eurofins | Environment Testing

ANALYTICAL REPORT

PREPARED FOR

Attn: Mr. Erwin Kawata
City & County of Honolulu
630 South Beretania Street
Public Service Bldg. Room 308
Honolulu, Hawaii 96843

Generated 12/28/2022 8:43:34 PM

JOB DESCRIPTION

RED-HILL
RUSH Weekly Red Hill

JOB NUMBER

380-29023-1

Eurofins Eaton Monrovia
750 Royal Oaks Drive
Suite 100
Monrovia CA 91016

See page two for job notes and contact information.

my EOL

Job Notes

Laboratory certifies that the test results meet all TNI 2016 and ISO/IEC 17025:2017 requirements unless noted under the individual analysis.

Following the cover page are State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report,Data Report, QC Summary, QC Report and Regulatory Forms, as applicable.

Test results relate only to the sample(s) tested.

Test results apply to the sample(s) as received, unless otherwise noted in the comments report (ISO/IEC 17025:2017).

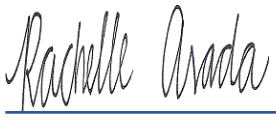
This report shall not be reproduced except in full, without the written approval of the laboratory.

This report includes ISO/IEC 17025 and non-ISO 17025 accredited methods.

Compliance Statement

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

Authorization



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Authorized for release by
Rachelle Arada, Manager of Project Management
Rachelle.Arada@et.eurofinsus.com
(626)386-1106

Table of Contents

Definitions/Glossary

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

Job ID: 380-29023-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
^3+	Reporting Limit Check Standard is outside acceptance limits, high biased
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
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: 380-29023-1

Laboratory: Eurofins Eaton Monrovia

Narrative

Job Narrative
380-29023-1

Comments
No additional comments.

Receipt
The samples were received on 11/22/2022 9:50 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 3 coolers at receipt time were 2.8º C, 3.7º C and 5.2º C

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described 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 Gas (Purgeable) LL (EAL), 8015 LL DRO/MRO/JP5/JP8: 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: 380-29023-1

Client Sample ID: AIEA GULCH WELLS PUMP 1 — Lab Sample ID: 380-29023-1
PWSID Number: HI0000331

No Detections.

Client Sample ID: HALAWA WELLS UNITS 1 & 2 — Lab Sample ID: 380-29023-2
PWSID Number: HI0000331

No Detections.

Client Sample ID: AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-29023-3
PWSID Number: HI0000331

No Detections.

Client Sample ID: AIEA WELLS PUMPS 1&2 (260) — Lab Sample ID: 380-29023-4
PWSID Number: HI0000331

No Detections.

Client Sample ID: TB: AIEA GULCH WELLS PUMP 1 — Lab Sample ID: 380-29023-5

No Detections.

Client Sample ID: TB: AIEA GULCH WELLS PUMP 2 — Lab Sample ID: 380-29023-6

No Detections.

Client Sample ID: TB: AIEA WELLS PUMPS 1&2 (260) — Lab Sample ID: 380-29023-7

No Detections.

Client Sample ID: TB: HALAWA WELLS UNITS 1 & 2 — Lab Sample ID: 380-29023-8

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-29023-1

Client Sample ID: AIEA GULCH WELLS PUMP 1
Date Collected: 11/21/22 10:50
Date Received: 11/22/22 09:50

Lab Sample ID: 380-29023-1
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		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
2,4'-DDE	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
2,4'-DDT	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
2,4-Dinitrotoluene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
2,6-Dinitrotoluene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
4,4'-DDD	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
4,4'-DDE	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
4,4'-DDT	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Acenaphthene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Acenaphthylene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Acetochlor	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Alachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
alpha-BHC	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
alpha-Chlordane	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Anthracene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 11:07	1
Atrazine	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Benz(a)anthracene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Benzo[a]pyrene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 11:07	1
Benzo[b]fluoranthene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 11:07	1
Benzo[g,h,i]perylene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Benzo[k]fluoranthene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 11:07	1
beta-BHC	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Bromacil	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Butachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Butylbenzylphthalate	ND	^3+	0.49		ug/L		12/01/22 06:49	12/05/22 11:07	1
Caffeine	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Chlorobenzilate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Chloroneb	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Chlorothalonil (Draconil, Bravo)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Chlorpyrifos	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Chrysene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 11:07	1
delta-BHC	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Di(2-ethylhexyl)adipate	ND		0.58		ug/L		12/01/22 06:49	12/05/22 11:07	1
Bis(2-ethylhexyl) phthalate	ND		0.58		ug/L		12/01/22 06:49	12/05/22 11:07	1
Diazinon (Qualitative)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Dibenz(a,h)anthracene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Diclorvos (DDVP)	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Dieldrin	ND		0.19		ug/L		12/01/22 06:49	12/05/22 11:07	1
Diethylphthalate	ND		0.49		ug/L		12/01/22 06:49	12/05/22 11:07	1
Dimethoate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Dimethylphthalate	ND		0.49		ug/L		12/01/22 06:49	12/05/22 11:07	1
Di-n-butyl phthalate	ND		0.97		ug/L		12/01/22 06:49	12/05/22 11:07	1
Di-n-octyl phthalate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Endosulfan I (Alpha)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Endosulfan II (Beta)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Endosulfan sulfate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Endrin	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Endrin aldehyde	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
EPTC	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1

