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ANALYTICAL REPORT

Eurofins Eaton Monrovia
750 Royal Oaks Drive
Suite 100
Monrovia, CA 91016
Tel: (626)386-1100

Laboratory Job ID: 380-16786-1
Client Project/Site: RED-HILL
Sampling Event: RUSH Weekly Red Hill

For:
City & County of Honolulu
630 South Beretania Street
Public Service Bldg. Room 308
Honolulu, Hawaii 96843

Attn: Mr. Erwin Kawata

Rachelle Arada

Authorized for release by:
10/18/2022 9:39:18 PM

Rachelle Arada, Manager of Project Management
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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)

Rachelle Arada
Manager of Project Management
10/18/2022 9:39:18 PM

Table of Contents

Definitions/Glossary

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

Job ID: 380-16786-1

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

Subcontract

Qualifier	Qualifier Description
U	This analyte was not detected.

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 ID: 380-16786-1

Laboratory: Eurofins Eaton Monrovia

Narrative

Job Narrative
380-16786-1

Comments
No additional comments.

Receipt
The samples were received on 8/16/2022 10:15 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 5.7º C.

GC/MS Semi VOA
Method 525.2: MRL was below acceptance limits for Caffeine. Caffeine is not a target analyte for this project. Data is not reported.

AIEA GULCH WELLS PUMP 1 (331-201-TP071) (380-16786-1), AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-16786-2), AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-16786-3) and (MRL 380-14908/2-A)

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

Subcontract non-Sister
See attached subcontract report.

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

Subcontract Work
Methods 8015 Diesel LL (EAL) and Motor Oil, 8015 Gas (Purgeable) LL (EAL): These methods were subcontracted to EMAX Laboratories Inc. The subcontract laboratory certifications are different from that of the facility issuing the final report.

Method 625 PAH Physis LL (EAL) + TICs: This method was subcontracted to Physis Environmental Laboratories. The subcontract laboratory certification is different from that of the facility issuing the final report.

Detection Summary

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

Job ID: 380-16786-1

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)
PWSID Number: HI0000331

Lab Sample ID: 380-16786-1

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)
PWSID Number: HI0000331

Lab Sample ID: 380-16786-2

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)
PWSID Number: HI0000331

Lab Sample ID: 380-16786-3

No Detections.

Client Sample ID: TB AIEA GULCH WELLS PUMP1

Lab Sample ID: 380-16786-4

No Detections.

Client Sample ID: TB AIEA GULCH WELLS PUMP2

Lab Sample ID: 380-16786-5

No Detections.

Client Sample ID: TB AIEA GULCH WELLS PUMP1&2

Lab Sample ID: 380-16786-6

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-16786-1

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)
Date Collected: 08/15/22 09:58
Date Received: 08/16/22 21:17

Lab Sample ID: 380-16786-1
Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
2,4'-DDE	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
2,4'-DDT	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
2,4-Dinitrotoluene	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
2,6-Dinitrotoluene	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
4,4'-DDD	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
4,4'-DDE	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
4,4'-DDT	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Acenaphthene	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Acenaphthylene	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Acetochlor	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Alachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
alpha-BHC	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
alpha-Chlordane	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Anthracene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 16:21	1
Atrazine	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Benz(a)anthracene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Benzo[a]pyrene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 16:21	1
Benzo[b]fluoranthene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 16:21	1
Benzo[g,h,i]perylene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Benzo[k]fluoranthene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 16:21	1
beta-BHC	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Bromacil	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Butachlor	ND	^3+	0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Butylbenzylphthalate	ND		0.49		ug/L		08/25/22 10:21	08/29/22 16:21	1
Chlorobenzilate	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Chloroneb	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Chlorothalonil (Draconil, Bravo)	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Chlorpyrifos	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Chrysene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 16:21	1
delta-BHC	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Di(2-ethylhexyl)adipate	ND		0.59		ug/L		08/25/22 10:21	08/29/22 16:21	1
Bis(2-ethylhexyl) phthalate	ND		0.59		ug/L		08/25/22 10:21	08/29/22 16:21	1
Diazinon (Qualitative)	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Dibenz(a,h)anthracene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Diclorvos (DDVP)	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Dieldrin	ND		0.20		ug/L		08/25/22 10:21	08/29/22 16:21	1
Diethylphthalate	ND		0.49		ug/L		08/25/22 10:21	08/29/22 16:21	1
Dimethoate	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Dimethylphthalate	ND		0.49		ug/L		08/25/22 10:21	08/29/22 16:21	1
Di-n-butyl phthalate	ND		0.98		ug/L		08/25/22 10:21	08/29/22 16:21	1
Di-n-octyl phthalate	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Endosulfan I (Alpha)	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Endosulfan II (Beta)	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Endosulfan sulfate	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Endrin	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Endrin aldehyde	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
EPTC	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)
Date Collected: 08/15/22 09:58
Date Received: 08/16/22 21:17

Lab Sample ID: 380-16786-1
Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Fluorene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
gamma-Chlordane	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Heptachlor	ND		0.039		ug/L		08/25/22 10:21	08/29/22 16:21	1
Heptachlor epoxide (isomer B)	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Hexachlorobenzene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Hexachlorocyclopentadiene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Indeno[1,2,3-cd]pyrene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Isophorone	ND		0.49		ug/L		08/25/22 10:21	08/29/22 16:21	1
Lindane	ND		0.039		ug/L		08/25/22 10:21	08/29/22 16:21	1
Malathion	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Methoxychlor	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Metolachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Metribuzin	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Molinate	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Naphthalene	ND		0.29		ug/L		08/25/22 10:21	08/29/22 16:21	1
Parathion	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Pendimethalin (Penoxaline)	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		08/25/22 10:21	08/29/22 16:21	1
Phenanthrene	ND		0.039		ug/L		08/25/22 10:21	08/29/22 16:21	1
Propachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Pyrene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Simazine	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Terbacil	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Terbuthylazine	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1
Thiobencarb	ND		0.20		ug/L		08/25/22 10:21	08/29/22 16:21	1
trans-Nonachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:21	1
Trifluralin	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:21	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*08/25/22 10:21*	*08/29/22 16:21*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*90*		*70 - 130*	*08/25/22 10:21*	*08/29/22 16:21*	*1*
Triphenylphosphate	*92*		*70 - 130*	*08/25/22 10:21*	*08/29/22 16:21*	*1*
Perylene-d12	*90*		*70 - 130*	*08/25/22 10:21*	*08/29/22 16:21*	*1*

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Acenaphthene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Anthracene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

Lab Sample ID: 380-16786-1

Date Collected: 08/15/22 09:58
Date Received: 08/16/22 21:17

Matrix: Drinking Water
PWSID Number: HI0000331

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Biphenyl	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Chrysene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/17/22 00:00	08/21/22 16:54	1
Fluoranthene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Fluorene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Naphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Perylene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Phenanthrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1
Pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 16:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*81*		*45 - 118*	*08/17/22 00:00*	*08/21/22 16:54*	*1*
(d10-Phenanthrene)	*90*		*56 - 123*	*08/17/22 00:00*	*08/21/22 16:54*	*1*
(d12-Chrysene)	*92*		*36 - 142*	*08/17/22 00:00*	*08/21/22 16:54*	*1*
(d12-Perylene)	*82*		*36 - 161*	*08/17/22 00:00*	*08/21/22 16:54*	*1*
(d8-Naphthalene)	*75*		*20 - 112*	*08/17/22 00:00*	*08/21/22 16:54*	*1*

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/19/22 14:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*90*		*60 - 140*		*08/19/22 14:38*	*1*

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.027		mg/L			08/22/22 21:18	1
MOTOR OIL	ND	U	0.055		mg/L			08/22/22 21:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*69*		*60 - 130*		*08/22/22 21:18*	*1*
HEXACOSANE	*89*		*60 - 130*		*08/22/22 21:18*	*1*

Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)

Lab Sample ID: 380-16786-2

Date Collected: 08/15/22 10:32
Date Received: 08/16/22 21:17

Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
2,4'-DDE	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1

Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)
Lab Sample ID: 380-16786-2
Date Collected: 08/15/22 10:32
Matrix: Drinking Water
Date Received: 08/16/22 21:17
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDT	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
2,4-Dinitrotoluene	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
2,6-Dinitrotoluene	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
4,4'-DDD	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
4,4'-DDE	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
4,4'-DDT	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Acenaphthene	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Acenaphthylene	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Acetochlor	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Alachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
alpha-BHC	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
alpha-Chlordane	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Anthracene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 16:41	1
Atrazine	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Benz(a)anthracene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Benzo[a]pyrene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 16:41	1
Benzo[b]fluoranthene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 16:41	1
Benzo[g,h,i]perylene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Benzo[k]fluoranthene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 16:41	1
beta-BHC	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Bromacil	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Butachlor	ND	^3+	0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Butylbenzylphthalate	ND		0.49		ug/L		08/25/22 10:21	08/29/22 16:41	1
Chlorobenzilate	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Chloroneb	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Chlorothalonil (Draconil, Bravo)	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Chlorpyrifos	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Chrysene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 16:41	1
delta-BHC	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Di(2-ethylhexyl)adipate	ND		0.59		ug/L		08/25/22 10:21	08/29/22 16:41	1
Bis(2-ethylhexyl) phthalate	ND		0.59		ug/L		08/25/22 10:21	08/29/22 16:41	1
Diazinon (Qualitative)	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Dibenz(a,h)anthracene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Diclorvos (DDVP)	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Dieldrin	ND		0.20		ug/L		08/25/22 10:21	08/29/22 16:41	1
Diethylphthalate	ND		0.49		ug/L		08/25/22 10:21	08/29/22 16:41	1
Dimethoate	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Dimethylphthalate	ND		0.49		ug/L		08/25/22 10:21	08/29/22 16:41	1
Di-n-butyl phthalate	ND		0.98		ug/L		08/25/22 10:21	08/29/22 16:41	1
Di-n-octyl phthalate	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Endosulfan I (Alpha)	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Endosulfan II (Beta)	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Endosulfan sulfate	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Endrin	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Endrin aldehyde	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
EPTC	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Fluoranthene	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Fluorene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1

Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)
Date Collected: 08/15/22 10:32
Date Received: 08/16/22 21:17

Lab Sample ID: 380-16786-2
Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
gamma-Chlordane	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Heptachlor	ND		0.039		ug/L		08/25/22 10:21	08/29/22 16:41	1
Heptachlor epoxide (isomer B)	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Hexachlorobenzene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Hexachlorocyclopentadiene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Indeno[1,2,3-cd]pyrene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Isophorone	ND		0.49		ug/L		08/25/22 10:21	08/29/22 16:41	1
Lindane	ND		0.039		ug/L		08/25/22 10:21	08/29/22 16:41	1
Malathion	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Methoxychlor	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Metolachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Metribuzin	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Molinate	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Naphthalene	ND		0.29		ug/L		08/25/22 10:21	08/29/22 16:41	1
Parathion	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Pendimethalin (Penoxaline)	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		08/25/22 10:21	08/29/22 16:41	1
Phenanthrene	ND		0.039		ug/L		08/25/22 10:21	08/29/22 16:41	1
Propachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Pyrene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Simazine	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Terbacil	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Terbuthylazine	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1
Thiobencarb	ND		0.20		ug/L		08/25/22 10:21	08/29/22 16:41	1
trans-Nonachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 16:41	1
Trifluralin	ND		0.098		ug/L		08/25/22 10:21	08/29/22 16:41	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*08/25/22 10:21*	*08/29/22 16:41*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*91*		*70 - 130*	*08/25/22 10:21*	*08/29/22 16:41*	*1*
Triphenylphosphate	*91*		*70 - 130*	*08/25/22 10:21*	*08/29/22 16:41*	*1*
Perylene-d12	*91*		*70 - 130*	*08/25/22 10:21*	*08/29/22 16:41*	*1*

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Acenaphthene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Anthracene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1

Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)

Lab Sample ID: 380-16786-2

Date Collected: 08/15/22 10:32
Date Received: 08/16/22 21:17

Matrix: Drinking Water
PWSID Number: HI0000331

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Biphenyl	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Chrysene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/17/22 00:00	08/21/22 18:40	1
Fluoranthene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Fluorene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Naphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Perylene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Phenanthrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1
Pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 18:40	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*73*		*45 - 118*	*08/17/22 00:00*	*08/21/22 18:40*	*1*
(d10-Phenanthrene)	*83*		*56 - 123*	*08/17/22 00:00*	*08/21/22 18:40*	*1*
(d12-Chrysene)	*85*		*36 - 142*	*08/17/22 00:00*	*08/21/22 18:40*	*1*
(d12-Perylene)	*70*		*36 - 161*	*08/17/22 00:00*	*08/21/22 18:40*	*1*
(d8-Naphthalene)	*69*		*20 - 112*	*08/17/22 00:00*	*08/21/22 18:40*	*1*

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/19/22 16:29	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*90*		*60 - 140*		*08/19/22 16:29*	*1*

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.024		mg/L			08/22/22 22:32	1
MOTOR OIL	ND	U	0.047		mg/L			08/22/22 22:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*61*		*60 - 130*		*08/22/22 22:32*	*1*
HEXACOSANE	*83*		*60 - 130*		*08/22/22 22:32*	*1*

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)

Lab Sample ID: 380-16786-3

Date Collected: 08/15/22 09:36
Date Received: 08/16/22 21:17

Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
2,4'-DDE	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
2,4'-DDT	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
2,4-Dinitrotoluene	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1

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

Job ID: 380-16786-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)
Date Collected: 08/15/22 09:36
Date Received: 08/16/22 21:17

Lab Sample ID: 380-16786-3
Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,6-Dinitrotoluene	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
4,4'-DDD	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
4,4'-DDE	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
4,4'-DDT	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Acenaphthene	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Acenaphthylene	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Acetochlor	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Alachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
alpha-BHC	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
alpha-Chlordane	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Anthracene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 17:01	1
Atrazine	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Benz(a)anthracene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Benzo[a]pyrene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 17:01	1
Benzo[b]fluoranthene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 17:01	1
Benzo[g,h,i]perylene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Benzo[k]fluoranthene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 17:01	1
beta-BHC	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Bromacil	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Butachlor	ND	^3+	0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Butylbenzylphthalate	ND		0.49		ug/L		08/25/22 10:21	08/29/22 17:01	1
Chlorobenzilate	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Chloroneb	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Chlorothalonil (Draconil, Bravo)	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Chlorpyrifos	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Chrysene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 17:01	1
delta-BHC	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Di(2-ethylhexyl)adipate	ND		0.59		ug/L		08/25/22 10:21	08/29/22 17:01	1
Bis(2-ethylhexyl) phthalate	ND		0.59		ug/L		08/25/22 10:21	08/29/22 17:01	1
Diazinon (Qualitative)	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Dibenz(a,h)anthracene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Diclorvos (DDVP)	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Dieldrin	ND		0.20		ug/L		08/25/22 10:21	08/29/22 17:01	1
Diethylphthalate	ND		0.49		ug/L		08/25/22 10:21	08/29/22 17:01	1
Dimethoate	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Dimethylphthalate	ND		0.49		ug/L		08/25/22 10:21	08/29/22 17:01	1
Di-n-butyl phthalate	ND		0.99		ug/L		08/25/22 10:21	08/29/22 17:01	1
Di-n-octyl phthalate	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Endosulfan I (Alpha)	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Endosulfan II (Beta)	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Endosulfan sulfate	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Endrin	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Endrin aldehyde	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
EPTC	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Fluoranthene	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Fluorene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
gamma-Chlordane	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Heptachlor	ND		0.040		ug/L		08/25/22 10:21	08/29/22 17:01	1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)
Date Collected: 08/15/22 09:36
Date Received: 08/16/22 21:17

Lab Sample ID: 380-16786-3
Matrix: Drinking Water
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Heptachlor epoxide (isomer B)	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Hexachlorobenzene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Hexachlorocyclopentadiene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Indeno[1,2,3-cd]pyrene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Isophorone	ND		0.49		ug/L		08/25/22 10:21	08/29/22 17:01	1
Lindane	ND		0.040		ug/L		08/25/22 10:21	08/29/22 17:01	1
Malathion	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Methoxychlor	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Metolachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Metribuzin	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Molinate	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Naphthalene	ND		0.30		ug/L		08/25/22 10:21	08/29/22 17:01	1
Parathion	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Pendimethalin (Penoxaline)	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		08/25/22 10:21	08/29/22 17:01	1
Phenanthrene	ND		0.040		ug/L		08/25/22 10:21	08/29/22 17:01	1
Propachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Pyrene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Simazine	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Terbacil	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Terbuthylazine	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1
Thiobencarb	ND		0.20		ug/L		08/25/22 10:21	08/29/22 17:01	1
trans-Nonachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 17:01	1
Trifluralin	ND		0.099		ug/L		08/25/22 10:21	08/29/22 17:01	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*08/25/22 10:21*	*08/29/22 17:01*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*89*		*70 - 130*	*08/25/22 10:21*	*08/29/22 17:01*	*1*
Triphenylphosphate	*88*		*70 - 130*	*08/25/22 10:21*	*08/29/22 17:01*	*1*
Perylene-d12	*91*		*70 - 130*	*08/25/22 10:21*	*08/29/22 17:01*	*1*

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Acenaphthene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Anthracene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)

Lab Sample ID: 380-16786-3

Date Collected: 08/15/22 09:36
Date Received: 08/16/22 21:17

Matrix: Drinking Water
PWSID Number: HI0000331

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Biphenyl	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Chrysene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/17/22 00:00	08/21/22 20:27	1
Fluoranthene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Fluorene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Naphthalene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Perylene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Phenanthrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1
Pyrene	ND		0.005	0.001	µg/L		08/17/22 00:00	08/21/22 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*83*		*45 - 118*	*08/17/22 00:00*	*08/21/22 20:27*	*1*
(d10-Phenanthrene)	*92*		*56 - 123*	*08/17/22 00:00*	*08/21/22 20:27*	*1*
(d12-Chrysene)	*98*		*36 - 142*	*08/17/22 00:00*	*08/21/22 20:27*	*1*
(d12-Perylene)	*83*		*36 - 161*	*08/17/22 00:00*	*08/21/22 20:27*	*1*
(d8-Naphthalene)	*82*		*20 - 112*	*08/17/22 00:00*	*08/21/22 20:27*	*1*

