Analysis Batch: 93116

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 92982

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.3	56.5		ng/L		112	70 - 130
Perfluorohexanoic acid (PFHxA)	<2.0		50.3	56.8		ng/L		112	70 - 130
Perfluorododecanoic acid (PFDoA)	<2.0		50.3	52.5		ng/L		104	70 - 130
Perfluorooctanoic acid (PFOA)	<2.0		50.3	59.9		ng/L		116	70 - 130
Perfluorodecanoic acid (PFDA)	<2.0		50.3	56.4		ng/L		112	70 - 130
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.3	54.1		ng/L		105	70 - 130
Perfluorobutanesulfonic acid (PFBS)	2.8		50.3	54.0		ng/L		102	70 - 130
Perfluoroheptanoic acid (PFHpA)	<2.0		50.3	54.4		ng/L		107	70 - 130
Perfluorononanoic acid (PFNA)	<2.0		50.3	55.6		ng/L		111	70 - 130
Perfluorotetradecanoic acid (PFTA)	<2.0		50.3	51.1		ng/L		102	70 - 130
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.3	50.8		ng/L		101	70 - 130
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.3	52.7		ng/L		105	70 - 130
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.3	50.1		ng/L		100	70 - 130
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.3	56.2		ng/L		112	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
d5-NEtFOSAA	*92*		*70 - 130*
13C2 PFHxA	*102*		*70 - 130*
13C2 PFDA	*96*		*70 - 130*
13C3-GenX	*94*		*70 - 130*

Lab Sample ID: 380-97770-C-9-A MSD
Matrix: Water
Analysis Batch: 93116

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 92982

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		50.3	52.3		ng/L		104	70 - 130	2	30
Perfluorooctanesulfonic acid (PFOS)	5.5		50.3	60.3		ng/L		109	70 - 130	1	30
Perfluoroundecanoic acid (PFUnA)	<2.0		50.3	53.9		ng/L		107	70 - 130	2	30
N-methylperfluorooctanesulfonamidoacetic acid (NMeFOSAA)	<2.0		50.3	53.7		ng/L		107	70 - 130	4	30
N-ethylperfluorooctanesulfonamidoacetic acid (NEtFOSAA)	<2.0		50.3	54.3		ng/L		108	70 - 130	4	30
Perfluorohexanoic acid (PFHxA)	<2.0		50.3	53.9		ng/L		106	70 - 130	5	30
Perfluorododecanoic acid (PFDoA)	<2.0		50.3	52.7		ng/L		105	70 - 130	0	30
Perfluorooctanoic acid (PFOA)	<2.0		50.3	56.1		ng/L		109	70 - 130	7	30
Perfluorodecanoic acid (PFDA)	<2.0		50.3	53.0		ng/L		105	70 - 130	6	30

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

Lab Sample ID: 380-97770-C-9-A MSD
Matrix: Water
Analysis Batch: 93116

Client Sample ID: Matrix Spike Duplicate
Prep Type: Total/NA
Prep Batch: 92982

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perfluorohexanesulfonic acid (PFHxS)	<2.0		50.3	55.5		ng/L		108	70 - 130	3	30
Perfluorobutanesulfonic acid (PFBS)	2.8		50.3	54.3		ng/L		102	70 - 130	1	30
Perfluoroheptanoic acid (PFHpA)	<2.0		50.3	54.0		ng/L		106	70 - 130	1	30
Perfluorononanoic acid (PFNA)	<2.0		50.3	53.6		ng/L		107	70 - 130	4	30
Perfluorotetradecanoic acid (PFTA)	<2.0		50.3	47.2		ng/L		94	70 - 130	8	30
Perfluorotridecanoic acid (PFTrDA)	<2.0		50.3	49.7		ng/L		99	70 - 130	2	30
9-Chlorohexadecafluoro-3-oxanonane-1-sulfonic acid(9Cl-PF3ONS)	<2.0		50.3	53.9		ng/L		107	70 - 130	2	30
11-Chloroeicosafluoro-3-oxaundecane-1-sulfonic acid (11Cl-PF3OUdS)	<2.0		50.3	52.3		ng/L		104	70 - 130	4	30
4,8-Dioxa-3H-perfluorononanoic acid (ADONA)	<2.0		50.3	54.3		ng/L		108	70 - 130	3	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
d5-NEtFOSAA	*89*		*70 - 130*
13C2 PFHxA	*94*		*70 - 130*
13C2 PFDA	*91*		*70 - 130*
13C3-GenX	*89*		*70 - 130*