Client Sample ID: AIEA GULCH WELLS PUMP 1
Date Collected: 11/21/22 10:50
Date Received: 11/22/22 09:50

Lab Sample ID: 380-29023-1
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		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Fluorene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
gamma-Chlordane	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Heptachlor	ND		0.039		ug/L		12/01/22 06:49	12/05/22 11:07	1
Heptachlor epoxide (isomer B)	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Hexachlorobenzene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Hexachlorocyclopentadiene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Indeno[1,2,3-cd]pyrene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Isophorone	ND		0.49		ug/L		12/01/22 06:49	12/05/22 11:07	1
Lindane	ND		0.039		ug/L		12/01/22 06:49	12/05/22 11:07	1
Malathion	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Methoxychlor	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Metolachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Metribuzin	ND	^3+	0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Molinate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Naphthalene	ND		0.29		ug/L		12/01/22 06:49	12/05/22 11:07	1
Parathion	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Pendimethalin (Penoxaline)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Total Permethrin (mixed isomers)	ND		0.19		ug/L		12/01/22 06:49	12/05/22 11:07	1
Phenanthrene	ND		0.039		ug/L		12/01/22 06:49	12/05/22 11:07	1
Propachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Pyrene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Simazine	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Terbacil	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Terbuthylazine	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1
Thiobencarb	ND		0.19		ug/L		12/01/22 06:49	12/05/22 11:07	1
trans-Nonachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:07	1
Trifluralin	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:07	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*12/01/22 06:49*	*12/05/22 11:07*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*98*		*70 - 130*	*12/01/22 06:49*	*12/05/22 11:07*	*1*
Triphenylphosphate	*106*		*70 - 130*	*12/01/22 06:49*	*12/05/22 11:07*	*1*
Perylene-d12	*99*		*70 - 130*	*12/01/22 06:49*	*12/05/22 11:07*	*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		11/23/22 00:00	12/03/22 13:19	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Acenaphthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Acenaphthylene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Anthracene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-29023-1
Date Collected: 11/21/22 10:50
Matrix: Drinking Water
Date Received: 11/22/22 09:50
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[e]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Biphenyl	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Chrysene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Dibenzothiophene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		11/23/22 00:00	12/03/22 13:19	1
Fluoranthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Fluorene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Naphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Perylene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Phenanthrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1
Pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 13:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*93*		*45 - 118*	*11/23/22 00:00*	*12/03/22 13:19*	*1*
(d10-Phenanthrene)	*93*		*56 - 123*	*11/23/22 00:00*	*12/03/22 13:19*	*1*
(d12-Chrysene)	*92*		*36 - 142*	*11/23/22 00:00*	*12/03/22 13:19*	*1*
(d12-Perylene)	*85*		*36 - 161*	*11/23/22 00:00*	*12/03/22 13:19*	*1*
(d8-Naphthalene)	*73*		*20 - 112*	*11/23/22 00:00*	*12/03/22 13:19*	*1*

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	0.020		mg/L			11/28/22 17:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*91*		*60 - 140*		*11/28/22 17:10*	*1*

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.028		mg/L			12/03/22 20:16	1
JP5	ND	U	0.055		mg/L			12/03/22 20:16	1
JP8	ND	U	0.055		mg/L			12/03/22 20:16	1
MOTOR OIL	ND	U	0.055		mg/L			12/03/22 20:16	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*93*		*60 - 130*		*12/03/22 20:16*	*1*
HEXACOSANE	*110*		*60 - 130*		*12/03/22 20:16*	*1*

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-29023-2
Date Collected: 11/21/22 10:10
Matrix: Drinking Water
Date Received: 11/22/22 09:50
PWSID Number: HI0000331

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
2,4'-DDE	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
2,4'-DDT	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2
Date Collected: 11/21/22 10:10
Date Received: 11/22/22 09:50

Lab Sample ID: 380-29023-2
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
2,4-Dinitrotoluene	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
2,6-Dinitrotoluene	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
4,4'-DDD	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
4,4'-DDE	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
4,4'-DDT	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Acenaphthene	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Acenaphthylene	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Acetochlor	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Alachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
alpha-BHC	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
alpha-Chlordane	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Anthracene	ND		0.020		ug/L		12/01/22 06:49	12/05/22 11:26	1
Atrazine	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Benz(a)anthracene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Benzo[a]pyrene	ND		0.020		ug/L		12/01/22 06:49	12/05/22 11:26	1
Benzo[b]fluoranthene	ND		0.020		ug/L		12/01/22 06:49	12/05/22 11:26	1
Benzo[g,h,i]perylene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Benzo[k]fluoranthene	ND		0.020		ug/L		12/01/22 06:49	12/05/22 11:26	1
beta-BHC	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Bromacil	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Butachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Butylbenzylphthalate	ND	^3+	0.49		ug/L		12/01/22 06:49	12/05/22 11:26	1
Caffeine	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Chlorobenzilate	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Chloroneb	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Chlorothalonil (Draconil, Bravo)	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Chlorpyrifos	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Chrysene	ND		0.020		ug/L		12/01/22 06:49	12/05/22 11:26	1
delta-BHC	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Di(2-ethylhexyl)adipate	ND		0.59		ug/L		12/01/22 06:49	12/05/22 11:26	1
Bis(2-ethylhexyl) phthalate	ND		0.59		ug/L		12/01/22 06:49	12/05/22 11:26	1
Diazinon (Qualitative)	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Dibenz(a,h)anthracene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Diclorvos (DDVP)	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Dieldrin	ND		0.20		ug/L		12/01/22 06:49	12/05/22 11:26	1
Diethylphthalate	ND		0.49		ug/L		12/01/22 06:49	12/05/22 11:26	1
Dimethoate	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Dimethylphthalate	ND		0.49		ug/L		12/01/22 06:49	12/05/22 11:26	1
Di-n-butyl phthalate	ND		0.98		ug/L		12/01/22 06:49	12/05/22 11:26	1
Di-n-octyl phthalate	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Endosulfan I (Alpha)	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Endosulfan II (Beta)	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Endosulfan sulfate	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Endrin	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Endrin aldehyde	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
EPTC	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Fluoranthene	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Fluorene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
gamma-Chlordane	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Date Collected: 11/21/22 10:10
Date Received: 11/22/22 09:50