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.028		mg/L			08/22/22 22:50	1
GASOLINE	ND	U	0.02		mg/L			08/19/22 17:43	1
MOTOR OIL	ND	U	0.056		mg/L			08/22/22 22:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*74*		*60 - 130*		*08/22/22 22:50*	*1*
BROMOFLUOROBENZENE	*92*		*60 - 140*		*08/19/22 17:43*	*1*
HEXACOSANE	*95*		*60 - 130*		*08/22/22 22:50*	*1*

Client Sample ID: TB AIEA GULCH WELLS PUMP1

Lab Sample ID: 380-16786-4

Date Collected: 08/15/22 09:58
Date Received: 08/16/22 10:15

Matrix: Water

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/19/22 18:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*93*		*60 - 140*		*08/19/22 18:20*	*1*

Client Sample ID: TB AIEA GULCH WELLS PUMP2

Lab Sample ID: 380-16786-5

Date Collected: 08/15/22 10:32
Date Received: 08/16/22 10:15

Matrix: Water

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/19/22 18:56	1

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

Job ID: 380-16786-1

Client Sample ID: TB AIEA GULCH WELLS PUMP2

Lab Sample ID: 380-16786-5

Date Collected: 08/15/22 10:32
Matrix: Water
Date Received: 08/16/22 10:15

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*89*		*60 - 140*		*08/19/22 18:56*	*1*

Client Sample ID: TB AIEA GULCH WELLS PUMP1&2

Lab Sample ID: 380-16786-6

Date Collected: 08/15/22 09:36
Matrix: Water
Date Received: 08/16/22 10:15

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/19/22 19:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*102*		*60 - 140*		*08/19/22 19:33*	*1*

Action Limit Summary

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

Job ID: 380-16786-1

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

Lab Sample ID: 380-16786-1

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Alachlor	ND		ug/L	2	0.049	525.2	Total/NA
Atrazine	ND		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.020	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.59	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.59	525.2	Total/NA
Endrin	ND		ug/L	2	0.098	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	ND		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.049	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.098	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)

Lab Sample ID: 380-16786-2

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Alachlor	ND		ug/L	2	0.049	525.2	Total/NA
Atrazine	ND		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.020	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.59	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.59	525.2	Total/NA
Endrin	ND		ug/L	2	0.098	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	ND		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.049	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.098	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)

Lab Sample ID: 380-16786-3

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Alachlor	ND		ug/L	2	0.049	525.2	Total/NA

Action Limit Summary

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

Job ID: 380-16786-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (Continued)

Lab Sample ID: 380-16786-3

PWSID Number: HI0000331

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL Limit	RL	Method	Prep Type
Atrazine	ND		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.020	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.59	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.59	525.2	Total/NA
Endrin	ND		ug/L	2	0.099	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.040	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	ND		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.049	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.040	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.099	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-16786-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	TPP	PRY
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-16786-1	AIEA GULCH WELLS PUMP 1 (	90	92	90
380-16786-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	91	91	91
380-16786-3	AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	89	88	91

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	TPP	PRY
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-16460-T-1-A DU	Duplicate	90	91	89
380-16794-L-1-A MS	Matrix Spike	94	92	93
LCS 380-14908/3-A	Lab Control Sample	93	91	90
LCSD 380-14908/4-A	Lab Control Sample Dup	93	94	91
MB 380-14908/1-A	Method Blank	90	93	87
MRL 380-14908/2-A	Lab Control Sample	92	92	85

Surrogate Legend

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

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i

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

		Percent Surrogate Recovery (Acceptance Limits)				
		ANT	CRY	NPT	PHN	PRY
Lab Sample ID	Client Sample ID	(45-118)	(36-142)	(20-112)	(56-123)	(36-161)
380-16786-1	AIEA GULCH WELLS PUMP 1 (	81	92	75	90	82
380-16786-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	73	85	69	83	70
380-16786-3	AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	83	98	82	92	83

Surrogate Legend

ANT = (d10-Acenaphthene)
CRY = (d12-Chrysene)
NPT = (d8-Naphthalene)
PHN = (d10-Phenanthrene)
PRY = (d12-Perylene)

Surrogate Summary

Client: City & County of Honolulu
Job ID: 380-16786-1
Project/Site: RED-HILL

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i

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

		Percent Surrogate Recovery (Acceptance Limits)				
		ANT	CRY	NPT	PHN	PRY
Lab Sample ID	Client Sample ID	(65-113)	(60-139)	(44-119)	(80-111)	(36-161)
99235-B1	Method Blank	92	92	88	93	88
99235-BS1	Lab Control Sample	87	84	81	91	86
99235-BS2	Lab Control Sample Dup	92	88	90	98	95

Surrogate Legend

ANT = (d10-Acenaphthene)
CRY = (d12-Chrysene)
NPT = (d8-Naphthalene)
PHN = (d10-Phenanthrene)
PRY = (d12-Perylene)

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

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

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
380-16786-1	AIEA GULCH WELLS PUMP 1 (	90
380-16786-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	90

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

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

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
22H217-01M	Matrix Spike	114
22H217-01S	Matrix Spike Duplicate	110

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

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

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	
22VG39H09B	Method Blank	

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

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

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(70-130)
22VG39H09C	LCD	107

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO (Continued)

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

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	BFB (70-130)								
22VG39H09L	Lab Control Sample	100								

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

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

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	BB (60-130)	XACOSA (60-130)							
380-16786-1	AIEA GULCH WELLS PUMP 1 (	69	89							
380-16786-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	61	83							
380-16786-3	AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	74	95							

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

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

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	BFB (60-140)								
380-16786-3	AIEA WELLS PUMPS 1&2 (260)	92								

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

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

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	BB (60-130)	XACOSA (60-130)							
22DSH034WL	Lab Control Sample	75	93							

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

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

		Percent Surrogate Recovery (Acceptance Limits)								
Lab Sample ID	Client Sample ID	BFB (60-140)								
380-16786-4	TB AIEA GULCH WELLS PUMP	93								
380-16786-5	TB AIEA GULCH WELLS PUMP	89								
380-16786-6	TB AIEA GULCH WELLS PUMP1&2	102								

Surrogate Summary

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

Job ID: 380-16786-1

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BB	XACOSA
Lab Sample ID	**Client Sample ID**		
22DSH034WB	Method Blank		

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

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

Lab Sample ID: MB 380-14908/1-A
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 14908

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
2,4'-DDE	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
2,4'-DDT	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
2,4-Dinitrotoluene	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
2,6-Dinitrotoluene	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
4,4'-DDD	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
4,4'-DDE	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
4,4'-DDT	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Acenaphthene	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Acenaphthylene	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Acetochlor	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Alachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
alpha-BHC	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
alpha-Chlordane	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Anthracene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 10:55	1
Atrazine	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Benz(a)anthracene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Benzo[a]pyrene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 10:55	1
Benzo[b]fluoranthene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 10:55	1
Benzo[g,h,i]perylene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Benzo[k]fluoranthene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 10:55	1
beta-BHC	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Bromacil	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Butachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Butylbenzylphthalate	ND		0.49		ug/L		08/25/22 10:21	08/29/22 10:55	1
Chlorobenzilate	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Chloroneb	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Chlorothalonil (Draconil, Bravo)	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Chlorpyrifos	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Chrysene	ND		0.020		ug/L		08/25/22 10:21	08/29/22 10:55	1
delta-BHC	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Di(2-ethylhexyl)adipate	ND		0.59		ug/L		08/25/22 10:21	08/29/22 10:55	1
Bis(2-ethylhexyl) phthalate	ND		0.59		ug/L		08/25/22 10:21	08/29/22 10:55	1
Diazinon (Qualitative)	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Dibenz(a,h)anthracene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Diclorvos (DDVP)	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Dieldrin	ND		0.20		ug/L		08/25/22 10:21	08/29/22 10:55	1
Diethylphthalate	ND		0.49		ug/L		08/25/22 10:21	08/29/22 10:55	1
Dimethoate	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Dimethylphthalate	ND		0.49		ug/L		08/25/22 10:21	08/29/22 10:55	1
Di-n-butyl phthalate	ND		0.99		ug/L		08/25/22 10:21	08/29/22 10:55	1
Di-n-octyl phthalate	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Endosulfan I (Alpha)	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Endosulfan II (Beta)	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Endosulfan sulfate	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Endrin	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Endrin aldehyde	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
EPTC	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1

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

Lab Sample ID: MB 380-14908/1-A
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 14908

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Fluorene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
gamma-Chlordane	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Heptachlor	ND		0.039		ug/L		08/25/22 10:21	08/29/22 10:55	1
Heptachlor epoxide (isomer B)	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Hexachlorobenzene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Hexachlorocyclopentadiene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Indeno[1,2,3-cd]pyrene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Isophorone	ND		0.49		ug/L		08/25/22 10:21	08/29/22 10:55	1
Lindane	ND		0.039		ug/L		08/25/22 10:21	08/29/22 10:55	1
Malathion	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Methoxychlor	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Metolachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Metribuzin	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Molinate	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Naphthalene	ND		0.30		ug/L		08/25/22 10:21	08/29/22 10:55	1
Parathion	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Pendimethalin (Penoxaline)	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		08/25/22 10:21	08/29/22 10:55	1
Phenanthrene	ND		0.039		ug/L		08/25/22 10:21	08/29/22 10:55	1
Propachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Pyrene	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Simazine	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Terbacil	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Terbuthylazine	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1
Thiobencarb	ND		0.20		ug/L		08/25/22 10:21	08/29/22 10:55	1
trans-Nonachlor	ND		0.049		ug/L		08/25/22 10:21	08/29/22 10:55	1
Trifluralin	ND		0.099		ug/L		08/25/22 10:21	08/29/22 10:55	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
n-Hexadecanoic acid	*0.632*	*T J N*	*ug/L*		*5.92*	*57-10-3*	*08/25/22 10:21*	*08/29/22 10:55*	*1*
9-Octadecenoic acid, (E)-	*0.832*	*T J N*	*ug/L*		*6.56*	*112-79-8*	*08/25/22 10:21*	*08/29/22 10:55*	*1*
Octadecanoic acid	*0.566*	*T J N*	*ug/L*		*6.63*	*57-11-4*	*08/25/22 10:21*	*08/29/22 10:55*	*1*
9-Octadecenamide, (Z)-	*0.907*	*T J N*	*ug/L*		*7.67*	*301-02-0*	*08/25/22 10:21*	*08/29/22 10:55*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*90*		*70 - 130*	*08/25/22 10:21*	*08/29/22 10:55*	*1*
Triphenylphosphate	*93*		*70 - 130*	*08/25/22 10:21*	*08/29/22 10:55*	*1*
Perylene-d12	*87*		*70 - 130*	*08/25/22 10:21*	*08/29/22 10:55*	*1*

Lab Sample ID: LCS 380-14908/3-A
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 14908

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.97	1.99		ug/L		101	70 - 130
2,4'-DDE	1.97	2.08		ug/L		106	70 - 130
2,4'-DDT	1.97	2.08		ug/L		105	70 - 130

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

Lab Sample ID: LCS 380-14908/3-A
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 14908

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dinitrotoluene	1.97	1.96		ug/L		99	70 - 130
2,6-Dinitrotoluene	1.97	1.87		ug/L		95	70 - 130
4,4'-DDD	1.97	2.11		ug/L		107	70 - 130
4,4'-DDE	1.97	1.86		ug/L		94	70 - 130
4,4'-DDT	1.97	2.04		ug/L		104	70 - 130
Acenaphthene	1.97	1.88		ug/L		95	70 - 130
Acenaphthylene	1.97	1.84		ug/L		93	70 - 130
Acetochlor	1.97	2.08		ug/L		105	70 - 130
Alachlor	1.97	2.03		ug/L		103	70 - 130
alpha-BHC	1.97	2.00		ug/L		101	70 - 130
alpha-Chlordane	1.97	1.75		ug/L		89	70 - 130
Anthracene	1.97	1.96		ug/L		99	70 - 130
Atrazine	1.97	2.15		ug/L		109	70 - 130
Benz(a)anthracene	1.97	2.04		ug/L		104	70 - 130
Benzo[a]pyrene	1.97	2.12		ug/L		108	70 - 130
Benzo[b]fluoranthene	1.97	2.22		ug/L		113	70 - 130
Benzo[g,h,i]perylene	1.97	1.95		ug/L		99	70 - 130
Benzo[k]fluoranthene	1.97	2.30		ug/L		117	70 - 130
beta-BHC	1.97	2.00		ug/L		102	70 - 130
Bromacil	1.97	2.15		ug/L		109	70 - 130
Butachlor	1.97	2.01		ug/L		102	70 - 130
Butylbenzylphthalate	1.97	2.08		ug/L		106	70 - 130
Caffeine	1.97	0.942		ug/L		48	45 - 137
Chlorobenzilate	1.97	1.95		ug/L		99	70 - 130
Chloroneb	1.97	2.03		ug/L		103	70 - 130
Chlorothalonil (Draconil, Bravo)	1.97	1.97		ug/L		100	70 - 130
Chlorpyrifos	1.97	2.06		ug/L		104	70 - 130
Chrysene	1.97	2.19		ug/L		111	70 - 130
delta-BHC	1.97	1.98		ug/L		100	70 - 130
Di(2-ethylhexyl)adipate	1.97	2.00		ug/L		101	70 - 130
Bis(2-ethylhexyl) phthalate	1.97	1.83		ug/L		93	70 - 130
Diazinon (Qualitative)	1.97	1.74		ug/L		88	15 - 132
Dibenz(a,h)anthracene	1.97	2.10		ug/L		107	70 - 130
Diclorvos (DDVP)	1.97	1.96		ug/L		100	70 - 130
Dieldrin	1.97	2.03		ug/L		103	70 - 130
Diethylphthalate	1.97	2.01		ug/L		102	70 - 130
Dimethoate	1.97	0.957		ug/L		49	35 - 100
Dimethylphthalate	1.97	2.02		ug/L		102	70 - 130
Di-n-butyl phthalate	3.94	4.10		ug/L		104	70 - 130
Di-n-octyl phthalate	1.97	1.74		ug/L		88	70 - 130
Endosulfan I (Alpha)	1.97	1.75		ug/L		89	70 - 130
Endosulfan II (Beta)	1.97	1.99		ug/L		101	70 - 130
Endosulfan sulfate	1.97	2.13		ug/L		108	70 - 130
Endrin	1.97	1.99		ug/L		101	70 - 130
Endrin aldehyde	1.97	1.60		ug/L		81	70 - 130
EPTC	1.97	1.99		ug/L		101	70 - 130
Fluoranthene	1.97	2.07		ug/L		105	70 - 130
Fluorene	1.97	2.02		ug/L		103	70 - 130
gamma-Chlordane	1.97	1.81		ug/L		92	70 - 130

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

Lab Sample ID: LCS 380-14908/3-A
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 14908

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Heptachlor			1.97	1.87		ug/L		95	70 - 130		
Heptachlor epoxide (isomer B)			1.97	1.85		ug/L		94	70 - 130		
Hexachlorobenzene			1.97	1.87		ug/L		95	70 - 130		
Hexachlorocyclopentadiene			1.97	2.25		ug/L		114	70 - 130		
Indeno[1,2,3-cd]pyrene			1.97	2.04		ug/L		104	70 - 130		
Isophorone			1.97	1.88		ug/L		95	70 - 130		
Lindane			1.97	1.95		ug/L		99	70 - 130		
Malathion			1.97	2.20		ug/L		112	70 - 130		
Methoxychlor			1.97	2.19		ug/L		111	70 - 130		
Metolachlor			1.97	2.15		ug/L		109	70 - 130		
Metribuzin			1.97	1.90		ug/L		97	70 - 130		
Molinate			1.97	2.06		ug/L		104	70 - 130		
Naphthalene			1.97	1.84		ug/L		94	70 - 130		
Parathion			1.97	2.13		ug/L		108	70 - 130		
Pendimethalin (Penoxaline)			1.97	2.10		ug/L		106	70 - 130		
Phenanthrene			1.97	1.87		ug/L		95	70 - 130		
Propachlor			1.97	2.10		ug/L		107	70 - 130		
Pyrene			1.97	2.08		ug/L		106	70 - 130		
Simazine			1.97	2.06		ug/L		105	70 - 130		
Terbacil			1.97	1.94		ug/L		98	70 - 130		
Terbuthylazine			1.97	2.13		ug/L		108	70 - 130		
Thiobencarb			1.97	1.98		ug/L		101	70 - 130		
trans-Nonachlor			1.97	1.94		ug/L		99	70 - 130		
Trifluralin			1.97	1.97		ug/L		100	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*93*		*70 - 130*
Triphenylphosphate	*91*		*70 - 130*
Perylene-d12	*90*		*70 - 130*

Lab Sample ID: LCSD 380-14908/4-A
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 14908

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD			1.96	2.06		ug/L		105	70 - 130	3	20
2,4'-DDE			1.96	2.11		ug/L		107	70 - 130	1	20
2,4'-DDT			1.96	2.12		ug/L		108	70 - 130	2	20
2,4-Dinitrotoluene			1.96	1.96		ug/L		100	70 - 130	0	20
2,6-Dinitrotoluene			1.96	1.90		ug/L		97	70 - 130	1	20
4,4'-DDD			1.96	2.14		ug/L		109	70 - 130	2	20
4,4'-DDE			1.96	1.94		ug/L		99	70 - 130	4	20
4,4'-DDT			1.96	2.09		ug/L		106	70 - 130	2	20
Acenaphthene			1.96	1.89		ug/L		96	70 - 130	1	20
Acenaphthylene			1.96	1.84		ug/L		94	70 - 130	0	20
Acetochlor			1.96	2.05		ug/L		104	70 - 130	1	20
Alachlor			1.96	2.02		ug/L		103	70 - 130	1	20
alpha-BHC			1.96	2.02		ug/L		103	70 - 130	1	20