QC Association Summary

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

GC/MS Semi VOA

Prep Batch: 93149

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-97746-1	MOANALUA WELLS	Total/NA	Water	525.2	
MB 380-93149/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-93149/23-A	Lab Control Sample	Total/NA	Water	525.2	
MRL 380-93149/22-A	Lab Control Sample	Total/NA	Water	525.2	
810-106147-B-6-A MS	Matrix Spike	Total/NA	Water	525.2	
810-106147-B-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 93298

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-93149/21-A	Method Blank	Total/NA	Water	525.2	93149
LCS 380-93149/23-A	Lab Control Sample	Total/NA	Water	525.2	93149
MRL 380-93149/22-A	Lab Control Sample	Total/NA	Water	525.2	93149
810-106147-B-6-A MS	Matrix Spike	Total/NA	Water	525.2	93149
810-106147-B-1-A DU	Duplicate	Total/NA	Water	525.2	93149

Analysis Batch: 93398

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-97746-1	MOANALUA WELLS	Total/NA	Water	525.2	93149

LCMS

Prep Batch: 92976

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-97746-1	MOANALUA WELLS	Total/NA	Water	533	
380-97746-2	FB: MOANALUA WELLS	Total/NA	Water	533	
MBL 380-92976/22-A	Method Blank	Total/NA	Water	533	
LCS 380-92976/24-A	Lab Control Sample	Total/NA	Water	533	
MRL 380-92976/23-A	Lab Control Sample	Total/NA	Water	533	
380-97770-E-9-A LMS	Matrix Spike	Total/NA	Water	533	
380-97770-F-9-A LMSD	Matrix Spike Duplicate	Total/NA	Water	533	

Prep Batch: 92982

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-97746-1	MOANALUA WELLS	Total/NA	Water	537.1 DW	
380-97746-2	FB: MOANALUA WELLS	Total/NA	Water	537.1 DW	
MBL 380-92982/21-A	Method Blank	Total/NA	Water	537.1 DW	
LCS 380-92982/23-A	Lab Control Sample	Total/NA	Water	537.1 DW	
MRL 380-92982/22-A	Lab Control Sample	Total/NA	Water	537.1 DW	
380-97770-B-9-A MS	Matrix Spike	Total/NA	Water	537.1 DW	
380-97770-C-9-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1 DW	

Analysis Batch: 93081

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-97746-1	MOANALUA WELLS	Total/NA	Water	533	92976
380-97746-2	FB: MOANALUA WELLS	Total/NA	Water	533	92976
MBL 380-92976/22-A	Method Blank	Total/NA	Water	533	92976
LCS 380-92976/24-A	Lab Control Sample	Total/NA	Water	533	92976
MRL 380-92976/23-A	Lab Control Sample	Total/NA	Water	533	92976
380-97770-E-9-A LMS	Matrix Spike	Total/NA	Water	533	92976
380-97770-F-9-A LMSD	Matrix Spike Duplicate	Total/NA	Water	533	92976

QC Association Summary

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

LCMS

Analysis Batch: 93116

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-97746-1	MOANALUA WELLS	Total/NA	Water	537.1	92982
380-97746-2	FB: MOANALUA WELLS	Total/NA	Water	537.1	92982
MBL 380-92982/21-A	Method Blank	Total/NA	Water	537.1	92982
LCS 380-92982/23-A	Lab Control Sample	Total/NA	Water	537.1	92982
MRL 380-92982/22-A	Lab Control Sample	Total/NA	Water	537.1	92982
380-97770-B-9-A MS	Matrix Spike	Total/NA	Water	537.1	92982
380-97770-C-9-A MSD	Matrix Spike Duplicate	Total/NA	Water	537.1	92982