Lab Sample ID: 380-29023-2

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
Heptachlor	ND		0.039		ug/L		12/01/22 06:49	12/05/22 11:26	1
Heptachlor epoxide (isomer B)	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Hexachlorobenzene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Hexachlorocyclopentadiene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Indeno[1,2,3-cd]pyrene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Isophorone	ND		0.49		ug/L		12/01/22 06:49	12/05/22 11:26	1
Lindane	ND		0.039		ug/L		12/01/22 06:49	12/05/22 11:26	1
Malathion	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Methoxychlor	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Metolachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Metribuzin	ND	^3+	0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Molinate	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Naphthalene	ND		0.29		ug/L		12/01/22 06:49	12/05/22 11:26	1
Parathion	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Pendimethalin (Penoxaline)	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		12/01/22 06:49	12/05/22 11:26	1
Phenanthrene	ND		0.039		ug/L		12/01/22 06:49	12/05/22 11:26	1
Propachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Pyrene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Simazine	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Terbacil	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Terbuthylazine	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1
Thiobencarb	ND		0.20		ug/L		12/01/22 06:49	12/05/22 11:26	1
trans-Nonachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 11:26	1
Trifluralin	ND		0.098		ug/L		12/01/22 06:49	12/05/22 11:26	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*12/01/22 06:49*	*12/05/22 11:26*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*98*		*70 - 130*	*12/01/22 06:49*	*12/05/22 11:26*	*1*
Triphenylphosphate	*109*		*70 - 130*	*12/01/22 06:49*	*12/05/22 11:26*	*1*
Perylene-d12	*95*		*70 - 130*	*12/01/22 06:49*	*12/05/22 11:26*	*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		11/23/22 00:00	12/03/22 15:07	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Acenaphthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Acenaphthylene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Anthracene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-29023-2
Date Collected: 11/21/22 10:10
Matrix: Drinking Water
Date Received: 11/22/22 09:50
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		11/23/22 00:00	12/03/22 15:07	1
Chrysene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Dibenzothiophene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		11/23/22 00:00	12/03/22 15:07	1
Fluoranthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Fluorene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Naphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Perylene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Phenanthrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1
Pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 15:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*93*		*45 - 118*	*11/23/22 00:00*	*12/03/22 15:07*	*1*
(d10-Phenanthrene)	*93*		*56 - 123*	*11/23/22 00:00*	*12/03/22 15:07*	*1*
(d12-Chrysene)	*94*		*36 - 142*	*11/23/22 00:00*	*12/03/22 15:07*	*1*
(d12-Perylene)	*88*		*36 - 161*	*11/23/22 00:00*	*12/03/22 15:07*	*1*
(d8-Naphthalene)	*86*		*20 - 112*	*11/23/22 00:00*	*12/03/22 15:07*	*1*

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	0.020		mg/L			11/28/22 18:59	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*98*		*60 - 140*		*11/28/22 18:59*	*1*

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.025		mg/L			12/03/22 20:35	1
JP5	ND	U	0.051		mg/L			12/03/22 20:35	1
JP8	ND	U	0.051		mg/L			12/03/22 20:35	1
MOTOR OIL	ND	U	0.051		mg/L			12/03/22 20:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*78*		*60 - 130*		*12/03/22 20:35*	*1*
HEXACOSANE	*98*		*60 - 130*		*12/03/22 20:35*	*1*

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-29023-3
Date Collected: 11/21/22 11:08
Matrix: Drinking Water
Date Received: 11/22/22 09:50
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		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
2,4'-DDE	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
2,4'-DDT	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
2,4-Dinitrotoluene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
2,6-Dinitrotoluene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
4,4'-DDD	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1

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

Job ID: 380-29023-1

Client Sample ID: AIEA GULCH WELLS PUMP 2
Date Collected: 11/21/22 11:08
Date Received: 11/22/22 09:50