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

Lab Sample ID: LCSD 380-14908/4-A
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 14908

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
alpha-Chlordane			1.96	1.78		ug/L		91	70 - 130	2	20
Anthracene			1.96	1.95		ug/L		99	70 - 130	0	20
Atrazine			1.96	2.21		ug/L		113	70 - 130	3	20
Benz(a)anthracene			1.96	2.07		ug/L		106	70 - 130	1	20
Benzo[a]pyrene			1.96	2.14		ug/L		109	70 - 130	1	20
Benzo[b]fluoranthene			1.96	2.23		ug/L		114	70 - 130	1	20
Benzo[g,h,i]perylene			1.96	2.03		ug/L		103	70 - 130	4	20
Benzo[k]fluoranthene			1.96	2.28		ug/L		116	70 - 130	1	20
beta-BHC			1.96	2.02		ug/L		103	70 - 130	1	20
Bromacil			1.96	1.99		ug/L		101	70 - 130	8	20
Butachlor			1.96	2.06		ug/L		105	70 - 130	2	20
Butylbenzylphthalate			1.96	2.12		ug/L		108	70 - 130	2	20
Caffeine			1.96	0.982		ug/L		50	45 - 137	4	20
Chlorobenzilate			1.96	2.00		ug/L		102	70 - 130	3	20
Chloroneb			1.96	2.05		ug/L		104	70 - 130	1	20
Chlorothalonil (Draconil, Bravo)			1.96	2.06		ug/L		105	70 - 130	4	20
Chlorpyrifos			1.96	2.08		ug/L		106	70 - 130	1	20
Chrysene			1.96	2.18		ug/L		111	70 - 130	0	20
delta-BHC			1.96	1.97		ug/L		100	70 - 130	0	20
Di(2-ethylhexyl)adipate			1.96	2.06		ug/L		105	70 - 130	3	20
Bis(2-ethylhexyl) phthalate			1.96	1.87		ug/L		95	70 - 130	2	20
Diazinon (Qualitative)			1.96	1.76		ug/L		90	15 - 132	1	20
Dibenz(a,h)anthracene			1.96	2.15		ug/L		109	70 - 130	2	20
Diclorvos (DDVP)			1.96	1.97		ug/L		100	70 - 130	0	20
Dieldrin			1.96	2.02		ug/L		103	70 - 130	0	20
Diethylphthalate			1.96	2.03		ug/L		103	70 - 130	1	20
Dimethoate			1.96	0.977		ug/L		50	35 - 100	2	20
Dimethylphthalate			1.96	2.02		ug/L		103	70 - 130	0	20
Di-n-butyl phthalate			3.93	4.21		ug/L		107	70 - 130	3	20
Di-n-octyl phthalate			1.96	1.76		ug/L		90	70 - 130	2	20
Endosulfan I (Alpha)			1.96	1.73		ug/L		88	70 - 130	1	20
Endosulfan II (Beta)			1.96	2.07		ug/L		105	70 - 130	4	20
Endosulfan sulfate			1.96	2.14		ug/L		109	70 - 130	0	20
Endrin			1.96	2.02		ug/L		103	70 - 130	1	20
Endrin aldehyde			1.96	1.59		ug/L		81	70 - 130	0	20
EPTC			1.96	2.00		ug/L		102	70 - 130	0	20
Fluoranthene			1.96	2.08		ug/L		106	70 - 130	0	20
Fluorene			1.96	2.02		ug/L		103	70 - 130	0	20
gamma-Chlordane			1.96	1.84		ug/L		94	70 - 130	2	20
Heptachlor			1.96	1.89		ug/L		96	70 - 130	1	20
Heptachlor epoxide (isomer B)			1.96	1.83		ug/L		93	70 - 130	1	20
Hexachlorobenzene			1.96	1.92		ug/L		98	70 - 130	3	20
Hexachlorocyclopentadiene			1.96	2.30		ug/L		117	70 - 130	2	20
Indeno[1,2,3-cd]pyrene			1.96	2.11		ug/L		107	70 - 130	3	20
Isophorone			1.96	1.87		ug/L		95	70 - 130	0	20
Lindane			1.96	1.99		ug/L		101	70 - 130	2	20
Malathion			1.96	2.25		ug/L		114	70 - 130	2	20
Methoxychlor			1.96	2.24		ug/L		114	70 - 130	2	20
Metolachlor			1.96	2.18		ug/L		111	70 - 130	1	20

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

Lab Sample ID: LCSD 380-14908/4-A
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 14908

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Metribuzin			1.96	1.91		ug/L		97	70 - 130	1	20
Molinate			1.96	2.05		ug/L		105	70 - 130	0	20
Naphthalene			1.96	1.86		ug/L		95	70 - 130	1	20
Parathion			1.96	2.19		ug/L		112	70 - 130	3	20
Pendimethalin (Penoxaline)			1.96	2.13		ug/L		109	70 - 130	2	20
Phenanthrene			1.96	1.85		ug/L		94	70 - 130	1	20
Propachlor			1.96	2.13		ug/L		108	70 - 130	1	20
Pyrene			1.96	2.11		ug/L		107	70 - 130	1	20
Simazine			1.96	2.09		ug/L		106	70 - 130	1	20
Terbacil			1.96	1.90		ug/L		97	70 - 130	2	20
Terbuthylazine			1.96	2.20		ug/L		112	70 - 130	3	20
Thiobencarb			1.96	1.98		ug/L		101	70 - 130	0	20
trans-Nonachlor			1.96	1.94		ug/L		99	70 - 130	0	20
Trifluralin			1.96	2.02		ug/L		103	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Nitro-m-xylene	*93*		*70 - 130*
Triphenylphosphate	*94*		*70 - 130*
Perylene-d12	*91*		*70 - 130*

Lab Sample ID: MRL 380-14908/2-A
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 14908

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
2,4'-DDD			0.0987	0.137		ug/L		139	50 - 150		
2,4'-DDE			0.0987	0.112		ug/L		114	50 - 150		
2,4'-DDT			0.0987	0.121		ug/L		123	50 - 150		
2,4-Dinitrotoluene			0.0987	0.117		ug/L		118	50 - 150		
2,6-Dinitrotoluene			0.0987	0.0878	J	ug/L		89	50 - 150		
4,4'-DDD			0.0987	0.0984	J	ug/L		100	50 - 150		
4,4'-DDE			0.0987	0.0983	J	ug/L		100	50 - 150		
4,4'-DDT			0.0987	0.125		ug/L		127	50 - 150		
Acenaphthene			0.0987	0.0985	J	ug/L		100	50 - 150		
Acenaphthylene			0.0987	0.0819	J	ug/L		83	50 - 150		
Acetochlor			0.0493	0.0446	J	ug/L		90	50 - 150		
Alachlor			0.0493	0.0615		ug/L		125	50 - 150		
alpha-BHC			0.0987	0.106		ug/L		107	50 - 150		
alpha-Chlordane			0.0493	0.0470	J	ug/L		95	50 - 150		
Anthracene			0.0197	0.0210		ug/L		107	50 - 150		
Atrazine			0.0493	0.0474	J	ug/L		96	50 - 150		
Benz(a)anthracene			0.0493	0.0396	J	ug/L		80	50 - 150		
Benzo[a]pyrene			0.0197	0.0206		ug/L		104	50 - 150		
Benzo[b]fluoranthene			0.0197	0.0219		ug/L		111	50 - 150		
Benzo[g,h,i]perylene			0.0493	0.0399	J	ug/L		81	50 - 150		
Benzo[k]fluoranthene			0.0197	0.0209		ug/L		106	50 - 150		
beta-BHC			0.0987	0.109		ug/L		110	50 - 150		
Bromacil			0.0987	0.125		ug/L		127	50 - 150		

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

Lab Sample ID: MRL 380-14908/2-A
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 14908

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Butachlor	0.0493	0.0786	^3+	ug/L		159	50 - 150
Butylbenzylphthalate	0.148	0.177	J	ug/L		120	50 - 150
Caffeine	0.0493	0.0222	J ^3-	ug/L		45	50 - 150
Chlorobenzilate	0.0987	0.125		ug/L		127	50 - 150
Chloroneb	0.0987	0.133		ug/L		135	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0987	0.130		ug/L		132	50 - 150
Chlorpyrifos	0.0493	0.0500		ug/L		101	50 - 150
Chrysene	0.0197	0.0244		ug/L		124	50 - 150
delta-BHC	0.0987	0.131		ug/L		133	50 - 150
Di(2-ethylhexyl)adipate	0.296	0.324	J	ug/L		109	50 - 150
Bis(2-ethylhexyl) phthalate	0.592	0.598		ug/L		101	50 - 150
Diazinon (Qualitative)	0.0987	0.0868	J	ug/L		88	15 - 132
Dibenz(a,h)anthracene	0.0493	0.0458	J	ug/L		93	50 - 150
Diclorvos (DDVP)	0.0493	0.0499		ug/L		101	50 - 150
Dieldrin	0.0987	0.119	J	ug/L		121	50 - 150
Diethylphthalate	0.148	0.161	J	ug/L		109	50 - 150
Dimethoate	0.0987	0.0441	J	ug/L		45	35 - 100
Dimethylphthalate	0.296	0.305	J	ug/L		103	50 - 150
Di-n-butyl phthalate	0.296	0.320	J	ug/L		108	49 - 243
Di-n-octyl phthalate	0.0987	0.107		ug/L		108	50 - 150
Endosulfan I (Alpha)	0.0987	0.106		ug/L		107	50 - 150
Endosulfan II (Beta)	0.0987	0.103		ug/L		104	50 - 150
Endosulfan sulfate	0.0987	0.0987	J	ug/L		100	50 - 150
Endrin	0.0987	0.121		ug/L		123	50 - 150
Endrin aldehyde	0.0987	ND		ug/L		70	50 - 150
EPTC	0.0987	0.0956	J	ug/L		97	50 - 150
Fluoranthene	0.0493	0.0506	J	ug/L		103	50 - 150
Fluorene	0.0493	0.0502		ug/L		102	50 - 150
gamma-Chlordane	0.0493	0.0470	J	ug/L		95	50 - 150
Heptachlor	0.0395	0.0522		ug/L		132	50 - 150
Heptachlor epoxide (isomer B)	0.0493	0.0425	J	ug/L		86	50 - 150
Hexachlorobenzene	0.0493	0.0658		ug/L		133	50 - 150
Hexachlorocyclopentadiene	0.0493	0.0462	J	ug/L		94	50 - 150
Indeno[1,2,3-cd]pyrene	0.0493	0.0437	J	ug/L		89	50 - 150
Isophorone	0.0987	0.0976	J	ug/L		99	50 - 150
Lindane	0.0493	0.0463		ug/L		94	50 - 150
Malathion	0.0987	0.0977	J	ug/L		99	50 - 150
Methoxychlor	0.0987	0.0960	J	ug/L		97	50 - 150
Metolachlor	0.0493	0.0581		ug/L		118	50 - 150
Metribuzin	0.0493	0.0410	J	ug/L		83	50 - 150
Molinate	0.0987	0.105		ug/L		106	50 - 150
Naphthalene	0.0987	0.102	J	ug/L		103	50 - 150
Parathion	0.0987	0.128		ug/L		130	50 - 150
Pendimethalin (Penoxaline)	0.0987	0.134		ug/L		136	50 - 150
Phenanthrene	0.0197	0.0219	J	ug/L		111	50 - 150
Propachlor	0.0493	0.0532		ug/L		108	50 - 150
Pyrene	0.0493	0.0521		ug/L		106	50 - 150
Simazine	0.0493	0.0535		ug/L		109	50 - 150
Terbacil	0.0987	0.140		ug/L		142	50 - 150

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

Lab Sample ID: MRL 380-14908/2-A
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 14908

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Terbuthylazine			0.0987	0.0947	J	ug/L		96	50 - 150		
Thiobencarb			0.0987	0.109	J	ug/L		110	50 - 150		
trans-Nonachlor			0.0493	0.0495		ug/L		100	50 - 150		
Trifluralin			0.0987	0.124		ug/L		126	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*92*		*70 - 130*
Triphenylphosphate	*92*		*70 - 130*
Perylene-d12	*85*		*70 - 130*

Lab Sample ID: 380-16794-L-1-A MS
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 14908

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
2,4'-DDD	ND		1.99	2.04		ug/L		103	70 - 130		
2,4'-DDE	ND		1.99	2.06		ug/L		104	70 - 130		
2,4'-DDT	ND		1.99	2.05		ug/L		103	70 - 130		
2,4-Dinitrotoluene	ND		1.99	1.69		ug/L		85	70 - 130		
2,6-Dinitrotoluene	ND		1.99	1.66		ug/L		84	70 - 130		
4,4'-DDD	ND		1.99	2.07		ug/L		104	70 - 130		
4,4'-DDE	ND		1.99	1.83		ug/L		92	70 - 130		
4,4'-DDT	ND		1.99	1.99		ug/L		100	70 - 130		
Acenaphthene	ND		1.99	1.93		ug/L		97	70 - 130		
Acenaphthylene	ND		1.99	1.85		ug/L		93	70 - 130		
Acetochlor	ND		1.99	2.05		ug/L		103	70 - 130		
Alachlor	ND		1.99	2.01		ug/L		101	70 - 130		
alpha-BHC	ND		1.99	2.01		ug/L		101	70 - 130		
alpha-Chlordane	ND		1.99	1.77		ug/L		89	70 - 130		
Anthracene	ND		1.99	1.97		ug/L		99	70 - 130		
Atrazine	ND		1.99	2.12		ug/L		107	70 - 130		
Benz(a)anthracene	ND		1.99	2.03		ug/L		102	70 - 130		
Benzo[a]pyrene	ND		1.99	2.08		ug/L		105	70 - 130		
Benzo[b]fluoranthene	ND		1.99	2.23		ug/L		112	70 - 130		
Benzo[g,h,i]perylene	ND		1.99	2.03		ug/L		102	70 - 130		
Benzo[k]fluoranthene	ND		1.99	2.14		ug/L		108	70 - 130		
beta-BHC	ND		1.99	2.03		ug/L		102	70 - 130		
Bromacil	ND		1.99	1.56		ug/L		75	70 - 130		
Butachlor	ND	^3+	1.99	2.01		ug/L		101	70 - 130		
Butylbenzylphthalate	ND		1.99	2.09		ug/L		105	70 - 130		
Caffeine	ND	F1 ^3-	1.99	0.749	F1	ug/L		38	46 - 144		
Chlorobenzilate	ND		1.99	1.97		ug/L		99	70 - 130		
Chloroneb	ND		1.99	2.06		ug/L		104	70 - 130		
Chlorothalonil (Draconil, Bravo)	ND		1.99	2.00		ug/L		101	70 - 130		
Chlorpyrifos	ND		1.99	2.06		ug/L		104	70 - 130		
Chrysene	ND		1.99	2.17		ug/L		109	70 - 130		
delta-BHC	ND		1.99	1.98		ug/L		100	70 - 130		
Di(2-ethylhexyl)adipate	ND		1.99	1.92		ug/L		97	70 - 130		

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

Lab Sample ID: 380-16794-L-1-A MS
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 14908

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Bis(2-ethylhexyl) phthalate	ND		1.99	1.73		ug/L		87	70 - 130
Diazinon (Qualitative)	ND		1.99	1.78		ug/L		89	15 - 132
Dibenz(a,h)anthracene	ND		1.99	2.13		ug/L		107	70 - 130
Diclorvos (DDVP)	ND		1.99	1.81		ug/L		91	70 - 130
Dieldrin	ND		1.99	2.04		ug/L		103	70 - 130
Diethylphthalate	ND		1.99	2.03		ug/L		102	70 - 130
Dimethoate	ND		1.99	0.716		ug/L		36	34 - 111
Dimethylphthalate	ND		1.99	1.96		ug/L		99	70 - 130
Di-n-butyl phthalate	ND		3.97	4.08		ug/L		103	70 - 130
Di-n-octyl phthalate	ND		1.99	1.66		ug/L		84	70 - 130
Endosulfan I (Alpha)	ND		1.99	1.79		ug/L		90	70 - 130
Endosulfan II (Beta)	ND		1.99	2.05		ug/L		103	70 - 130
Endosulfan sulfate	ND		1.99	2.17		ug/L		109	70 - 130
Endrin	ND		1.99	2.01		ug/L		101	70 - 130
Endrin aldehyde	ND		1.99	1.58		ug/L		80	70 - 130
EPTC	ND		1.99	2.05		ug/L		103	70 - 130
Fluoranthene	ND		1.99	2.06		ug/L		104	70 - 130
Fluorene	ND		1.99	2.05		ug/L		103	70 - 130
gamma-Chlordane	ND		1.99	1.81		ug/L		90	70 - 130
Heptachlor	ND		1.99	1.90		ug/L		96	70 - 130
Heptachlor epoxide (isomer B)	ND		1.99	1.78		ug/L		90	70 - 130
Hexachlorobenzene	ND		1.99	1.94		ug/L		98	70 - 130
Hexachlorocyclopentadiene	ND		1.99	2.33		ug/L		118	70 - 130
Indeno[1,2,3-cd]pyrene	ND		1.99	2.09		ug/L		105	70 - 130
Isophorone	ND		1.99	1.78		ug/L		90	70 - 130
Lindane	ND		1.99	2.02		ug/L		102	70 - 130
Malathion	ND		1.99	2.22		ug/L		112	70 - 130
Methoxychlor	ND		1.99	2.20		ug/L		111	70 - 130
Metolachlor	ND		1.99	2.15		ug/L		108	70 - 130
Metribuzin	ND		1.99	1.62		ug/L		81	70 - 130
Molinate	ND		1.99	2.07		ug/L		104	70 - 130
Naphthalene	ND		1.99	1.85		ug/L		93	70 - 130
Parathion	ND		1.99	2.18		ug/L		110	70 - 130
Pendimethalin (Penoxaline)	ND		1.99	2.12		ug/L		107	70 - 130
Phenanthrene	ND		1.99	1.87		ug/L		94	70 - 130
Propachlor	ND		1.99	2.13		ug/L		107	70 - 130
Pyrene	ND		1.99	2.10		ug/L		106	70 - 130
Simazine	ND		1.99	1.79		ug/L		90	70 - 130
Terbacil	ND		1.99	1.65		ug/L		83	70 - 130
Terbuthylazine	ND		1.99	2.12		ug/L		107	70 - 130
Thiobencarb	ND		1.99	1.98		ug/L		100	70 - 130
trans-Nonachlor	ND		1.99	1.93		ug/L		97	70 - 130
Trifluralin	ND		1.99	1.99		ug/L		100	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*94*		*70 - 130*
Triphenylphosphate	*92*		*70 - 130*
Perylene-d12	*93*		*70 - 130*