Lab Chronicle

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

Client Sample ID: MOANALUA WELLS

Lab Sample ID: 380-97746-1

Date Collected: 05/28/24 10:30
Matrix: Water
Date Received: 05/30/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			93149	IQ42	EA POM	06/01/24 14:55
Total/NA	Analysis	525.2		1	93398	UPAC	EA POM	06/04/24 12:17
Total/NA	Prep	533			92976	SL5Q	EA POM	05/31/24 06:34
Total/NA	Analysis	533		1	93081	M7ML	EA POM	06/01/24 05:03
Total/NA	Prep	537.1 DW			92982	A5GB	EA POM	05/31/24 08:27
Total/NA	Analysis	537.1		1	93116	Y5FM	EA POM	06/01/24 09:41

Client Sample ID: FB: MOANALUA WELLS

Lab Sample ID: 380-97746-2

Date Collected: 05/28/24 10:30
Matrix: Water
Date Received: 05/30/24 09:40

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	533			92976	SL5Q	EA POM	05/31/24 06:34
Total/NA	Analysis	533		1	93081	M7ML	EA POM	06/01/24 05:12
Total/NA	Prep	537.1 DW			92982	A5GB	EA POM	05/31/24 08:27
Total/NA	Analysis	537.1		1	93116	Y5FM	EA POM	06/01/24 09:50

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: 380-97746-1
SDG: 525.2, 533, 537.1

Laboratory: Eurofins Eaton Analytical Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-25

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

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

Method Summary

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

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

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

Sample Summary

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

Job ID: 380-97746-1
SDG: 525.2, 533, 537.1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-97746-1	MOANALUA WELLS	Water	05/28/24 10:30	05/30/24 09:40
380-97746-2	FB: MOANALUA WELLS	Water	05/28/24 10:30	05/30/24 09:40

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: NISHIKAWA	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-27984-2757.2
Client Contact: Dr. Ron Fenstermacher	Phone: 808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 1 of 3
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street; Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State, Zip: HI, 96843	Compliance Project: Δ No			
Phone: 808-748-5091 (tel)	PO #: C20525101 exp 05312023			
Email: rfenstemacher@hbws.org	WO #:			
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill	Project #: 38001111			
Site:	SSOW#:			

Analysis Requested

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

Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	8015B_GRO_LL - (MOD) GRO	8015B_DRO_LL_CS - HNL Ranges: C10-C24/C24-C36/C8-C18	525.2_PREC - (MOD) 525plus PLUS TICs	537.1_DW_PREC - 537.1 Full List	533 - All Analytes	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	A	Q		Y	N		
MOANALUA WELLS	28-May-2024	1030		Water			2	4	2	2				chlorinated
AIEA GULCH WELLS PUMP2				Water			2	4	2	2				chlorinated
AIEA WELLS PUMPS 1&2 (260)				Water			2	4	2	2				
HALAWA WELLS UNITS 1&2				Water			2	4	2	2				
TB MOANALUA WELLS	28-May-2024	1030		Water				2						
TB AIEA GULCH WELLS PUMP2				Water				2						
TB AIEA WELLS PUMPS 1&2 (260)				Water				2						
TB HALAWA WELLS UNITS 1&2				Water				2						

380-97746 COC

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

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

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements: (1) 7766 0696 3339

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: FEDEX (2) " " 3340

Relinquished by: [redacted]	Date/Time: 5/28/24 1200	Company: HBWS	Received by: G.REITNER	Date/Time: 05/30/2024 0940	Company: EEAP
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.:

Cooler Temperature(s) °C and Other Remarks: 751A (1) 2.9°-0.1°=2.8° 751A (2) 5.9°-0.1°=5.8° GEL-FROZEN

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-97746-1
SDG Number: 525.2, 533, 537.1

Login Number: 97746
List Number: 1
Creator: Elyas, Matthew

List Source: Eurofins Eaton Analytical Pomona

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