Lab Sample ID: 380-29023-3
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
4,4'-DDE	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
4,4'-DDT	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Acenaphthene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Acenaphthylene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Acetochlor	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Alachlor	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
alpha-BHC	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
alpha-Chlordane	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Anthracene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 11:46	1
Atrazine	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Benz(a)anthracene	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Benzo[a]pyrene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 11:46	1
Benzo[b]fluoranthene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 11:46	1
Benzo[g,h,i]perylene	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Benzo[k]fluoranthene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 11:46	1
beta-BHC	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Bromacil	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Butachlor	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Butylbenzylphthalate	ND	^3+	0.48		ug/L		12/01/22 06:49	12/05/22 11:46	1
Caffeine	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Chlorobenzilate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Chloroneb	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Chlorothalonil (Draconil, Bravo)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Chlorpyrifos	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Chrysene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 11:46	1
delta-BHC	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Di(2-ethylhexyl)adipate	ND		0.58		ug/L		12/01/22 06:49	12/05/22 11:46	1
Bis(2-ethylhexyl) phthalate	ND		0.58		ug/L		12/01/22 06:49	12/05/22 11:46	1
Diazinon (Qualitative)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Dibenz(a,h)anthracene	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Diclorvos (DDVP)	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Dieldrin	ND		0.19		ug/L		12/01/22 06:49	12/05/22 11:46	1
Diethylphthalate	ND		0.48		ug/L		12/01/22 06:49	12/05/22 11:46	1
Dimethoate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Dimethylphthalate	ND		0.48		ug/L		12/01/22 06:49	12/05/22 11:46	1
Di-n-butyl phthalate	ND		0.97		ug/L		12/01/22 06:49	12/05/22 11:46	1
Di-n-octyl phthalate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Endosulfan I (Alpha)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Endosulfan II (Beta)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Endosulfan sulfate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Endrin	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Endrin aldehyde	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
EPTC	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Fluoranthene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Fluorene	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
gamma-Chlordane	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Heptachlor	ND		0.039		ug/L		12/01/22 06:49	12/05/22 11:46	1
Heptachlor epoxide (isomer B)	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Hexachlorobenzene	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Date Collected: 11/21/22 11:08
Date Received: 11/22/22 09:50

Lab Sample ID: 380-29023-3

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
Hexachlorocyclopentadiene	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Indeno[1,2,3-cd]pyrene	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Isophorone	ND		0.48		ug/L		12/01/22 06:49	12/05/22 11:46	1
Lindane	ND		0.039		ug/L		12/01/22 06:49	12/05/22 11:46	1
Malathion	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Methoxychlor	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Metolachlor	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Metribuzin	ND	^3+	0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Molinate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Naphthalene	ND		0.29		ug/L		12/01/22 06:49	12/05/22 11:46	1
Parathion	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Pendimethalin (Penoxaline)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Total Permethrin (mixed isomers)	ND		0.19		ug/L		12/01/22 06:49	12/05/22 11:46	1
Phenanthrene	ND		0.039		ug/L		12/01/22 06:49	12/05/22 11:46	1
Propachlor	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Pyrene	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Simazine	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Terbacil	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Terbuthylazine	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1
Thiobencarb	ND		0.19		ug/L		12/01/22 06:49	12/05/22 11:46	1
trans-Nonachlor	ND		0.048		ug/L		12/01/22 06:49	12/05/22 11:46	1
Trifluralin	ND		0.097		ug/L		12/01/22 06:49	12/05/22 11:46	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*12/01/22 06:49*	*12/05/22 11:46*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*102*		*70 - 130*	*12/01/22 06:49*	*12/05/22 11:46*	*1*
Triphenylphosphate	*107*		*70 - 130*	*12/01/22 06:49*	*12/05/22 11:46*	*1*
Perylene-d12	*99*		*70 - 130*	*12/01/22 06:49*	*12/05/22 11:46*	*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		11/23/22 00:00	12/03/22 16:54	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Acenaphthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Acenaphthylene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Anthracene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Biphenyl	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Chrysene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-29023-3
Date Collected: 11/21/22 11:08
Matrix: Drinking Water
Date Received: 11/22/22 09:50
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
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Dibenzothiophene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		11/23/22 00:00	12/03/22 16:54	1
Fluoranthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Fluorene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Naphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Perylene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Phenanthrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1
Pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 16:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*72*		*45 - 118*	*11/23/22 00:00*	*12/03/22 16:54*	*1*
(d10-Phenanthrene)	*93*		*56 - 123*	*11/23/22 00:00*	*12/03/22 16:54*	*1*
(d12-Chrysene)	*93*		*36 - 142*	*11/23/22 00:00*	*12/03/22 16:54*	*1*
(d12-Perylene)	*85*		*36 - 161*	*11/23/22 00:00*	*12/03/22 16:54*	*1*
(d8-Naphthalene)	*83*		*20 - 112*	*11/23/22 00:00*	*12/03/22 16:54*	*1*

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	0.020		mg/L			11/28/22 19:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*95*		*60 - 140*		*11/28/22 19:36*	*1*

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.026		mg/L			12/03/22 20:53	1
JP5	ND	U	0.052		mg/L			12/03/22 20:53	1
JP8	ND	U	0.052		mg/L			12/03/22 20:53	1
MOTOR OIL	ND	U	0.052		mg/L			12/03/22 20:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*78*		*60 - 130*		*12/03/22 20:53*	*1*
HEXACOSANE	*100*		*60 - 130*		*12/03/22 20:53*	*1*

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

Lab Sample ID: 380-29023-4
Date Collected: 11/21/22 10:29
Matrix: Drinking Water
Date Received: 11/22/22 09:50
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		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
2,4'-DDE	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
2,4'-DDT	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
2,4-Dinitrotoluene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
2,6-Dinitrotoluene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
4,4'-DDD	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
4,4'-DDE	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
4,4'-DDT	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Acenaphthene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1

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

Job ID: 380-29023-1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)
Date Collected: 11/21/22 10:29
Date Received: 11/22/22 09:50