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

Lab Sample ID: 380-16460-T-1-A DU
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 14908

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

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

Lab Sample ID: 380-16460-T-1-A DU
Matrix: Water
Analysis Batch: 15264

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 14908

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Fluoranthene	ND			ND		ug/L				NC	20
Fluorene	ND			ND		ug/L				NC	20
gamma-Chlordane	ND			ND		ug/L				NC	20
Heptachlor	ND			ND		ug/L				NC	20
Heptachlor epoxide (isomer B)	ND			ND		ug/L				NC	20
Hexachlorobenzene	ND			ND		ug/L				NC	20
Hexachlorocyclopentadiene	ND			ND		ug/L				NC	20
Indeno[1,2,3-cd]pyrene	ND			ND		ug/L				NC	20
Isophorone	ND			ND		ug/L				NC	20
Lindane	ND			ND		ug/L				NC	20
Malathion	ND			ND		ug/L				NC	20
Methoxychlor	ND			ND		ug/L				NC	20
Metolachlor	ND			ND		ug/L				NC	20
Metribuzin	ND			ND		ug/L				NC	20
Molinate	ND			ND		ug/L				NC	20
Naphthalene	ND			ND		ug/L				NC	20
Parathion	ND			ND		ug/L				NC	20
Pendimethalin (Penoxaline)	ND			ND		ug/L				NC	20
Total Permethrin (mixed isomers)	ND			ND		ug/L				NC	20
Phenanthrene	ND			ND		ug/L				NC	20
Propachlor	ND			ND		ug/L				NC	20
Pyrene	ND			ND		ug/L				NC	20
Simazine	ND			ND		ug/L				NC	20
Terbacil	ND			ND		ug/L				NC	20
Terbuthylazine	ND			ND		ug/L				NC	20
Thiobencarb	ND			ND		ug/L				NC	20
trans-Nonachlor	ND			ND		ug/L				NC	20
Trifluralin	ND			ND		ug/L				NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
2-Nitro-m-xylene	*90*		*70 - 130*
Triphenylphosphate	*91*		*70 - 130*
Perylene-d12	*89*		*70 - 130*

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i

Lab Sample ID: 99235-B1
Matrix: water
Analysis Batch: O-38084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-38084_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Acenaphthene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Acenaphthylene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Anthracene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Lab Sample ID: 99235-B1
Matrix: water
Analysis Batch: O-38084

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-38084_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Benz[a]anthracene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Biphenyl	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Chrysene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Dibenzothiophene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		08/15/22 00:00	08/20/22 16:04	1
Fluoranthene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Fluorene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Naphthalene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Perylene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Phenanthrene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1
Pyrene	ND		0.005	0.001	µg/L		08/15/22 00:00	08/20/22 16:04	1

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*92*		*65 - 113*	*08/15/22 00:00*	*08/20/22 16:04*	*1*
(d10-Phenanthrene)	*93*		*80 - 111*	*08/15/22 00:00*	*08/20/22 16:04*	*1*
(d12-Chrysene)	*92*		*60 - 139*	*08/15/22 00:00*	*08/20/22 16:04*	*1*
(d12-Perylene)	*88*		*36 - 161*	*08/15/22 00:00*	*08/20/22 16:04*	*1*
(d8-Naphthalene)	*88*		*44 - 119*	*08/15/22 00:00*	*08/20/22 16:04*	*1*

Lab Sample ID: 99235-BS1
Matrix: water
Analysis Batch: O-38084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-38084_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.414		µg/L		83	49 - 117
1-Methylphenanthrene	0.5	0.434		µg/L		87	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.427		µg/L		85	57 - 120
2,6-Dimethylnaphthalene	0.5	0.413		µg/L		83	54 - 117
2-Methylnaphthalene	0.5	0.41		µg/L		82	47 - 130
Acenaphthene	0.5	0.425		µg/L		85	53 - 131
Acenaphthylene	0.5	0.418		µg/L		84	43 - 140
Anthracene	0.5	0.449		µg/L		90	58 - 135
Benz[a]anthracene	0.5	0.365		µg/L		73	55 - 145
Benzo[a]pyrene	0.5	0.401		µg/L		80	51 - 143
Benzo[b]fluoranthene	0.5	0.446		µg/L		89	46 - 165
Benzo[e]pyrene	0.5	0.427		µg/L		85	42 - 152
Benzo[g,h,i]perylene	0.5	0.444		µg/L		89	63 - 133
Benzo[k]fluoranthene	0.5	0.426		µg/L		85	56 - 145
Biphenyl	0.5	0.422		µg/L		84	56 - 119
Chrysene	0.5	0.384		µg/L		77	56 - 141

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Lab Sample ID: 99235-BS1
Matrix: water
Analysis Batch: O-38084

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-38084_P

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Dibenz[a,h]anthracene			0.5	0.407		µg/L		81	55 - 150		
Dibenzo[a,l]pyrene			0.5	0.499		µg/L		100	50 - 150		
Dibenzothiophene			0.5	0.436		µg/L		87	75 - 113		
Disalicylidenepropanediamine			25	18.1		µg/L		72	50 - 150		
Fluoranthene			0.5	0.442		µg/L		88	60 - 146		
Fluorene			0.5	0.432		µg/L		86	58 - 131		
Indeno[1,2,3-cd]pyrene			0.5	0.415		µg/L		83	50 - 151		
Naphthalene			0.5	0.402		µg/L		80	41 - 126		
Perylene			0.5	0.4		µg/L		80	48 - 141		
Phenanthrene			0.5	0.45		µg/L		90	67 - 127		
Pyrene			0.5	0.425		µg/L		85	54 - 156		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
(d10-Acenaphthene)	*87*		*65 - 113*
(d10-Phenanthrene)	*91*		*80 - 111*
(d12-Chrysene)	*84*		*60 - 139*
(d12-Perylene)	*86*		*36 - 161*
(d8-Naphthalene)	*81*		*44 - 119*

Lab Sample ID: 99235-BS2
Matrix: water
Analysis Batch: O-38084

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-38084_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene			0.5	0.442		µg/L		88	49 - 117	6	30
1-Methylphenanthrene			0.5	0.443		µg/L		89	66 - 127	2	30
2,3,5-Trimethylnaphthalene			0.5	0.45		µg/L		90	57 - 120	6	30
2,6-Dimethylnaphthalene			0.5	0.44		µg/L		88	54 - 117	6	30
2-Methylnaphthalene			0.5	0.439		µg/L		88	47 - 130	7	30
Acenaphthene			0.5	0.449		µg/L		90	53 - 131	6	30
Acenaphthylene			0.5	0.449		µg/L		90	43 - 140	7	30
Anthracene			0.5	0.427		µg/L		85	58 - 135	6	30
Benz[a]anthracene			0.5	0.387		µg/L		77	55 - 145	5	30
Benzo[a]pyrene			0.5	0.447		µg/L		89	51 - 143	11	30
Benzo[b]fluoranthene			0.5	0.472		µg/L		94	46 - 165	5	30
Benzo[e]pyrene			0.5	0.453		µg/L		91	42 - 152	7	30
Benzo[g,h,i]perylene			0.5	0.465		µg/L		93	63 - 133	4	30
Benzo[k]fluoranthene			0.5	0.468		µg/L		94	56 - 145	10	30
Biphenyl			0.5	0.455		µg/L		91	56 - 119	8	30
Chrysene			0.5	0.4		µg/L		80	56 - 141	4	30
Dibenz[a,h]anthracene			0.5	0.439		µg/L		88	55 - 150	8	30
Dibenzo[a,l]pyrene			0.5	0.512		µg/L		102	50 - 150	2	30
Dibenzothiophene			0.5	0.461		µg/L		92	75 - 113	6	30
Disalicylidenepropanediamine			25	23.3		µg/L		93	50 - 150	25	30
Fluoranthene			0.5	0.459		µg/L		92	60 - 146	4	30
Fluorene			0.5	0.449		µg/L		90	58 - 131	5	30
Indeno[1,2,3-cd]pyrene			0.5	0.442		µg/L		88	50 - 151	6	30
Naphthalene			0.5	0.437		µg/L		87	41 - 126	8	30

Method: 625 PAH Physis LL (EAL) + TICs - EPA 625 Base/Neutral and Acid Organics i (Continued)

Lab Sample ID: 99235-BS2
Matrix: water
Analysis Batch: O-38084

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-38084_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Perylene			0.5	0.428		µg/L		86	48 - 141	7	30
Phenanthrene			0.5	0.47		µg/L		94	67 - 127	4	30
Pyrene			0.5	0.443		µg/L		89	54 - 156	5	30

Surrogate	*LCS DUP %Recovery*	*LCS DUP Qualifier*	*Limits*
(d10-Acenaphthene)	*92*		*65 - 113*
(d10-Phenanthrene)	*98*		*80 - 111*
(d12-Chrysene)	*88*		*60 - 139*
(d12-Perylene)	*95*		*36 - 161*
(d8-Naphthalene)	*90*		*44 - 119*

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO

Lab Sample ID: 22VG39H09B
Matrix: WATER
Analysis Batch: 22VG39H09

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/19/22 12:46	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE					*08/19/22 12:46*	*1*

Lab Sample ID: 22VG39H09L
Matrix: WATER
Analysis Batch: 22VG39H09

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
GASOLINE			0.5	0.447		mg/L		89	60 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOFLUOROBENZENE	*100*		*70 - 130*

Lab Sample ID: 22H217-01M
Matrix: WATER
Analysis Batch: 22VG39H09

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
GASOLINE	ND		0.5	0.458		mg/L		92	50 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
BROMOFLUOROBENZENE	*114*		*60 - 140*

Method: 8015 Diesel LL (EAL) and Motor Oil - 8015 - TPH DRO/ORO (Continued)

Lab Sample ID: 22H217-01S
Matrix: WATER
Analysis Batch: 22VG39H09

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

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
GASOLINE	ND		0.5	0.442		mg/L		88	50 - 130	4	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
BROMOFLUOROBENZENE	*110*		*60 - 140*

Method: 8015 Gas (Purgeable) LL (EAL) - SW846 8015B Gasoline Range Organics

Lab Sample ID: 22DSH034WB
Matrix: WATER
Analysis Batch: 22DSH034W

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.025		mg/L			08/22/22 17:35	1
MOTOR OIL	ND	U	0.05		mg/L			08/22/22 17:35	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE					*08/22/22 17:35*	*1*
HEXACOSANE					*08/22/22 17:35*	*1*

Lab Sample ID: 22DSH034WL
Matrix: WATER
Analysis Batch: 22DSH034W

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
DIESEL			2.5	2.11		mg/L		84	50 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*75*		*60 - 130*
HEXACOSANE	*93*		*60 - 130*

GC/MS Semi VOA

Prep Batch: 14908

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-16786-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	525.2	
380-16786-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	
380-16786-3	AIEA WELLS PUMPS 1&2 (260) (331-203-TP40(	Total/NA	Drinking Water	525.2	
MB 380-14908/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-14908/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-14908/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-14908/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-16794-L-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-16460-T-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 15264

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-16786-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	525.2	14908
380-16786-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	525.2	14908
380-16786-3	AIEA WELLS PUMPS 1&2 (260) (331-203-TP40(	Total/NA	Drinking Water	525.2	14908
MB 380-14908/1-A	Method Blank	Total/NA	Water	525.2	14908
LCS 380-14908/3-A	Lab Control Sample	Total/NA	Water	525.2	14908
LCSD 380-14908/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	14908
MRL 380-14908/2-A	Lab Control Sample	Total/NA	Water	525.2	14908
380-16794-L-1-A MS	Matrix Spike	Total/NA	Water	525.2	14908
380-16460-T-1-A DU	Duplicate	Total/NA	Water	525.2	14908

Subcontract

Analysis Batch: O-38084

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-16786-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38084_P
380-16786-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38084_P
380-16786-3	AIEA WELLS PUMPS 1&2 (260) (331-203-TP40(	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38084_P
99235-B1	Method Blank	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38084_P
99235-BS1	Lab Control Sample	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38084_P
99235-BS2	Lab Control Sample Dup	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38084_P

Analysis Batch: 22DSH034W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-16786-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-16786-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-16786-3	AIEA WELLS PUMPS 1&2 (260) (331-203-TP40(	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
22DSH034WB	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Subcontract (Continued)

Analysis Batch: 22DSH034W (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
22DSH034WL	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Analysis Batch: 22VG39H09

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-16786-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
380-16786-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	8015 Diesel LL (EAL) and Motor Oil	
380-16786-3	AIEA WELLS PUMPS 1&2 (260) (331-203-TP40(	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-16786-4	TB AIEA GULCH WELLS PUMP1	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-16786-5	TB AIEA GULCH WELLS PUMP2	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-16786-6	TB AIEA GULCH WELLS PUMP1&2	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
22VG39H09B	Method Blank	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22VG39H09L	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22H217-01M	Matrix Spike	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22H217-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

Prep Batch: O-38084_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-16786-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Total/NA	Drinking Water	EPA_625	
380-16786-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Total/NA	Drinking Water	EPA_625	
380-16786-3	AIEA WELLS PUMPS 1&2 (260) (331-203-TP40(	Total/NA	Drinking Water	EPA_625	
99235-B1	Method Blank	Total/NA	water	EPA_625	
99235-BS1	Lab Control Sample	Total/NA	water	EPA_625	
99235-BS2	Lab Control Sample Dup	Total/NA	water	EPA_625	

Lab Chronicle

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

Job ID: 380-16786-1

Client Sample ID: AIEA GULCH WELLS PUMP 1 (331-201-TP071)

Lab Sample ID: 380-16786-1

Date Collected: 08/15/22 09:58
Date Received: 08/16/22 21:17

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			14908	N8NE	EA MON	08/25/22 10:21
Total/NA	Analysis	525.2		1	15264	Q8LA	EA MON	08/29/22 16:21
Total/NA	Prep	EPA_625		1	O-38084_P			08/17/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38084	YC		08/21/22 16:54
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22VG39H09	SCerva		08/19/22 14:38
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22DSH034W	SDees		08/22/22 21:18

Client Sample ID: AIEA GULCH WELLS PUMP 2 (331-202-TP072)

Lab Sample ID: 380-16786-2

Date Collected: 08/15/22 10:32
Date Received: 08/16/22 21:17

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			14908	N8NE	EA MON	08/25/22 10:21
Total/NA	Analysis	525.2		1	15264	Q8LA	EA MON	08/29/22 16:41
Total/NA	Prep	EPA_625		1	O-38084_P			08/17/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38084	YC		08/21/22 18:40
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22VG39H09	SCerva		08/19/22 16:29
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22DSH034W	SDees		08/22/22 22:32

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)

Lab Sample ID: 380-16786-3

Date Collected: 08/15/22 09:36
Date Received: 08/16/22 21:17

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			14908	N8NE	EA MON	08/25/22 10:21
Total/NA	Analysis	525.2		1	15264	Q8LA	EA MON	08/29/22 17:01
Total/NA	Prep	EPA_625		1	O-38084_P			08/17/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38084	YC		08/21/22 20:27
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39H09	SCerva		08/19/22 17:43
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22DSH034W	SDees		08/22/22 22:50

Lab Chronicle

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

Job ID: 380-16786-1

Client Sample ID: TB AIEA GULCH WELLS PUMP1

Lab Sample ID: 380-16786-4
Matrix: Water
Date Collected: 08/15/22 09:58
Date Received: 08/16/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39H09	SCerva		08/19/22 18:20

Client Sample ID: TB AIEA GULCH WELLS PUMP2

Lab Sample ID: 380-16786-5
Matrix: Water
Date Collected: 08/15/22 10:32
Date Received: 08/16/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39H09	SCerva		08/19/22 18:56

Client Sample ID: TB AIEA GULCH WELLS PUMP1&2

Lab Sample ID: 380-16786-6
Matrix: Water
Date Collected: 08/15/22 09:36
Date Received: 08/16/22 10:15

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39H09	SCerva		08/19/22 19:33

Laboratory References:

= Physis Environmental Laboratories, 1904 Wright Circle, Anaheim, CA 92806

EA MON = Eurofins Eaton Monrovia, 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016, TEL (626)386-1100

Accreditation/Certification Summary

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

Job ID: 380-16786-1

Laboratory: Eurofins Eaton Monrovia

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	01-31-23

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

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

Laboratory: Eurofins Eaton Monrovia (Continued)

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

Authority	Program	Identification Number	Expiration Date

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

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Drinking Water	Malathion
525.2	525.2	Drinking Water	Molinate
525.2	525.2	Drinking Water	Naphthalene
525.2	525.2	Drinking Water	Parathion
525.2	525.2	Drinking Water	Pendimethalin (Penoxaline)
525.2	525.2	Drinking Water	Phenanthrene
525.2	525.2	Drinking Water	Pyrene
525.2	525.2	Drinking Water	Terbacil
525.2	525.2	Drinking Water	Terbuthylazine
525.2	525.2	Drinking Water	Thiobencarb
525.2	525.2	Drinking Water	Total Permethrin (mixed isomers)
525.2	525.2	Drinking Water	trans-Nonachlor
525.2	525.2	Drinking Water	Trifluralin

Method Summary

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

Job ID: 380-16786-1

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA MON
625	EPA 625 Base/Neutral and Acid Organics i	EPA	
8015	8015 - TPH DRO/ORO	EPA	
8015B	SW846 8015B Gasoline Range Organics	SW846	
525.2	Extraction of Semivolatile Compounds	EPA	EA MON

Protocol References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

= Physis Environmental Laboratories, 1904 Wright Circle, Anaheim, CA 92806

EA MON = Eurofins Eaton Monrovia, 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016, TEL (626)386-1100

Sample Summary

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

Job ID: 380-16786-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-16786-1	AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Drinking Water	08/15/22 09:58	08/16/22 21:17	HI0000331
380-16786-2	AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Drinking Water	08/15/22 10:32	08/16/22 21:17	HI0000331
380-16786-3	AIEA WELLS PUMPS 1&2 (260) (331-203-TP400)	Drinking Water	08/15/22 09:36	08/16/22 21:17	HI0000331
380-16786-4	TB AIEA GULCH WELLS PUMP1	Water	08/15/22 09:58	08/16/22 10:15	
380-16786-5	TB AIEA GULCH WELLS PUMP2	Water	08/15/22 10:32	08/16/22 10:15	
380-16786-6	TB AIEA GULCH WELLS PUMP1&2	Water	08/15/22 09:36	08/16/22 10:15	

EMAX LABORATORIES, INC.
3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 09-06-2022
EMAX Batch No.: 22H217

Attn: Jackie Contreras

Eurofins Eaton Analytical
750 Royal Oaks Dr., Suite 100
Monrovia, CA 91016-3629

Subject: Laboratory Report
Project: 380-16786

Enclosed is the Laboratory report for samples received on 08/17/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-16786-1	H217-01	08/15/22	WATER	TPH GASOLINE
				TPH DIESEL & MOTOR OIL
380-16786-2	H217-02	08/15/22	WATER	TPH GASOLINE
				TPH DIESEL & MOTOR OIL
380-16786-3	H217-03	08/15/22	WATER	TPH GASOLINE
				TPH DIESEL & MOTOR OIL
380-16786-4	H217-04	08/15/22	WATER	TPH GASOLINE
380-16786-5	H217-05	08/15/22	WATER	TPH GASOLINE
380-16786-6	H217-06	08/15/22	WATER	TPH GASOLINE
380-16786-1MS	H217-01M	08/15/22	WATER	TPH GASOLINE
380-16786-1MSD	H217-01S	08/15/22	WATER	TPH GASOLINE

The results are summarized on the following pages.