Lab Sample ID: 380-29023-4
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
Acenaphthylene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Acetochlor	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Alachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
alpha-BHC	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
alpha-Chlordane	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Anthracene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 12:06	1
Atrazine	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Benz(a)anthracene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Benzo[a]pyrene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 12:06	1
Benzo[b]fluoranthene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 12:06	1
Benzo[g,h,i]perylene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Benzo[k]fluoranthene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 12:06	1
beta-BHC	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Bromacil	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Butachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Butylbenzylphthalate	ND	^3+	0.49		ug/L		12/01/22 06:49	12/05/22 12:06	1
Caffeine	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Chlorobenzilate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Chloroneb	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Chlorothalonil (Draconil, Bravo)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Chlorpyrifos	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Chrysene	ND		0.019		ug/L		12/01/22 06:49	12/05/22 12:06	1
delta-BHC	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Di(2-ethylhexyl)adipate	ND		0.58		ug/L		12/01/22 06:49	12/05/22 12:06	1
Bis(2-ethylhexyl) phthalate	ND		0.58		ug/L		12/01/22 06:49	12/05/22 12:06	1
Diazinon (Qualitative)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Dibenz(a,h)anthracene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Diclorvos (DDVP)	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Dieldrin	ND		0.19		ug/L		12/01/22 06:49	12/05/22 12:06	1
Diethylphthalate	ND		0.49		ug/L		12/01/22 06:49	12/05/22 12:06	1
Dimethoate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Dimethylphthalate	ND		0.49		ug/L		12/01/22 06:49	12/05/22 12:06	1
Di-n-butyl phthalate	ND		0.97		ug/L		12/01/22 06:49	12/05/22 12:06	1
Di-n-octyl phthalate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Endosulfan I (Alpha)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Endosulfan II (Beta)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Endosulfan sulfate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Endrin	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Endrin aldehyde	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
EPTC	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Fluoranthene	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Fluorene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
gamma-Chlordane	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Heptachlor	ND		0.039		ug/L		12/01/22 06:49	12/05/22 12:06	1
Heptachlor epoxide (isomer B)	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Hexachlorobenzene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Hexachlorocyclopentadiene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Indeno[1,2,3-cd]pyrene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Isophorone	ND		0.49		ug/L		12/01/22 06:49	12/05/22 12:06	1

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)
Date Collected: 11/21/22 10:29
Date Received: 11/22/22 09:50

Lab Sample ID: 380-29023-4
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
Lindane	ND		0.039		ug/L		12/01/22 06:49	12/05/22 12:06	1
Malathion	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Methoxychlor	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Metolachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Metribuzin	ND	^3+	0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Molinate	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Naphthalene	ND		0.29		ug/L		12/01/22 06:49	12/05/22 12:06	1
Parathion	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Pendimethalin (Penoxaline)	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Total Permethrin (mixed isomers)	ND		0.19		ug/L		12/01/22 06:49	12/05/22 12:06	1
Phenanthrene	ND		0.039		ug/L		12/01/22 06:49	12/05/22 12:06	1
Propachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Pyrene	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Simazine	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Terbacil	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Terbuthylazine	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1
Thiobencarb	ND		0.19		ug/L		12/01/22 06:49	12/05/22 12:06	1
trans-Nonachlor	ND		0.049		ug/L		12/01/22 06:49	12/05/22 12:06	1
Trifluralin	ND		0.097		ug/L		12/01/22 06:49	12/05/22 12:06	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*12/01/22 06:49*	*12/05/22 12:06*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*99*		*70 - 130*	*12/01/22 06:49*	*12/05/22 12:06*	*1*
Triphenylphosphate	*105*		*70 - 130*	*12/01/22 06:49*	*12/05/22 12:06*	*1*
Perylene-d12	*97*		*70 - 130*	*12/01/22 06:49*	*12/05/22 12:06*	*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		11/23/22 00:00	12/03/22 18:41	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Acenaphthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Acenaphthylene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Anthracene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Biphenyl	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Chrysene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Dibenzothiophene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		11/23/22 00:00	12/03/22 18:41	1

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

Lab Sample ID: 380-29023-4
Date Collected: 11/21/22 10:29
Matrix: Drinking Water
Date Received: 11/22/22 09:50
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
Fluoranthene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Fluorene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Naphthalene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Perylene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Phenanthrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1
Pyrene	ND		0.005	0.001	µg/L		11/23/22 00:00	12/03/22 18:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*89*		*45 - 118*	*11/23/22 00:00*	*12/03/22 18:41*	*1*
(d10-Phenanthrene)	*91*		*56 - 123*	*11/23/22 00:00*	*12/03/22 18:41*	*1*
(d12-Chrysene)	*92*		*36 - 142*	*11/23/22 00:00*	*12/03/22 18:41*	*1*
(d12-Perylene)	*86*		*36 - 161*	*11/23/22 00:00*	*12/03/22 18:41*	*1*
(d8-Naphthalene)	*78*		*20 - 112*	*11/23/22 00:00*	*12/03/22 18:41*	*1*

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	0.020		mg/L			11/28/22 20:12	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*92*		*60 - 140*		*11/28/22 20:12*	*1*

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.025		mg/L			12/03/22 21:11	1
JP5	ND	U	0.051		mg/L			12/03/22 21:11	1
JP8	ND	U	0.051		mg/L			12/03/22 21:11	1
MOTOR OIL	ND	U	0.051		mg/L			12/03/22 21:11	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*80*		*60 - 130*		*12/03/22 21:11*	*1*
HEXACOSANE	*108*		*60 - 130*		*12/03/22 21:11*	*1*

Client Sample ID: TB: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-29023-5
Date Collected: 11/21/22 10:50
Matrix: Water
Date Received: 11/22/22 09:50

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	0.020		mg/L			11/28/22 20:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*94*		*60 - 140*		*11/28/22 20:48*	*1*

Client Sample ID: TB: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-29023-6
Date Collected: 11/21/22 11:08
Matrix: Water
Date Received: 11/22/22 09:50

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	0.020		mg/L			11/28/22 22:01	1

Client Sample ID: TB: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-29023-6

Date Collected: 11/21/22 11:08

Matrix: Water

Date Received: 11/22/22 09:50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*91*		*60 - 140*		*11/28/22 22:01*	*1*

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

Lab Sample ID: 380-29023-7

Date Collected: 11/21/22 10:29

Matrix: Water

Date Received: 11/22/22 09:50

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	0.020		mg/L			11/28/22 22:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*90*		*60 - 140*		*11/28/22 22:37*	*1*

Client Sample ID: TB: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-29023-8

Date Collected: 11/21/22 10:10

Matrix: Water

Date Received: 11/22/22 09:50

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	0.020		mg/L			11/28/22 23:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*96*		*60 - 140*		*11/28/22 23:13*	*1*

Action Limit Summary

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

Job ID: 380-29023-1

Client Sample ID: AIEA GULCH WELLS PUMP 1
Lab Sample ID: 380-29023-1
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	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	0.019	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.58	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.58	525.2	Total/NA
Endrin	ND		ug/L	2	0.097	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	0.097	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

Client Sample ID: HALAWA WELLS UNITS 1 & 2
Lab Sample ID: 380-29023-2
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	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
Lab Sample ID: 380-29023-3
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	Limit	RL	Method	Prep Type
Alachlor	ND		ug/L	2	0.048	525.2	Total/NA
Atrazine	ND		ug/L	3	0.048	525.2	Total/NA

Action Limit Summary

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

Job ID: 380-29023-1

Client Sample ID: AIEA GULCH WELLS PUMP 2 (Continued)

Lab Sample ID: 380-29023-3

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	Limit	RL	Method	Prep Type
Benzo[a]pyrene	ND		ug/L	0.2	0.019	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.58	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.58	525.2	Total/NA
Endrin	ND		ug/L	2	0.097	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	0.048	525.2	Total/NA
Hexachlorobenzene	ND		ug/L	1	0.048	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.048	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.097	525.2	Total/NA
Simazine	ND		ug/L	4	0.048	525.2	Total/NA

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

Lab Sample ID: 380-29023-4

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	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	0.019	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.58	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.58	525.2	Total/NA
Endrin	ND		ug/L	2	0.097	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	0.097	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: 380-29023-1

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)
380-29023-1	AIEA GULCH WELLS PUMP 1	98	106	99
380-29023-2	HALAWA WELLS UNITS 1 & 2	98	109	95
380-29023-3	AIEA GULCH WELLS PUMP 2	102	107	99
380-29023-3 MS	AIEA GULCH WELLS PUMP 2	99	110	102
380-29023-4	AIEA WELLS PUMPS 1&2 (260)	99	105	97
380-29023-4 DU	AIEA WELLS PUMPS 1&2 (260)	99	103	95

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)
LCS 380-25484/3-A	Lab Control Sample	99	108	98
LCSD 380-25484/4-A	Lab Control Sample Dup	100	102	96
MB 380-25484/1-A	Method Blank	100	107	96
MRL 380-25484/2-A	Lab Control Sample	99	107	99

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: BlankMatrix — **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)				
		Acenapht	Phenanth	CRY	NPT	PRY
Lab Sample ID	Client Sample ID	(27-133)	(43-129)	(52-144)	(25-125)	(36-161)
101945-B1	Method Blank	71	92	92	81	82
101945-BS1	Lab Control Sample	76	83	74	78	81
101945-BS2	Lab Control Sample Dup	78	96	87	74	97

Surrogate Legend

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

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)				
		Acenapht	Phenanth	CRY	NPT	PRY
Lab Sample ID	Client Sample ID	(45-118)	(56-123)	(36-142)	(20-112)	(36-161)
380-29023-1	AIEA GULCH WELLS PUMP 1	93	93	92	73	85

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

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

		Percent Surrogate Recovery (Acceptance Limits)								
		Acenapht	Phenanth	CRY	NPT	PRY				
Lab Sample ID	Client Sample ID	(45-118)	(56-123)	(36-142)	(20-112)	(36-161)				
380-29023-2	HALAWA WELLS UNITS 1 & 2	93	93	94	86	88				
380-29023-3	AIEA GULCH WELLS PUMP 2	72	93	93	83	85				
380-29023-4	AIEA WELLS PUMPS 1&2 (260)	89	91	92	78	86				

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)								
		BFB								
Lab Sample ID	Client Sample ID	(60-140)								
380-29023-1	AIEA GULCH WELLS PUMP 1	91								
380-29023-2	HALAWA WELLS UNITS 1 & 2	98								
380-29023-3	AIEA GULCH WELLS PUMP 2	95								
380-29023-4	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)								
		BFB								
Lab Sample ID	Client Sample ID									
22VGH7K14B	Method Blank									