Please feel free to call if you have any questions concerning
these results.

Sincerely yours,

Caspar J. Pang
Laboratory Director

EMAX certifies that results included in this report meets all TNI & DOD requirements unless noted in the Case Narrative.

NELAP Accredited Certificate Number CA002912022-22
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

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

22H217

Chain of Custody Record

eurofins | Environment Testing America

10/18/2022

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-17920.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Debbie.Frank@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: EMAX Laboratories Inc		Accreditations Required (See note): State - Hawaii		Job #: 380-16786-1
Address: 3051 Fujita Street, ,	Due Date Requested: 8/30/2022			
City: Torrance	TAT Requested (days):			
State, Zip: CA, 90505				
Phone:	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	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 - Client ID (Lab ID)	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)	SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)	SUB (8015 Diesel LL (EAL) and Motor Oil)/ 8015 Diesel LL (EAL) and Motor Oil	Total Number of containers	Special Instructions/Note:
				Preservation Code:							
1	AIEA GULCH WELLS PUMP 1 (331-201-TP071) (380-16786-1)	8/15/22	09:58 Hawaiian		Water			X	X	6	See Attached Instructions
2	AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-16786-2)	8/15/22	10:32 Hawaiian		Water			X	X	6	See Attached Instructions
3	AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-16786-3	8/15/22	09:36 Hawaiian		Water			X	X	6	See Attached Instructions
4	TB AIEA GULCH WELLS PUMP1 (380-16786-4)	8/15/22	09:58 Hawaiian		Water			X		2	See Attached Instructions
5	TB AIEA GULCH WELLS PUMP2 (380-16786-5)	8/15/22	10:32 Hawaiian		Water			X		2	See Attached Instructions
6	TB AIEA GULCH WELLS PUMP1&2 (380-16786-6)	8/15/22	09:36 Hawaiian		Water			X		2	See Attached Instructions

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	Sample Disposal (A fee may be assessed if samples ar e retained longer than 1 month)
Unconfirmed	☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	G. REITNER	08/17/2022	EEA		8-17-22 12	EEA
2		8-17-22 13:50	EEA		8-17-22 13:50	EMAX
3		Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: Temp. 2.8

EMAX LABORATORIES, INC.

REFERENCE: EMAX-SM02 Rev. 12

SAMPLE RECEIPT FORM 1

Type of Delivery	Airbill / Tracking Number	ECN 22H217
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Maria Rivera
☐ EMAX Courier ☒ Client Delivery		Date 08/17/22 Time 13:50

COC INSPECTION

☒ Client Name	☒ Client PM/FC	☐ Sampler Name	☒ Sampling Date/Time	☒ Sample ID	☒ Matrix
☒ Address	☒ Tel # / Fax #	☐ Courier Signature	☒ Analysis Required	☐ Preservative (if any)	☒ TAT
Safety Issues (if any)	☐ High concentrations expected	☐ From Superfund Site	☐ Rad screening required		

Note: _____

PACKAGING INSPECTION

Container	☒ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☐ Intact	☐ Damaged		
Packaging	☒ Bubble Pack	☐ Styrofoam	☐ Popcorn	☐ Sufficient	☐ _____
Temperatures (Cool, ≤6 °C but not frozen)	☒ Cooler 1 2.8 °C	☐ Cooler 2_____ °C	☐ Cooler 3_____ °C	☐ Cooler 4_____ °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C
Thermometer:	*A - S/N* _____	*B - S/N* 210760237	*C - S/N* _____	*D - S/N* 210760272	

Comments: ☐ **Temperature is out of range. PM was informed IMMEDIATELY.**

Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
4-6	20122,24	D22	2nd date reads 7/29/22	R1

☐ pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time.

AB 8/19/22

NOTES/OBSERVATIONS:

SAMPLE MATRIX IS DRINKING WATER? ☐ YES ☐ NO

LEGEND:

☐ Continue to next page.

Code	Description- Sample Management
D1	Analysis is not indicated in _____
D2	Analysis mismatch COC vs label
D3	Sample ID mismatch COC vs label
D4	Sample ID is not indicated in _____
D5	Container -[improper] [leaking] [broken]
D6	Date/Time is not indicated in _____
D7	Date/Time mismatch COC vs label
D8	Sample listed in COC is not received
D9	Sample received is not listed in COC
D10	No initial/date on corrections in COC/label
D11	Container count mismatch COC vs received
D12	Container size mismatch COC vs received

Code	Description-Sample Management
D13	Out of Holding Time
D14	Bubble is >6mm
D15	No trip blank in cooler
D16	Preservation not indicated in _____
D17	Preservation mismatch COC vs label
D18	Insufficient chemical preservative
D19	Insufficient Sample
D20	No filtration info for dissolved analysis
D21	No sample for moisture determination
D22	2nd date on label is incorrect
D23	_____
D24	_____

Code	Description-Sample Management
R1	Proceed as indicated in ☒ COC ☐ Label
R2	Refer to attached instruction
R3	Cancel the analysis
R4	Use vial with smallest bubble first
R5	Log-in with latest sampling date and time+1 min
R6	Adjust pH as necessary
R7	Filter and preserved as necessary
R8	_____
R9	_____
R10	_____
R11	_____
R12	_____

REVIEWS:

Sample Labeling Maria Rivera Date 08/17/22 8/17/22

SRF Date 8/17/22

PM Date 8/19/22

REPORTING CONVENTIONS

DATA QUALIFIERS:

Lab Qualifier	AFCEE Qualifier	Description
J	F	Indicates that the analyte is positively identified and the result is less than RL but greater than MDL.
N		Indicates presumptive evidence of a compound.
B	B	Indicates that the analyte is found in the associated method blank as well as in the sample at above QC level.
E	J	Indicates that the result is above the maximum calibration range or estimated value.
*	*	Out of QC limit.

Note: The above qualifiers are used to flag the results unless the project requires a different set of qualification criteria.

ACRONYMS AND ABBREVIATIONS:

CRDL	Contract Required Detection Limit
RL	Reporting Limit
MRL	Method Reporting Limit
PQL	Practical Quantitation Limit
MDL	Method Detection Limit
DO	Diluted out

DATES

The date and time information for leaching and preparation reflect the beginning date and time of the procedure unless the method, protocol, or project specifically requires otherwise.

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-16786

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

SDG#: 22H217

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-16786

SDG : 22H217

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

A total of six(6) water samples were received on 08/17/22 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method 5030B/8015B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VG39H09B - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of LCS/LCD was analyzed. VG39H09L/VG39H09C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Gasoline was within MS QC limits in H217-01M/H217-01S. Refer to Matrix QC summary form for details.

Surrogate
Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : EUROFINS EATON ANALYTICAL
Project : 380-16786
SDG NO. : 22H217
Instrument ID : GCT039

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VG39H09B	1	NA	08/19/2212:46	08/19/2212:46	EH19005A	EH19003A	22VG39H09	Method Blank
LCS1W	VG39H09L	1	NA	08/19/2213:24	08/19/2213:24	EH19006A	EH19003A	22VG39H09	Lab Control Sample (LCS)
LCD1W	VG39H09C	1	NA	08/19/2214:01	08/19/2214:01	EH19007A	EH19003A	22VG39H09	LCS Duplicate
380-16786-1	H217-01	1	NA	08/19/2214:38	08/19/2214:38	EH19008A	EH19003A	22VG39H09	Field Sample
380-16786-1MS	H217-01M	1	NA	08/19/2215:15	08/19/2215:15	EH19009A	EH19003A	22VG39H09	Matrix Spike Sample (MS)
380-16786-1MSD	H217-01S	1	NA	08/19/2215:52	08/19/2215:52	EH19010A	EH19003A	22VG39H09	MS Duplicate (MSD)
380-16786-2	H217-02	1	NA	08/19/2216:29	08/19/2216:29	EH19011A	EH19003A	22VG39H09	Field Sample
380-16786-3	H217-03	1	NA	08/19/2217:43	08/19/2217:43	EH19013A	EH19012A	22VG39H09	Field Sample
380-16786-4	H217-04	1	NA	08/19/2218:20	08/19/2218:20	EH19014A	EH19012A	22VG39H09	Field Sample
380-16786-5	H217-05	1	NA	08/19/2218:56	08/19/2218:56	EH19015A	EH19012A	22VG39H09	Field Sample
380-16786-6	H217-06	1	NA	08/19/2219:33	08/19/2219:33	EH19016A	EH19012A	22VG39H09	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/15/22 09:58
Project	: 380-16786	Date Received:	08/17/22
Batch No.	: 22H217	Date Extracted:	08/19/22 14:38
Sample ID	: 380-16786-1	Date Analyzed:	08/19/22 14:38
Lab Samp ID:	H217-01	Dilution Factor:	1
Lab File ID:	EH19008A	Matrix:	WATER
Ext Btch ID:	22VG39H09	% Moisture:	NA
Calib. Ref.:	EH19003A	Instrument ID:	39

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.020	0.010

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0361	0.0400	90	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume :	5ml
Prepared by	: SCerva	Analyzed by :	SCerva

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/15/22 10:32
Project	: 380-16786	Date Received:	08/17/22
Batch No.	: 22H217	Date Extracted:	08/19/22 16:29
Sample ID	: 380-16786-2	Date Analyzed:	08/19/22 16:29
Lab Samp ID:	H217-02	Dilution Factor:	1
Lab File ID:	EH19011A	Matrix:	WATER
Ext Btch ID:	22VG39H09	% Moisture:	NA
Calib. Ref.:	EH19003A	Instrument ID:	39

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.020	0.010

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0361	0.0400	90	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume :	5ml
Prepared by	: SCerva	Analyzed by :	SCerva

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/15/22 09:36
Project	: 380-16786	Date Received:	08/17/22
Batch No.	: 22H217	Date Extracted:	08/19/22 17:43
Sample ID	: 380-16786-3	Date Analyzed:	08/19/22 17:43
Lab Samp ID:	H217-03	Dilution Factor:	1
Lab File ID:	EH19013A	Matrix:	WATER
Ext Btch ID:	22VG39H09	% Moisture:	NA
Calib. Ref.:	EH19012A	Instrument ID:	39

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.020	0.010

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0369	0.0400	92	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume :	5ml
Prepared by	: SCerva	Analyzed by :	SCerva

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/15/22 09:58
Project	: 380-16786	Date Received:	08/17/22
Batch No.	: 22H217	Date Extracted:	08/19/22 18:20
Sample ID	: 380-16786-4	Date Analyzed:	08/19/22 18:20
Lab Samp ID:	H217-04	Dilution Factor:	1
Lab File ID:	EH19014A	Matrix:	WATER
Ext Btch ID:	22VG39H09	% Moisture:	NA
Calib. Ref.:	EH19012A	Instrument ID:	39

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.020	0.010

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0373	0.0400	93	60-140

Notes:
Parameter H-C Range
Gasoline C6-C10
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/15/22 10:32
Project	: 380-16786	Date Received:	08/17/22
Batch No.	: 22H217	Date Extracted:	08/19/22 18:56
Sample ID	: 380-16786-5	Date Analyzed:	08/19/22 18:56
Lab Samp ID:	H217-05	Dilution Factor:	1
Lab File ID:	EH19015A	Matrix:	WATER
Ext Btch ID:	22VG39H09	% Moisture:	NA
Calib. Ref.:	EH19012A	Instrument ID:	39

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.020	0.010

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0355	0.0400	89	60-140

Notes:
Parameter H-C Range
Gasoline C6-C10
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/15/22 09:36
Project	: 380-16786	Date Received:	08/17/22
Batch No.	: 22H217	Date Extracted:	08/19/22 19:33
Sample ID	: 380-16786-6	Date Analyzed:	08/19/22 19:33
Lab Samp ID:	H217-06	Dilution Factor:	1
Lab File ID:	EH19016A	Matrix:	WATER
Ext Btch ID:	22VG39H09	% Moisture:	NA
Calib. Ref.:	EH19012A	Instrument ID:	39

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.020	0.010

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0406	0.0400	102	60-140

Notes:
Parameter H-C Range
Gasoline C6-C10
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 5ml Final Volume : 5ml
Prepared by : SCerva Analyzed by : SCerva

QC SUMMARIES

METHOD 5030B/8015B
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/19/22 12:46
Project	: 380-16786	Date Received:	08/19/22
Batch No.	: 22H217	Date Extracted:	08/19/22 12:46
Sample ID	: MBLK1W	Date Analyzed:	08/19/22 12:46
Lab Samp ID	: VG39H09B	Dilution Factor:	1
Lab File ID	: EH19005A	Matrix:	WATER
Ext Btch ID	: 22VG39H09	% Moisture:	NA
Calib. Ref.:	EH19003A	Instrument ID:	39

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
GASOLINE	ND	0.020	0.010

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0341	0.0400	85	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 5ml	Final Volume :	5ml
Prepared by	: SCerva	Analyzed by :	SCerva

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-16786
BATCH NO. : 22H217
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VG39H09B	VG39H09L	VG39H09C
LAB FILE ID	: EH19005A	EH19006A	EH19007A
DATE PREPARED	: 08/19/22 12:46	08/19/22 13:24	08/19/22 14:01
DATE ANALYZED	: 08/19/22 12:46	08/19/22 13:24	08/19/22 14:01
PREP BATCH	: 22VG39H09	22VG39H09	22VG39H09
CALIBRATION REF	: EH19003A	EH19003A	EH19003A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.447	89	0.500	0.449	90	0	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0400	100	0.0400	0.0428	107	70-130

MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-16786
BATCH NO. : 22H217
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-16786-1	380-16786-1MS	380-16786-1MSD
LAB SAMPLE ID	: H217-01	H217-01M	H217-01S
LAB FILE ID	: EH19008A	EH19009A	EH19010A
DATE PREPARED	: 08/19/22 14:38	08/19/22 15:15	08/19/22 15:52
DATE ANALYZED	: 08/19/22 14:38	08/19/22 15:15	08/19/22 15:52
PREP BATCH	: 22VG39H09	22VG39H09	22VG39H09
CALIBRATION REF	: EH19003A	EH19003A	EH19003A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.458	92	0.500	0.442	88	4	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0455	114	0.0400	0.0441	110	60-140

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-16786

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22H217

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-16786

SDG : 22H217

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

A total of three(3) water samples were received on 08/17/22 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

Calibration
Multi-calibration points were generated to establish initial calibration (ICAL). ICAL was verified using a secondary source (ICV). Continuing calibration (CCV) verifications were carried out on a frequency specified by the project. All calibration requirements were within acceptance criteria. Refer to calibration summary forms of ICAL, ICV and CCV for details. MRL was analyzed as required by the project. Refer to MRL summary form for details.

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSH034WB - result was compliant to project requirement. Refer to sample result summary form for details.

Lab Control Sample
Lab control sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) LCS was analyzed. Percent recovery for Diesel was within LCS QC limits in DSH034WL. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Diesel was within MS QC limits in 22H180-01M/22H180-01S. Refer to Matrix QC summary form for details.