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)								
		BFB								
Lab Sample ID	Client Sample ID	(70-130)								
22VGH7K14C	LCD	126								
22VGH7K14L	Lab Control Sample	117								

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Surrogate Summary

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

Job ID: 380-29023-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
380-29023-5	TB: AIEA GULCH WELLS PUMP	94
380-29023-6	TB: AIEA GULCH WELLS PUMP 2	91
380-29023-7	TB: AIEA WELLS PUMPS 1&2 (260)	90
380-29023-8	TB: HALAWA WELLS UNITS 1 & 2	96

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)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
22K264-01M	Matrix Spike	116
22K264-01S	Matrix Spike Duplicate	115

Surrogate Legend

BFB = BROMOFLUOROBENZENE

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BB	XACOSA
Lab Sample ID	Client Sample ID	(60-130)	(60-130)
380-29023-1	AIEA GULCH WELLS PUMP 1	93	110
380-29023-2	HALAWA WELLS UNITS 1 & 2	78	98
380-29023-3	AIEA GULCH WELLS PUMP 2	78	100
380-29023-4	AIEA WELLS PUMPS 1&2 (260)	80	108

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BB	XACOSA
Lab Sample ID	Client Sample ID		
22DSL002WB	Method Blank		

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

Surrogate Summary

Client: City & County of Honolulu
Job ID: 380-29023-1
Project/Site: RED-HILL

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

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

		Percent Surrogate Recovery (Acceptance Limits)									
		BB	XACOSA								
Lab Sample ID	Client Sample ID	(60-130)	(60-130)								
22DSL002WC	LCD	102	111								
22DSL002WL	Lab Control Sample	103	104								
22J5L002WC	LCD	104	104								
22J5L002WL	Lab Control Sample	95	99								
22J8L002WC	LCD	101	106								
22J8L002WL	Lab Control Sample	89	105								

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

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

Lab Sample ID: MB 380-25484/1-A
Matrix: Water
Analysis Batch: 25689

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25484

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
2,4'-DDE	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
2,4'-DDT	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
2,4-Dinitrotoluene	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
2,6-Dinitrotoluene	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
4,4'-DDD	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
4,4'-DDE	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
4,4'-DDT	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Acenaphthene	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Acenaphthylene	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Acetochlor	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Alachlor	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
alpha-BHC	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
alpha-Chlordane	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Anthracene	ND		0.020		ug/L		12/01/22 06:49	12/05/22 10:07	1
Atrazine	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Benz(a)anthracene	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Benzo[a]pyrene	ND		0.020		ug/L		12/01/22 06:49	12/05/22 10:07	1
Benzo[b]fluoranthene	ND		0.020		ug/L		12/01/22 06:49	12/05/22 10:07	1
Benzo[g,h,i]perylene	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Benzo[k]fluoranthene	ND		0.020		ug/L		12/01/22 06:49	12/05/22 10:07	1
beta-BHC	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Bromacil	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Butachlor	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Butylbenzylphthalate	ND		0.50		ug/L		12/01/22 06:49	12/05/22 10:07	1
Caffeine	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Chlorobenzilate	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Chloroneb	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Chlorothalonil (Draconil, Bravo)	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Chlorpyrifos	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Chrysene	ND		0.020		ug/L		12/01/22 06:49	12/05/22 10:07	1
delta-BHC	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Di(2-ethylhexyl)adipate	ND		0.60		ug/L		12/01/22 06:49	12/05/22 10:07	1
Bis(2-ethylhexyl) phthalate	ND		0.60		ug/L		12/01/22 06:49	12/05/22 10:07	1
Diazinon (Qualitative)	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Dibenz(a,h)anthracene	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Diclorvos (DDVP)	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Dieldrin	ND		0.20		ug/L		12/01/22 06:49	12/05/22 10:07	1
Diethylphthalate	ND		0.50		ug/L		12/01/22 06:49	12/05/22 10:07	1
Dimethoate	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Dimethylphthalate	ND		0.50		ug/L		12/01/22 06:49	12/05/22 10:07	1
Di-n-butyl phthalate	ND		1.0		ug/L		12/01/22 06:49	12/05/22 10:07	1
Di-n-octyl phthalate	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Endosulfan I (Alpha)	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Endosulfan II (Beta)	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Endosulfan sulfate	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Endrin	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Endrin aldehyde	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1