Surrogate
Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

Sample Analysis
Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-16786
SDG NO. : 22H217
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	DSH034WL	1	NA	08/22/2217:16	08/20/2215:00	LH22010A	LH22004A	22DSH034W	Lab Control Sample (LCS)
MBLK1W	DSH034WB	1	NA	08/22/2217:35	08/20/2215:00	LH22011A	LH22004A	22DSH034W	Method Blank
380-16786-1	H217-01	1	NA	08/22/2221:18	08/20/2215:00	LH22023A	LH22004A	22DSH034W	Field Sample
380-16786-2	H217-02	1	NA	08/22/2222:32	08/20/2215:00	LH22027A	LH22024A	22DSH034W	Field Sample
380-16786-3	H217-03	1	NA	08/22/2222:50	08/20/2215:00	LH22028A	LH22024A	22DSH034W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/15/22 09:58
Project	: 380-16786	Date Received:	08/17/22
Batch No.	: 22H217	Date Extracted:	08/20/22 15:00
Sample ID	: 380-16786-1	Date Analyzed:	08/22/22 21:18
Lab Samp ID:	22H217-01	Dilution Factor:	1
Lab File ID:	LH22023A	Matrix:	WATER
Ext Btch ID:	22DSH034W	% Moisture:	NA
Calib. Ref.:	LH22004A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.027	0.014
Motor Oil	ND	0.055	0.027

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.377	0.545	69	60-130
Hexacosane	0.121	0.136	89	60-130

Notes:

Parameter	H-C Range
Diesel	C10-C24
Motor Oil	C24-C36

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 920ml	Final Volume	: 5ml
Prepared by	: DLi	Analyzed by	: SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/15/22 10:32
Project	: 380-16786	Date Received:	08/17/22
Batch No.	: 22H217	Date Extracted:	08/20/22 15:00
Sample ID	: 380-16786-2	Date Analyzed:	08/22/22 22:32
Lab Samp ID:	22H217-02	Dilution Factor:	1
Lab File ID:	LH22027A	Matrix:	WATER
Ext Btch ID:	22DSH034W	% Moisture:	NA
Calib. Ref.:	LH22024A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.024	0.012
Motor Oil	ND	0.047	0.024

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.285	0.470	61	60-130
Hexacosane	0.0978	0.118	83	60-130

Notes:

Parameter	H-C Range
Diesel	C10-C24
Motor Oil	C24-C36

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1060ml	Final Volume	: 5ml
Prepared by	: DLi	Analyzed by	: SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/15/22 09:36
Project	: 380-16786	Date Received:	08/17/22
Batch No.	: 22H217	Date Extracted:	08/20/22 15:00
Sample ID	: 380-16786-3	Date Analyzed:	08/22/22 22:50
Lab Samp ID:	22H217-03	Dilution Factor:	1
Lab File ID:	LH22028A	Matrix:	WATER
Ext Btch ID:	22DSH034W	% Moisture:	NA
Calib. Ref.:	LH22024A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.028	0.014
Motor Oil	ND	0.056	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.411	0.555	74	60-130
Hexacosane	0.131	0.139	95	60-130

Notes:

Parameter	H-C Range
Diesel	C10-C24
Motor Oil	C24-C36

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 900ml	Final Volume	: 5ml
Prepared by	: DLi	Analyzed by	: SDeeso

QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	08/20/22 15:00
Project	: 380-16786	Date Received:	08/20/22
Batch No.	: 22H217	Date Extracted:	08/20/22 15:00
Sample ID	: MBLK1W	Date Analyzed:	08/22/22 17:35
Lab Samp ID	: DSH034WB	Dilution Factor:	1
Lab File ID	: LH22011A	Matrix:	WATER
Ext Btch ID	: 22DSH034W	% Moisture:	NA
Calib. Ref.	: LH22004A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.025	0.012
Motor Oil	ND	0.050	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.380	0.500	76	60-130
Hexacosane	0.113	0.125	90	60-130

Notes:

Parameter	H-C Range
Diesel	C10-C24
Motor Oil	C24-C36

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 1000ml	Final Volume	: 5ml
Prepared by	: DLi	Analyzed by	: SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-16786
BATCH NO. : 22H217
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSH034WB	DSH034WL
LAB FILE ID	: LH22011A	LH22010A
DATE PREPARED	: 08/20/22 15:00	08/20/22 15:00
DATE ANALYZED	: 08/22/22 17:35	08/22/22 17:16
PREP BATCH	: 22DSH034W	22DSH034W
CALIBRATION REF	: LH22004A	LH22004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.11	84	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.377	75	60-130
Hexacosane	0.125	0.116	93	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-16110
BATCH NO. : 22H180
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-16110-1	380-16110-1MS	380-16110-1MSD
LAB SAMPLE ID	: 22H180-01	22H180-01M	22H180-01S
LAB FILE ID	: LH22015A	LH22016A	LH22017A
DATE PREPARED	: 08/20/22 15:00	08/20/22 15:00	08/20/22 15:00
DATE ANALYZED	: 08/22/22 18:49	08/22/22 19:08	08/22/22 19:26
PREP BATCH	: 22DSH034W	22DSH034W	22DSH034W
CALIBRATION REF	: LH22004A	LH22004A	LH22004A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.75	2.82	103	2.58	2.32	90	19	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.550	0.461	84	0.515	0.356	69	60-130
Hexacosane	0.138	0.132	96	0.129	0.118	92	60-130

PS: Parent Sample MS: Matrix Spike MSD: Matrix Spike Duplicate

August 22, 2022

Debbie Frank
Eurofins Eaton Analytical
750 Royal Oaks Drive
Suite 100
Monrovia, CA 91016-

Project Name: RED-HILL Project # 38001111 Job # 380-16786-1
Physis Project ID: 1407003-275

Dear Debbie,

Enclosed are the analytical results for samples submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 8/17/2022. A total of 3 samples were received for analysis in accordance with the attached chain of custody (COC). Per the COC, the samples were analyzed for:

Organics
Polynuclear Aromatic Hydrocarbons by EPA 625.1
Disalicylidenepropanediamine by EPA 625.1
Dibenzo [a,l] Pyrene w/ PAHs by EPA 625.1

Analytical results in this report apply only to samples submitted to PHYSIS in accordance with the COC and are intended to be considered in their entirety.

Please feel free to contact me at any time with any questions. PHYSIS appreciates the opportunity to provide you with our analytical and support services.

Regards,

Misty Mercier
714 602-5320
Extension 202
mistymercier@physislabs.com

PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-275

RED-HILL Project # 38001111 Job # 380-16786-1

Total Samples: 3

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
99236	AIEA GULCH WELLS PUMP 1	331-201-TP071 (380-16786-1)	8/15/2022	9:58	Samplewater	Not Specified
99237	AIEA GULCH WELLS PUMP 2	331-202-TP072 (380-16786-2)	8/15/2022	10:32	Samplewater	Not Specified
99238	AIEA WELLS PUMPS 1&2 (2603)	331-203-TP400 (380-16786-3)	8/15/2022	9:36	Samplewater	Not Specified

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

ABBREVIATIONS and ACRONYMS

QM	Quality Manual
QA	Quality Assurance
QC	Quality Control
MDL	method detection limit
RL	reporting limit
R1	project sample
R2	project sample replicate
MS1	matrix spike
MS2	matrix spike replicate
B1	procedural blank
B2	procedural blank replicate
BS1	blank spike
BS2	blank spike replicate
LCS1	laboratory control spike
LCS2	laboratory control spike replicate
LCM1	laboratory control material
LCM2	laboratory control material replicate
CRM1	certified reference material
CRM2	certified reference material replicate
RPD	relative percent difference
LMW	low molecular weight
HMW	high molecular weight

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QUALITY ASSURANCE SUMMARY

LABORATORY BATCH: Physis' QM defines a laboratory batch as a group of 20 or fewer project samples of similar matrix, processed together under the same conditions and with the same reagents. QC samples are associated with each batch and were used to assess the validity of the sample analyses.

PROCEDURAL BLANK: Laboratory contamination introduced during method use is assessed through the preparation and analysis of procedural blanks is provided at a minimum frequency of one per batch.

ACCURACY: Accuracy of analytical measurements is the degree of closeness based on percent recovery calculations between measured values and the actual or true value and includes a combination of reproducibility error and systematic bias due to sampling and analytical operations. Accuracy of the project data was indicated by analysis of MS, BS, LCS, LCM, CRM, and/or surrogate spikes on a minimum frequency of one per batch. Physis' QM requires that 95% of the target compounds greater than 10 times the MDL be within the specified acceptance limits.

PRECISION: Precision is the agreement among a set of replicate measurements without assumption of knowledge of the true value and is based on RPD calculations between repeated values. Precision of the project data was determined by analysis of replicate MS1/MS2, BS1/BS2, LCS1/LCS2, LCM1/LCM2, CRM1/CRM2, surrogate spikes and/or replicate project sample analysis (R1/R2) on a minimum frequency of one per batch. Physis' QM requires that for 95% of the compounds greater than 10 times the MDL, the percent RPD should be within the specified acceptance range.

BLANK SPIKES: BS is the introduction of a known concentration of analyte into the procedural blank. BS demonstrates performance of the preparation and analytical methods on a clean matrix void of potential matrix related interferences. The BS is performed in laboratory deionized water, making these recoveries a better indicator of the efficiency of the laboratory method per se.

MATRIX SPIKES: MS is the introduction of a known concentration of analyte into a sample. MS samples demonstrate the effect a particular project sample matrix has on the accuracy of a measurement. Individually, MS samples also indicate the bias of analytical measurements due to chemical interferences inherent in the in the specific project sample spiked. Intrinsic target analyte concentration in the specific project sample can also significantly impact MS recovery.

CERTIFIED REFERENCE MATERIALS: CRMs are materials of various matrices for which analytical information has been determined and certified by a recognized authority. These are used to provide a quantitative assessment of the accuracy of an analytical method. CRMs provide evidence that the laboratory preparation and analysis produces results that are comparable to those obtained by an independent organization.

LABORATORY CONTROL MATERIAL: LCM is provided because a suitable natural seawater CRM is not available and can be used to indicate accuracy of the method. Physis' internal LCM is seawater collected at ~800 meters in the Southern California San Pedro Basin and can be used as a reference for background concentrations in clean, natural seawater for comparison to project samples.

LABORATORY CONTROL SPIKES: LCS is the introduction of a known concentration of analyte into Physis' LCM. LCS samples were employed to assess the effect the seawater matrix has on the accuracy of a measurement. LCS also indicate the bias of this method due to chemical interferences inherent in the in the seawater matrix. Intrinsic LCM concentration can also significantly impact LCS recovery.

SURROGATES: A surrogate is a pure analyte unlikely to be found in any project sample, behaves similarly to

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the target analyte and most often used with organic analytical procedures. Surrogates are added in known concentration to all samples and are measured to indicate overall efficiency of the method including processing and analyses.

HOLDING TIME: Method recommended holding times are the length of time a project sample can be stored under specific conditions after collection and prior to analysis without significantly affecting the analyte's concentration. Holding times can be extended if preservation techniques are employed to reduce biodegradation, volatilization, oxidation, sorption, precipitation, and other physical and chemical processes.

SAMPLE STORAGE/RETENTION: In order to maintain chemical integrity prior to analysis, all samples submitted to Physis are refrigerated (liquids) or frozen (solids) upon receipt unless otherwise recommended by applicable methods. Solid samples are retained for 1 year from collection while liquid samples are retained until method recommended holding times elapse.

TOTAL/DISSOLVED FRACTION: In some instances, the results for the dissolved fraction may be higher than the total fraction for a particular analyte (e.g. trace metals). This is typically caused by the analytical variation for each result and indicates that the target analyte is primarily in the dissolved phase, within the sample.

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PHYSIS QUALIFIER CODES

CODE	DEFINITION
#	see Case Narrative
ND	analyte not detected at or above the MDL
B	analyte was detected in the procedural blank greater than 10 times the MDL
E	analyte concentration exceeds the upper limit of the linear calibration range, reported value is estimated
H	sample received and/or analyzed past the recommended holding time
J	analyte was detected at a concentration below the RL and above the MDL, reported value is estimated
N	insufficient sample, analysis could not be performed
M	analyte was outside the specified accuracy and/or precision acceptance limits due to matrix interference. The associated B/BS were within limits, therefore the sample data was reported without further clarification
SH	analyte concentration in the project sample exceeded the spike concentration, therefore accuracy and/or precision acceptance limits do not apply
SL	analyte results were lower than 10 times the MDL, therefore accuracy and/or precision acceptance limits do not apply
NH	project sample was heterogeneous and sample homogeneity could not be readily achieved using routine laboratory practices, therefore accuracy and/or precision acceptance limits do not apply
Q	analyte was outside the specified QAPP acceptance limits for precision and/or accuracy but within Physis derived acceptance limits, therefore the sample data was reported without further clarification
R	Physis' QM allows for 5% of the target compounds greater than 10 times the MDL to be outside the specified acceptance limits for precision and/or accuracy. This is often due to random error and does not indicate any significant problems with the analysis of these project samples

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CASE NARRATIVE

QUALIFIER NOTES

In addition to the use of analyte specific Physis Qualifier Codes where applicable, the following were also noted.

ND

MDL is listed due to report format restrictions; it is not used in reporting. Analytical results reported are ND at the RL.

ANALYTICAL REPORT

PHYSIS Project ID: 1407003-275
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-16786-1

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 99236-R1	**AIEA GULCH WELLS PUMP 1 331-201**	**Matrix: Samplewater**					**Sampled: 15-Aug-22 9:58**			**Received: 17-Aug-22**	
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38084	17-Aug-22	21-Aug-22
Sample ID: 99237-R1	**AIEA GULCH WELLS PUMP 2 331-20**	**Matrix: Samplewater**					**Sampled: 15-Aug-22 10:32**			**Received: 17-Aug-22**	
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38084	17-Aug-22	21-Aug-22
Sample ID: 99238-R1	**AIEA WELLS PUMPS 1&2 (260) 331-**	**Matrix: Samplewater**					**Sampled: 15-Aug-22 9:36**			**Received: 17-Aug-22**	
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38084	17-Aug-22	21-Aug-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 99236-R1	**AIEA GULCH WELLS PUMP 1 331-201**	**Matrix: Samplewater**					**Sampled:**	**15-Aug-22 9:58**		**Received:**	**17-Aug-22**
(d10-Acenaphthene)	EPA 625.1	% Recovery	81	1			Total		O-38084	17-Aug-22	21-Aug-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	90	1			Total		O-38084	17-Aug-22	21-Aug-22
(d12-Chrysene)	EPA 625.1	% Recovery	92	1			Total		O-38084	17-Aug-22	21-Aug-22
(d12-Perylene)	EPA 625.1	% Recovery	82	1			Total		O-38084	17-Aug-22	21-Aug-22
(d8-Naphthalene)	EPA 625.1	% Recovery	75	1			Total		O-38084	17-Aug-22	21-Aug-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22

PHYSIS Project ID: 1407003-275
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-16786-1

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 99237-R1	**AIEA GULCH WELLS PUMP 2 331-20 Matrix: Samplewater**						**Sampled:**	**15-Aug-22 10:32**		**Received:**	**17-Aug-22**
(d10-Acenaphthene)	EPA 625.1	% Recovery	73	1			Total		O-38084	17-Aug-22	21-Aug-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	83	1			Total		O-38084	17-Aug-22	21-Aug-22
(d12-Chrysene)	EPA 625.1	% Recovery	85	1			Total		O-38084	17-Aug-22	21-Aug-22
(d12-Perylene)	EPA 625.1	% Recovery	70	1			Total		O-38084	17-Aug-22	21-Aug-22
(d8-Naphthalene)	EPA 625.1	% Recovery	69	1			Total		O-38084	17-Aug-22	21-Aug-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 99238-R1	**AIEA WELLS PUMPS 1&2 (260) 331-**	**Matrix: Samplewater**					**Sampled:**	**15-Aug-22 9:36**		**Received:**	**17-Aug-22**
(d10-Acenaphthene)	EPA 625.1	% Recovery	83	1			Total		O-38084	17-Aug-22	21-Aug-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	92	1			Total		O-38084	17-Aug-22	21-Aug-22
(d12-Chrysene)	EPA 625.1	% Recovery	98	1			Total		O-38084	17-Aug-22	21-Aug-22
(d12-Perylene)	EPA 625.1	% Recovery	83	1			Total		O-38084	17-Aug-22	21-Aug-22
(d8-Naphthalene)	EPA 625.1	% Recovery	82	1			Total		O-38084	17-Aug-22	21-Aug-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22

PHYSIS Project ID: 1407003-275
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-16786-1

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38084	17-Aug-22	21-Aug-22

QUALITY CONTROL REPORT

PHYSIS Project ID: 1407003-275
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-16786-1

Base/Neutral Extractable Compounds QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODEc
Sample ID: 99235-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**		
		Method: EPA 625.1				Batch ID: O-38084		Prepared: 15-Aug-22					Analyzed: 20-Aug-22		
Disalicylidenepropanediamine	Total	ND	1	0.05	0.1	µg/L									
Sample ID: 99235-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**		
		Method: EPA 625.1				Batch ID: O-38084		Prepared: 15-Aug-22					Analyzed: 20-Aug-22		
Disalicylidenepropanediamine	Total	18.1	1	0.05	0.1	µg/L	25	0	72	50 - 150%	PASS				
Sample ID: 99235-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**		
		Method: EPA 625.1				Batch ID: O-38084		Prepared: 15-Aug-22					Analyzed: 20-Aug-22		
Disalicylidenepropanediamine	Total	23.3	1	0.05	0.1	µg/L	25	0	93	50 - 150%	PASS	25	30	PASS	

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 99235-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
		Method: EPA 625.1				Batch ID: O-38084		Prepared: 15-Aug-22				Analyzed: 20-Aug-22	
(d10-Acenaphthene)	Total	92	1			% Recovery	100	92	65 - 113%	PASS			
(d10-Phenanthrene)	Total	93	1			% Recovery	100	93	80 - 111%	PASS			
(d12-Chrysene)	Total	92	1			% Recovery	100	92	60 - 139%	PASS			
(d12-Perylene)	Total	88	1			% Recovery	100	88	36 - 161%	PASS			
(d8-Naphthalene)	Total	88	1			% Recovery	100	88	44 - 119%	PASS			
1-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
1-Methylphenanthrene	Total	ND	1	0.001	0.005	µg/L							
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
2-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
Acenaphthene	Total	ND	1	0.001	0.005	µg/L							
Acenaphthylene	Total	ND	1	0.001	0.005	µg/L							
Anthracene	Total	ND	1	0.001	0.005	µg/L							
Benz[a]anthracene	Total	ND	1	0.001	0.005	µg/L							
Benzo[a]pyrene	Total	ND	1	0.001	0.005	µg/L							
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Benzo[e]pyrene	Total	ND	1	0.001	0.005	µg/L							
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005	µg/L							
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Biphenyl	Total	ND	1	0.001	0.005	µg/L							
Chrysene	Total	ND	1	0.001	0.005	µg/L							
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005	µg/L							
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005	µg/L							
Dibenzothiophene	Total	ND	1	0.001	0.005	µg/L							

PHYSIS Project ID: 1407003-275
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Project: RED-HILL Project # 38001111 Job # 380-16786-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Fluorene	Total	ND	1	0.001	0.005	µg/L							
Indeno[1,2,3-cd]pyrene	Total	ND	1	0.001	0.005	µg/L							
Naphthalene	Total	ND	1	0.001	0.005	µg/L							
Perylene	Total	ND	1	0.001	0.005	µg/L							
Phenanthrene	Total	ND	1	0.001	0.005	µg/L							
Pyrene	Total	ND	1	0.001	0.005	µg/L							

PHYSIS Project ID: 1407003-275
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-16786-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 99235-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
		Method: EPA 625.1				Batch ID: O-38084		Prepared: 15-Aug-22				Analyzed: 20-Aug-22	
(d10-Acenaphthene)	Total	87	1			% Recovery	100	0	87	65 - 113%	PASS		
(d10-Phenanthrene)	Total	91	1			% Recovery	100	0	91	80 - 111%	PASS		
(d12-Chrysene)	Total	84	1			% Recovery	100	0	84	60 - 139%	PASS		
(d12-Perylene)	Total	86	1			% Recovery	100	0	86	36 - 161%	PASS		
(d8-Naphthalene)	Total	81	1			% Recovery	100	0	81	44 - 119%	PASS		
1-Methylnaphthalene	Total	0.414	1	0.001	0.005	µg/L	0.5	0	83	49 - 117%	PASS		
1-Methylphenanthrene	Total	0.434	1	0.001	0.005	µg/L	0.5	0	87	66 - 127%	PASS		
2,3,5-Trimethylnaphthalene	Total	0.427	1	0.001	0.005	µg/L	0.5	0	85	57 - 120%	PASS		
2,6-Dimethylnaphthalene	Total	0.413	1	0.001	0.005	µg/L	0.5	0	83	54 - 117%	PASS		
2-Methylnaphthalene	Total	0.41	1	0.001	0.005	µg/L	0.5	0	82	47 - 130%	PASS		
Acenaphthene	Total	0.425	1	0.001	0.005	µg/L	0.5	0	85	53 - 131%	PASS		
Acenaphthylene	Total	0.418	1	0.001	0.005	µg/L	0.5	0	84	43 - 140%	PASS		
Anthracene	Total	0.449	1	0.001	0.005	µg/L	0.5	0	90	58 - 135%	PASS		
Benz[a]anthracene	Total	0.365	1	0.001	0.005	µg/L	0.5	0	73	55 - 145%	PASS		
Benzo[a]pyrene	Total	0.401	1	0.001	0.005	µg/L	0.5	0	80	51 - 143%	PASS		
Benzo[b]fluoranthene	Total	0.446	1	0.001	0.005	µg/L	0.5	0	89	46 - 165%	PASS		
Benzo[e]pyrene	Total	0.427	1	0.001	0.005	µg/L	0.5	0	85	42 - 152%	PASS		
Benzo[g,h,i]perylene	Total	0.444	1	0.001	0.005	µg/L	0.5	0	89	63 - 133%	PASS		
Benzo[k]fluoranthene	Total	0.426	1	0.001	0.005	µg/L	0.5	0	85	56 - 145%	PASS		
Biphenyl	Total	0.422	1	0.001	0.005	µg/L	0.5	0	84	56 - 119%	PASS		
Chrysene	Total	0.384	1	0.001	0.005	µg/L	0.5	0	77	56 - 141%	PASS		
Dibenz[a,h]anthracene	Total	0.407	1	0.001	0.005	µg/L	0.5	0	81	55 - 150%	PASS		
Dibenzo[a,l]pyrene	Total	0.499	1	0.001	0.005	µg/L	0.5	0	100	50 - 150%	PASS		
Dibenzothiophene	Total	0.436	1	0.001	0.005	µg/L	0.5	0	87	75 - 113%	PASS		

PHYSIS Project ID: 1407003-275
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-16786-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODEc
Fluoranthene	Total	0.442	1	0.001	0.005	µg/L	0.5	0	88	60 - 146%	PASS			
Fluorene	Total	0.432	1	0.001	0.005	µg/L	0.5	0	86	58 - 131%	PASS			
Indeno[1,2,3-cd]pyrene	Total	0.415	1	0.001	0.005	µg/L	0.5	0	83	50 - 151%	PASS			
Naphthalene	Total	0.402	1	0.001	0.005	µg/L	0.5	0	80	41 - 126%	PASS			
Perylene	Total	0.4	1	0.001	0.005	µg/L	0.5	0	80	48 - 141%	PASS			
Phenanthrene	Total	0.45	1	0.001	0.005	µg/L	0.5	0	90	67 - 127%	PASS			
Pyrene	Total	0.425	1	0.001	0.005	µg/L	0.5	0	85	54 - 156%	PASS			

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	
Sample ID: 99235-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**			**Received:**			
		Method: EPA 625.1				Batch ID: O-38084		Prepared: 15-Aug-22			Analyzed: 20-Aug-22			
(d10-Acenaphthene)	Total	92	1			% Recovery	100	0	92	65 - 113%	PASS	6	30	PASS
(d10-Phenanthrene)	Total	98	1			% Recovery	100	0	98	80 - 111%	PASS	7	30	PASS
(d12-Chrysene)	Total	88	1			% Recovery	100	0	88	60 - 139%	PASS	5	30	PASS
(d12-Perylene)	Total	95	1			% Recovery	100	0	95	36 - 161%	PASS	10	30	PASS
(d8-Naphthalene)	Total	90	1			% Recovery	100	0	90	44 - 119%	PASS	11	30	PASS
1-Methylnaphthalene	Total	0.442	1	0.001	0.005	µg/L	0.5	0	88	49 - 117%	PASS	6	30	PASS
1-Methylphenanthrene	Total	0.443	1	0.001	0.005	µg/L	0.5	0	89	66 - 127%	PASS	2	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.45	1	0.001	0.005	µg/L	0.5	0	90	57 - 120%	PASS	6	30	PASS
2,6-Dimethylnaphthalene	Total	0.44	1	0.001	0.005	µg/L	0.5	0	88	54 - 117%	PASS	6	30	PASS
2-Methylnaphthalene	Total	0.439	1	0.001	0.005	µg/L	0.5	0	88	47 - 130%	PASS	7	30	PASS
Acenaphthene	Total	0.449	1	0.001	0.005	µg/L	0.5	0	90	53 - 131%	PASS	6	30	PASS
Acenaphthylene	Total	0.449	1	0.001	0.005	µg/L	0.5	0	90	43 - 140%	PASS	7	30	PASS
Anthracene	Total	0.427	1	0.001	0.005	µg/L	0.5	0	85	58 - 135%	PASS	6	30	PASS
Benz[a]anthracene	Total	0.387	1	0.001	0.005	µg/L	0.5	0	77	55 - 145%	PASS	5	30	PASS
Benzo[a]pyrene	Total	0.447	1	0.001	0.005	µg/L	0.5	0	89	51 - 143%	PASS	11	30	PASS
Benzo[b]fluoranthene	Total	0.472	1	0.001	0.005	µg/L	0.5	0	94	46 - 165%	PASS	5	30	PASS
Benzo[e]pyrene	Total	0.453	1	0.001	0.005	µg/L	0.5	0	91	42 - 152%	PASS	7	30	PASS
Benzo[g,h,i]perylene	Total	0.465	1	0.001	0.005	µg/L	0.5	0	93	63 - 133%	PASS	4	30	PASS
Benzo[k]fluoranthene	Total	0.468	1	0.001	0.005	µg/L	0.5	0	94	56 - 145%	PASS	10	30	PASS
Biphenyl	Total	0.455	1	0.001	0.005	µg/L	0.5	0	91	56 - 119%	PASS	8	30	PASS
Chrysene	Total	0.4	1	0.001	0.005	µg/L	0.5	0	80	56 - 141%	PASS	4	30	PASS
Dibenz[a,h]anthracene	Total	0.439	1	0.001	0.005	µg/L	0.5	0	88	55 - 150%	PASS	8	30	PASS
Dibenzo[a,l]pyrene	Total	0.512	1	0.001	0.005	µg/L	0.5	0	102	50 - 150%	PASS	2	30	PASS
Dibenzothiophene	Total	0.461	1	0.001	0.005	µg/L	0.5	0	92	75 - 113%	PASS	6	30	PASS

PHYSIS Project ID: 1407003-275
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-16786-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODEc
Fluoranthene	Total	0.459	1	0.001	0.005	µg/L	0.5	0	92	60 - 146%	PASS	4	30	PASS	
Fluorene	Total	0.449	1	0.001	0.005	µg/L	0.5	0	90	58 - 131%	PASS	5	30	PASS	
Indeno[1,2,3-cd]pyrene	Total	0.442	1	0.001	0.005	µg/L	0.5	0	88	50 - 151%	PASS	6	30	PASS	
Naphthalene	Total	0.437	1	0.001	0.005	µg/L	0.5	0	87	41 - 126%	PASS	8	30	PASS	
Perylene	Total	0.428	1	0.001	0.005	µg/L	0.5	0	86	48 - 141%	PASS	7	30	PASS	
Phenanthrene	Total	0.47	1	0.001	0.005	µg/L	0.5	0	94	67 - 127%	PASS	4	30	PASS	
Pyrene	Total	0.443	1	0.001	0.005	µg/L	0.5	0	89	54 - 156%	PASS	5	30	PASS	

TENTATIVELY IDENTIFIED COMPOUNDS

CHAIN OF CUSTODY

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

10/18/2022

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-17922.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Debbie.Frank@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: Physis Environmental Laboratories		Accreditations Required (See note): State - Hawaii		Job #: 380-16786-1
Address: 1904 Wright Circle, ,	Due Date Requested: 8/30/2022			
City: Anaheim	TAT Requested (days):			
State, Zip: CA, 92806				
Phone:	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MaOH, 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 - Client ID (Lab ID)	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)	SUB (625 PAH Physis LL (EAL) + TICs) / 625 PAH Physis LL (EAL) + TICs	Total Number of Containers	Special Instructions/Note:
			Preservation Code:						
AIEA GULCH WELLS PUMP 1 (331-201-TP071) (380-16786-1)	8/15/22	09:58 Hawaiian		Water			X	4	See Attached Instructions
AIEA GULCH WELLS PUMP 2 (331-202-TP072) (380-16786-2)	8/15/22	10:32 Hawaiian		Water			X	4	See Attached Instructions
AIEA WELLS PUMPS 1&2 (260) (331-203-TP400) (380-16786-3	8/15/22	09:36 Hawaiian		Water			X	4	See Attached Instructions

Note: Since laboratory accreditations are subject to change, Eurofins Eaton Analytical, LLC places the ownership of method, analyte & accreditation compliance upon out subcontract laboratories. This sample shipment is forwarded under chain-of-custody. If the laboratory does not currently maintain accreditation in the State of Origin listed above for analysis/tests/matrix being analyzed, the samples must be shipped back to the Eurofins Eaton Analytical, LLC laboratory or other instructions will be provided. Any changes to accreditation status should be brought to Eurofins Eaton Analytical, LLC attention immediately. If all requested accreditations are current to date, return the signed Chain of Custody attesting to said complicance to Eurofins Eaton Analytical, LLC.

Possible Hazard Identification	***Sample Disposal (A fee may be assessed if samples ar e retained longer than 1 month)***
Unconfirmed	☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For _____ Months*
Deliverable Requested: I, II, III, IV, Other (specify) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: G.REITNER	Date/Time: 08/17/2022	Company EEA	Received by:	Date/Time: 8-17-22 12:	Company EEA
Relinquished by:	Date/Time: 8-17-22 15:40	Company EEA	Received by:	Date/Time: 8/17/22 1540	Company PHYSIS
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:

PHYSIS
TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

Project Iteration ID: 1407003-275
Client Name: Eurofins Eaton Analytical
Project Name: RED-HILL Project # 38001111
Job # 380-16786-1
COC Page Number: 2 of 2
Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: YC
2. Date Received: 8/17/22
3. Time Received: 1540
4. Client Name: Eurofins
5. Courier Information: (Please circle)
   - Client
   - UPS
   - Area Fast
   - DRS
   - FedEx
   - GSO/GLS
   - Ontrac
   - PAMS
   - PHYSIS Driver:
     - i. Start Time: _____
     - ii. End Time: _____
     - iii. Total Mileage: _____
     - iv. Number of Pickups: _____
6. Container Information: (Please put the # of containers or circle none)
   - 3 Cooler
   - __ Styrofoam Cooler
   - ____ Boxes
   - None
   - ___ Carboy(s)
   - __Carboy Trash Can(s)
   - ____ Carboy Cap(s)
   - Other _____
7. What type of ice was used: (Please circle any that apply)
   - Wet Ice
   - Blue Ice
   - Dry Ice
   - Water
   - None
8. Randomly Selected Samples Temperature (°C): -0.1 Used I/R Thermometer # T2

Inspection Info

1. Initials Inspected By: RCH

Sample Integrity Upon Receipt:

1. COC(s) included and completely filled out..... Yes / No
2. All sample containers arrived intact..... Yes / No
3. All samples listed on COC(s) are present..... Yes / No
4. Information on containers consistent with information on COC(s)..... Yes / No
5. Correct containers and volume for all analyses indicated..... Yes / No
6. All samples received within method holding time..... Yes / No
7. Correct preservation used for all analyses indicated..... Yes / No
8. Name of sampler included on COC(s)..... Yes / No

Notes:

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: BAILEY	Lab PM: Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-9748-2757.1
Client Contact: Dr. Ron Fenstemacher	Phone: 808-748-5840	E-Mail: Debbie.Frank@et.eurofinsus.com	State of Origin:	Page: Page 1 of 4
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 Yes 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: Hawaii	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	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	525.2_PREC - (MOD) 525plus Plus TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	R	RA		RA		
AIEA GULCH WELLS PUMP 1 (331-201-TP071)	Aug 15 2022	0958	G	Water			X	X	X	X	X		
AIEA GULCH WELLS PUMP 2 (331-202-TP072)				Water									
AIEA WELLS PUMPS1&2(260)331-203-TP400				Water									
HALAWA SHAFT (331-241-TP401)				Water									
HALAWA WELLS UNITS1&2(331-206-TP065)				Water									
MOANALUA WELLS (331-223-TP202)				Water									
KAAMILO WELLS (331-261-TP008)				Water									
AIEA GULCH WELLS PUMP 1 (331-201-TP071)				Water									
AIEA GULCH WELLS PUMP 2 (331-202-TP072)	Aug 5, 2022	1032	G	Water			X	X	X	X	X		
AIEA WELLS PUMPS1&2(260)331-203-TP400				Water									
HALAWA SHAFT (331-241-TP401)				Water									

380-16786 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:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
BAILEY	August 15 2022 1400	HBWS	Mark Urrutia	8/16/22 1015	EEA
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:

Ver: 06/08/2021

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

Chain of Custody Record

eurofins

Client Information	Sampler: BAILEY	Lab PM: Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-9748-2757.3
Client Contact: Dr. Ron Fenstemacher	Phone: 808-748-5840	E-Mail: Debbie.Frank@et.eurofinsus.com	State of Origin:	Page: Page 3 of 4
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 Yes 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: Hawaii	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	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	525.2_PREC - (MOD) 525plus Plus TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Total Number of containers	Special Instructions/Note:
			Preservation Code:				R	R	RA		RA		
AIEA GULCH WELLS PUMP 2 (331-202-TP072)				Water									
AIEA WELLS PUMPS1&2(260)331-203-TP400	Aug 15,2022	0936	G	Water			X	X	X	X	X		
HALAWA SHAFT (331-241-TP401)				Water									
HALAWA WELLS UNITS1&2(331-206-TP065)				Water									
MOANALUA WELLS (331-223-TP202)				Water									
KAAMILO WELLS (331-261-TP008)				Water									
TB AIEA GULCH WELLS PUMP1 331-201-TP071	Aug 15,2022	0953		Water							X		
TB AIEA GULCH WELLS PUMP2 331-202-TP07	Aug 15,2022	1032		Water							X		
TB AIEA WELLS PUMPS1&2(260)331-203-TP400	Aug 15,2022	0936		Water							X		
TB HALAWA SHAFT (331-241-TP401)				Water									
TB HALAWA WELLS UNITS1&2(331-206-TP065)				Water									

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

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

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

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by: BAILEY	Date/Time: 8/15/2022 1400	Company: HBWS	Received by: Mark Urrutia	Date/Time: 8/16/22 1015	Company: FEA
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:

Ver: 06/08/2021

Bottle Order Information

Bottle Order: RUSH RED-HILL WEEKLY
Bottle Order #: 2757
Request From Client: 7/27/2022
Date Order Posted: 7/20/2022 11:12:54AM
Order Status: Ready To Process
Prepared By: Davis Haley
Deliver By Date: ***8/1/2022 11:59:00PM***
Lab Project Number: 38001111
PWSID: HI0000331

Order Completion Information

Creator: Davis Haley
Filled by:
Sent Date:
Sent Via:
Tracking #:

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
7	4	28	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	Water	Normal	625 PAH + MS/MSD Volume	
7	4	28	Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Normal		
7	2	14	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	Water	Normal		
7	2	14	Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	525.2_PREC - (MOD) 525plus Plus TICs	Water	Normal		
7	2	14	VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Trip Blank		

Total Bottle Summary

Bottle Type Description	Preservative	Bottle Count
Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Aci	14
Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	28
Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	14
VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/Hydrochloric Aci	14
Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	28
	Total Bottles:	98

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

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INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

SAMPLE TEMP RECEIVED:

Note: If samples are out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 630A (Observation= 5.9 °C) (Corr.Factor 0.2 °C) (Final = 5.7 °C)

TYPE OF ICE: Real ___ Synthetic ✓ No Ice ___ CONDITION OF ICE: Frozen ✓ Partially Frozen ___ Thawed ___ N/A ___

METHOD OF SHIPMENT: Pick-Up / Walk-In / (FedEx) / UPS / DHL / Area Fast / Top Line / Other: ___

Compliance Acceptance Criteria:

1) Chemistry: >0, ≤ 6°C, not frozen (NELAP) (If received after 24 hrs of sample collection)

2) Microbiology, Distribution: < 10°C, not frozen (can be ≥10°C if received on ice the same day as sample collection, within 8 hours)

3) Microbiology, Surface Water: < 10°C (If received after 2 hours of sample collection)

If out of temperature range for both Chemistry and Microbiology samples and temperature does not confirm, then measure the temperature of each quadrant and record each temperature of the quadrants

1 = (Observation= ___ °C) (Corr.Factor ___ °C) (Final = ___ °C)	2 = (Observation= ___ °C) (Corr.Factor ___ °C) (Final = ___ °C)
3 = (Observation= ___ °C) (Corr.Factor ___ °C) (Final = ___ °C)	4 = (Observation= ___ °C) (Corr.Factor ___ °C) (Final = ___ °C)

4 Dioxin (1613 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (If received after 24 hrs of sample collection)

5) pH Check. Manufacturer: ___ Lot Number: ___ pH strip type: 0 - 14 or ___ Expiration Date ___ Results: ___

6) Chlorine check. Manufacturer: Sensafe. Lot No.: ___ Expiration Date: ___ Results ___

7) VOA and Radon Headspace: No Samples with Headspace: ☐ Samples with Headspace (see below): ☐

Headspace Documentation (use additional VOC and Radon Internal COFC for additional bottles)

Example from headspace concerns: Methods 515.4, HAA(6251,552), 505, SPME, @OH, 502LOMS, 555, 556, Anatoxin, LOMS methods using 40 ml vials, International clients

Samp ID	Bottle #	None/<6 mm	>6mm	Test

Samp ID	Bottle #	None/<6 mm	>6mm	Test

Samp ID	Bottle #	None/<6 mm	>6mm	Test

Samp ID	Bottle #	None/<6 mm	>6mm	Test

Note Sample IDs which have dissimilar headspace (i.e. potential sampling errors): ___

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RECEIVED BY:	[signature]	Mark Urcutia	Eurofins Eaton Analytical	9/16/22	1015
SAMPLES CHECKED AGAINST COC BY:			Eurofins Eaton Analytical		

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Notes to Field Staff:

Scan QR code for field sampler instructions

SAMPLER FOLLOW 2 STAGE FIELD PRESERVATION FOR 8015 and 525.2

Health and Safety Notes:

Preservative	Comment
Sodium Sulfite w/HCl	CAUTION! CONTAINS SODIUM SULFITE. Harmful if inhaled. Use adequate ventilation. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.
Sodium Thiosulfate	CAUTION! CONTAINS 10% SODIUM THIOSULFATE. Harmful if inhaled. Use adequate ventilation. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.
Sodium Thiosulfate/Hydrochloric Acid	CAUTION! CONTAINS 10% SODIUM THIOSULFATE. Harmful if inhaled. Use adequate ventilation. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water. Contains 13.3% Monochloroacetic Acid. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water. CAUTION! CONTAINS 1:1 HYDROCHLORIC ACID. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.

Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:
Relinquished By	Company	Date	Time	Received By	Company	Seal #: Seal #: Seal #:

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

Shipping Order Form - Bottle Order

eurofins | Environment Testing America

S380-9748

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

Shipping Order ID: 9748

Ship Via: FedEx

When To Ship: 8/ 1/2022

Due On: 8/1/2022 11:59:00PM

Due After: 8/1/2022 12:00:00 AM

Ship To Information

Project Manager: Debbie Frank
Em: Debbie.Frank@et.eurofinsus.com
Company Name: City & County of Honolulu
Attention: Erwin Kawata
Address 1: 630 South Beretania Street
Address 2: Public Service Bldg. Room 308
Address 3:
City: Honolulu
State: HI
Zip: 96843
Phone #: +1-808-748-5841
Project Ref: RED-HILL
Event Desc: RUSH Weekly Red Hill

Notes to Bottle/Shipping Department

Pack with Gel Ice
Label the cooler under the left hand handle with the ID of the samples that are in the cooler (Print extra set of labels to use for this)
Send only medium to large coolers

Shipping Method: **Individual sample per cooler (affixed TALS labels)**

- ☑ Ready to Fill
- ☑ Preprinted COC
  - 1 Number of COC Copies
- ☐ Seals on Bottle
- ☐ Seals on Coolers
- ☐ Priority
- ☐ Return Shipment Labels
  - ☐ Prepaid Return
  - Monrovia, CA (Suite 100)
- ☐ Short Hold Times
- ☑ Temperature Control
- ☐ Rush

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

Shipping Assets

Assets	Quantity	Description	Filled
Gel Ice	1	Plese include exra additonal gel ice	☐

Please notify your PM immediately if an error is found in shipment. When returning samples, please return all provided QC samples.

ORIGIN ID:HIKA (808) 748-5840
BWS CHEMLAB
HONOLULU BOARD OF WATER SUPPLY
630 S. BERETANIA ST.
CHEMICAL LABORATORY
HONOLULU, HI 96843
UNITED STATES US

SHIP DATE: 15AUG22
ACTWGT: 54.00 LB
CAD: 100205419/INET4490

BILL RECIPIENT

TO BROOKS
EUROFINS EATON ANALYTICAL, INC
750 ROYAL OAKS DR
SUITE 100
MONROVIA CA 91016
(626) 386-1178 REF
INV
PO: DEPT

581J2/F39D/FE2D

FedEx Express

J22202204120luv

TUE - 16 AUG 10:30A
PRIORITY OVERNIGHT

1 of 3

TRK# 0201 7776 6665 7392

MASTER

WZ WHPA

91016
CA-US BUR

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Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com.FedEx will not be responsible for any claim in excess of $100 per package, whether the result of loss, damage, delay, non-delivery,misdelivery,or misinformation, unless you declare a higher value, pay an additional charge, document your actual loss and file a timely claim.Limitations found in the current FedEx Service Guide apply. Your right to recover from FedEx for any loss, including intrinsic value of the package, loss of sales, income interest, profit, attorney's fees, costs, and other forms of damage whether direct, incidental,consequential, or special is limited to the greater of $100 or the authorized declared value. Recovery cannot exceed actual documented loss.Maximum for items of extraordinary value is $1,000, e.g. jewelry, precious metals, negotiable instruments and other items listed in our ServiceGuide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

SAMPLE TEMP RECEIVED:
Note: If samples are out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.
SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 630A (Observation= 6.1 °C) (Corr.Factor 0.2 °C) (Final = 5.9 °C)

TYPE OF ICE: Real ____ Synthetic ✓ No Ice ____ CONDITION OF ICE: Frozen ✓ Partially Frozen ____ Thawed ____ N/A ____

METHOD OF SHIPMENT: Pick-Up / Walk-In / (FedEx) / UPS / DHL / Area Fast / Top Line / Other: ________

Compliance Acceptance Criteria:

1) Chemistry: >0, ≤ 6°C, not frozen (NELAP) (If received after 24 hrs of sample collection)

2) Microbiology, Distribution: < 10°C, not frozen (can be ≥10°C if received on ice the same day as sample collection, within 8 hours)

3) Microbiology, Surface Water: < 10°C (If received after 2 hours of sample collection)

If out of temperature range for both Chemistry and Microbiology samples and temperature does not confirm, then measure the temperature of each quadrant and record each temperature of the quadrants

1 - (Observation ____ °C) (Corr.Factor ____ °C) (Final = ____ °C)	2 - (Observation ____ °C) (Corr.Factor ____ °C) (Final = ____ °C)
3 - (Observation ____ °C) (Corr.Factor ____ °C) (Final = ____ °C)	4 - (Observation ____ °C) (Corr.Factor ____ °C) (Final = ____ °C)

4 Dioxin (1613 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (If received after 24 hrs of sample collection)

5) pH Check, Manufacturer: ________ Lot Number: ________ pH strip type: 0 - 14 or ________ Expiration Date ________ Results: ________

6) Chlorine check. Manufacturer: Sensafe, Lot No.: ________ Expiration Date: ________ Results ________

7) VOA and Radon Headspace: No Samples with Headspace: ☐ Samples with Headspace (see below): ☐

Headspace Documentation (use additional VOC and Radon Internal COFC for additional bottles)
Example from headspace concerns: Methods 515.4, HAA(6251,552), 505, SPME, @OH, 502LOMS, 555, 536, Anatoxin, LCMS methods using 40 ml vials, International clients

Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test	Samp ID	Bottle #	None/<6 mm	>6mm	Test

Note Sample IDs which have dissimilar headspace (i.e. potential sampling errors): ________

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RECEIVED BY:	[signature]	Mark Urrutia	Eurofins Eaton Analytical	8/16/22	1015
SAMPLES CHECKED AGAINST COC BY:			Eurofins Eaton Analytical		

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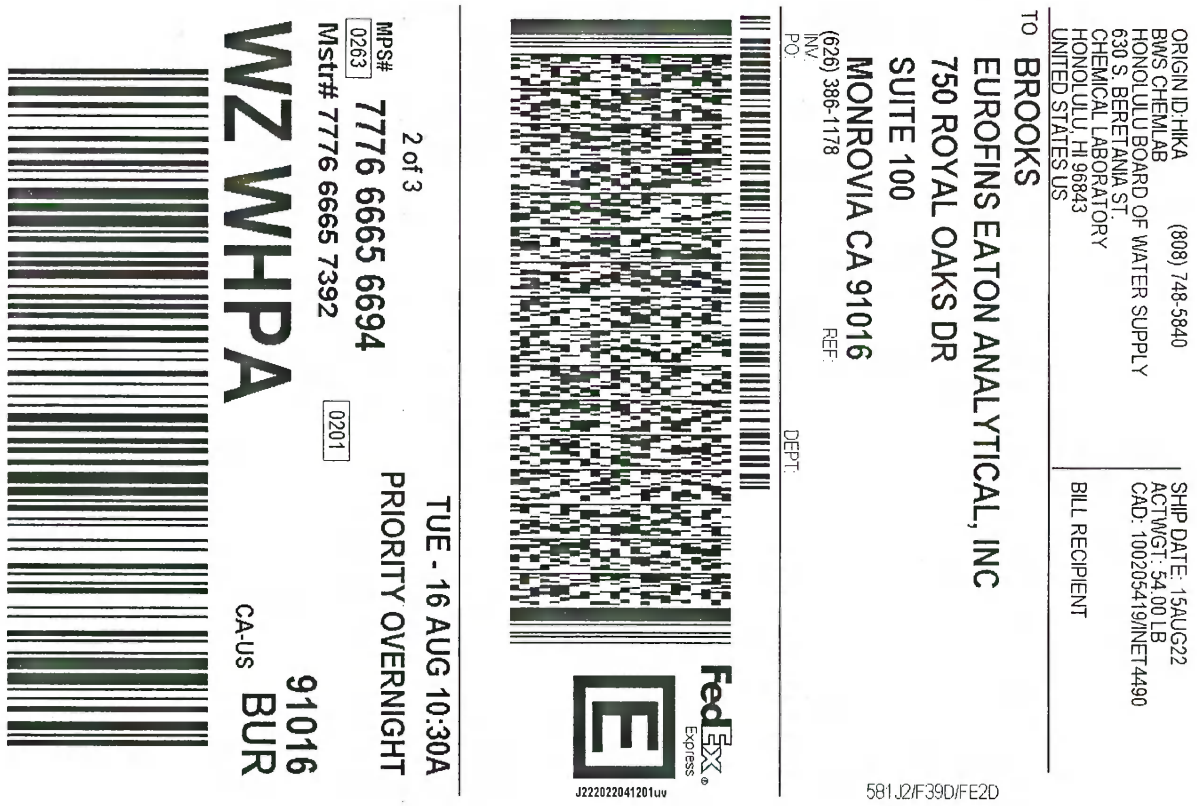

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INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

SAMPLE TEMP RECEIVED:
Note: If samples are out of temperature range, let the ASMs know. ASMs will determine whether to proceed with analysis or not.
SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 630H (Observation= 5.8 °C) (Corr.Factor 0.2 °C) (Final = 5.6 °C)

TYPE OF ICE: Real ____ Synthetic ✓ No Ice ____ CONDITION OF ICE: Frozen ✓ Partially Frozen ____ Thawed ____ N/A ____

METHOD OF SHIPMENT: Pick-Up / Walk-In / (FedEx) / UPS / DHL / Area Fast / Top Line / Other: ____

Compliance Acceptance Criteria:

1) Chemistry: >0, ≤ 6°C, not frozen (NELAP) (If received after 24 hrs of sample collection)

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1 = (Observation= ____ °C) (Corr.Factor ____ °C) (Final = ____ °C)	2 = (Observation= ____ °C) (Corr.Factor ____ °C) (Final = ____ °C)
3 = (Observation= ____ °C) (Corr.Factor ____ °C) (Final = ____ °C)	4 = (Observation= ____ °C) (Corr.Factor ____ °C) (Final = ____ °C)

4 Dioxin (1613 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (If received after 24 hrs of sample collection)

5) pH Check. Manufacturer: ____ Lot Number: ____ pH strip type: 0 - 14 or ____ Expiration Date ____ Results: ____

6) Chlorine check. Manufacturer: Sensafe. Lot No.: ____ Expiration Date: ____ Results ____

7) VOA and Radon Headspace: No Samples with Headspace: ☐ Samples with Headspace (see below): ☐

Headspace Documentation (use additional VOC and Radon Internal COFC for additional bottles)
Exempt from headspace concerns: Methods 515.4, HAA(6251,552), 505, SPME, @OH, 532LOMS, 555, 556, Anatoxin, LOMS methods using 40 ml vials, International clients

Samp ID	Bottle #	None/<6 mm	>6mm	Test

Samp ID	Bottle #	None/<6 mm	>6mm	Test

Samp ID	Bottle #	None/<6 mm	>6mm	Test

Samp ID	Bottle #	None/<6 mm	>6mm	Test

Note Sample IDs which have dissimilar headspace (i.e. potential sampling errors): ____

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RECEIVED BY:	[signature]	Mark Ucrutia	Eurofins Eaton Analytical	8/16/22	1015
SAMPLES CHECKED AGAINST COC BY:			Eurofins Eaton Analytical		

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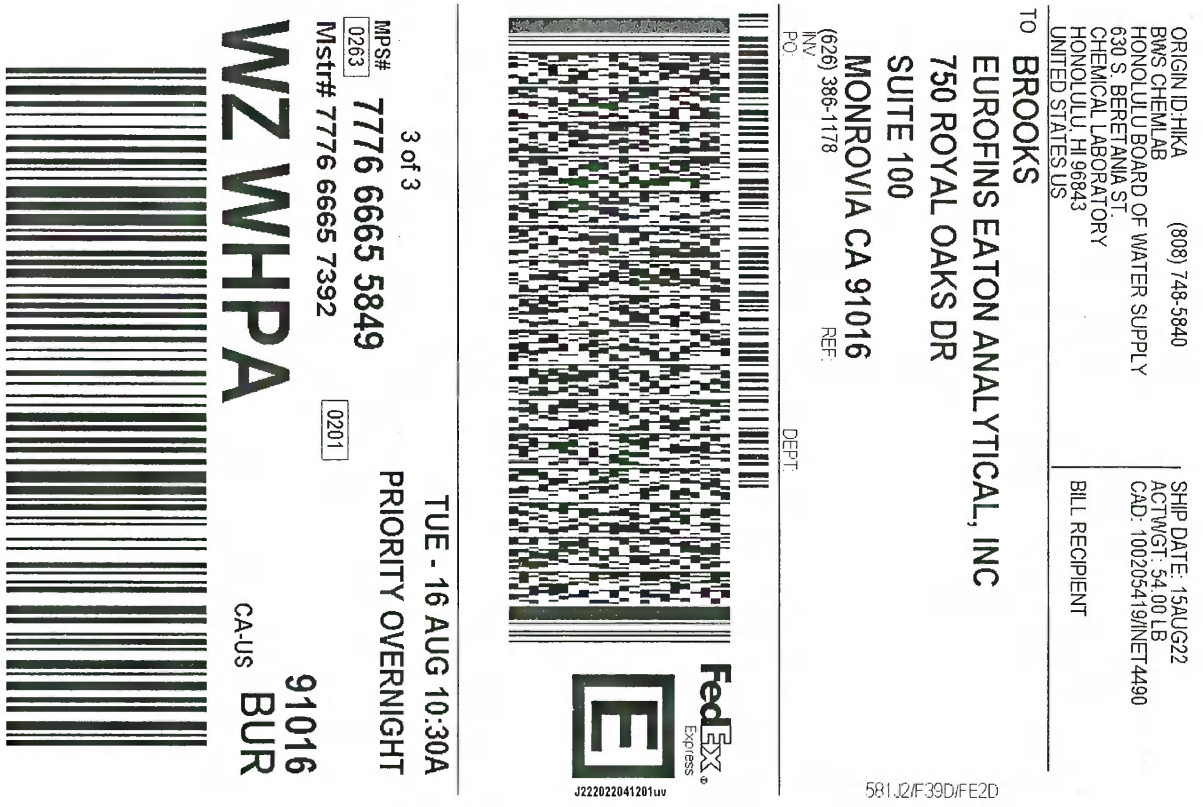

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Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-16786-1

Login Number: 16786
List Number: 1
Creator: Segura, Ryan

List Source: Eurofins Eaton Monrovia

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