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

Lab Sample ID: MB 380-25484/1-A
Matrix: Water
Analysis Batch: 25689

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 25484

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
EPTC	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Fluoranthene	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Fluorene	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
gamma-Chlordane	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Heptachlor	ND		0.040		ug/L		12/01/22 06:49	12/05/22 10:07	1
Heptachlor epoxide (isomer B)	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Hexachlorobenzene	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Hexachlorocyclopentadiene	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Indeno[1,2,3-cd]pyrene	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Isophorone	ND		0.50		ug/L		12/01/22 06:49	12/05/22 10:07	1
Lindane	ND		0.040		ug/L		12/01/22 06:49	12/05/22 10:07	1
Malathion	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Methoxychlor	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Metolachlor	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Metribuzin	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Molinate	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Naphthalene	ND		0.30		ug/L		12/01/22 06:49	12/05/22 10:07	1
Parathion	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Pendimethalin (Penoxaline)	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		12/01/22 06:49	12/05/22 10:07	1
Phenanthrene	ND		0.040		ug/L		12/01/22 06:49	12/05/22 10:07	1
Propachlor	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Pyrene	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Simazine	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Terbacil	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Terbuthylazine	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1
Thiobencarb	ND		0.20		ug/L		12/01/22 06:49	12/05/22 10:07	1
trans-Nonachlor	ND		0.050		ug/L		12/01/22 06:49	12/05/22 10:07	1
Trifluralin	ND		0.10		ug/L		12/01/22 06:49	12/05/22 10:07	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*1.67*	*T J*	*ug/L*		*2.40*		*12/01/22 06:49*	*12/05/22 10:07*	*1*
Unknown	*0.592*	*T J*	*ug/L*		*2.70*		*12/01/22 06:49*	*12/05/22 10:07*	*1*
Unknown	*0.842*	*T J*	*ug/L*		*5.83*		*12/01/22 06:49*	*12/05/22 10:07*	*1*
Unknown	*0.910*	*T J*	*ug/L*		*6.44*		*12/01/22 06:49*	*12/05/22 10:07*	*1*
Unknown	*0.836*	*T J*	*ug/L*		*6.51*		*12/01/22 06:49*	*12/05/22 10:07*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*100*		*70 - 130*	*12/01/22 06:49*	*12/05/22 10:07*	*1*
Triphenylphosphate	*107*		*70 - 130*	*12/01/22 06:49*	*12/05/22 10:07*	*1*
Perylene-d12	*96*		*70 - 130*	*12/01/22 06:49*	*12/05/22 10:07*	*1*

Lab Sample ID: LCS 380-25484/3-A
Matrix: Water
Analysis Batch: 25689

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25484

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
2,4'-DDD			1.99	2.12		ug/L		106	70 - 130		

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

Lab Sample ID: LCS 380-25484/3-A
Matrix: Water
Analysis Batch: 25689

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25484

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDE	1.99	2.08		ug/L		105	70 - 130
2,4'-DDT	1.99	1.95		ug/L		98	70 - 130
2,4-Dinitrotoluene	1.99	2.14		ug/L		108	70 - 130
2,6-Dinitrotoluene	1.99	2.01		ug/L		101	70 - 130
4,4'-DDD	1.99	1.99		ug/L		100	70 - 130
4,4'-DDE	1.99	2.02		ug/L		102	70 - 130
4,4'-DDT	1.99	1.77		ug/L		89	70 - 130
Acenaphthene	1.99	1.88		ug/L		95	70 - 130
Acenaphthylene	1.99	1.89		ug/L		95	70 - 130
Acetochlor	1.99	2.18		ug/L		110	70 - 130
Alachlor	1.99	2.03		ug/L		102	70 - 130
alpha-BHC	1.99	1.97		ug/L		99	70 - 130
alpha-Chlordane	1.99	1.93		ug/L		97	70 - 130
Anthracene	1.99	2.08		ug/L		105	70 - 130
Atrazine	1.99	2.11		ug/L		106	70 - 130
Benz(a)anthracene	1.99	1.95		ug/L		98	70 - 130
Benzo[a]pyrene	1.99	2.07		ug/L		104	70 - 130
Benzo[b]fluoranthene	1.99	2.09		ug/L		105	70 - 130
Benzo[g,h,i]perylene	1.99	2.29		ug/L		115	70 - 130
Benzo[k]fluoranthene	1.99	2.10		ug/L		106	70 - 130
beta-BHC	1.99	2.02		ug/L		101	70 - 130
Bromacil	1.99	1.89		ug/L		95	70 - 130
Butachlor	1.99	2.27		ug/L		114	70 - 130
Butylbenzylphthalate	1.99	2.33		ug/L		117	70 - 130
Caffeine	1.99	1.48		ug/L		75	45 - 137
Chlorobenzilate	1.99	2.30		ug/L		116	70 - 130
Chloroneb	1.99	1.91		ug/L		96	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	2.07		ug/L		104	70 - 130
Chlorpyrifos	1.99	2.29		ug/L		115	70 - 130
Chrysene	1.99	1.93		ug/L		97	70 - 130
delta-BHC	1.99	2.03		ug/L		102	70 - 130
Di(2-ethylhexyl)adipate	1.99	2.23		ug/L		112	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	2.16		ug/L		108	70 - 130
Diazinon (Qualitative)	1.99	2.06		ug/L		104	15 - 132
Dibenz(a,h)anthracene	1.99	2.48		ug/L		125	70 - 130
Diclorvos (DDVP)	1.99	1.99		ug/L		100	70 - 130
Dieldrin	1.99	1.99		ug/L		100	70 - 130
Diethylphthalate	1.99	2.10		ug/L		106	70 - 130
Dimethoate	1.99	1.22		ug/L		61	35 - 100
Dimethylphthalate	1.99	2.12		ug/L		107	70 - 130
Di-n-butyl phthalate	3.98	4.33		ug/L		109	70 - 130
Di-n-octyl phthalate	1.99	1.88		ug/L		94	70 - 130
Endosulfan I (Alpha)	1.99	1.93		ug/L		97	70 - 130
Endosulfan II (Beta)	1.99	2.08		ug/L		105	70 - 130
Endosulfan sulfate	1.99	2.09		ug/L		105	70 - 130
Endrin	1.99	2.38		ug/L		120	70 - 130
Endrin aldehyde	1.99	2.00		ug/L		101	70 - 130
EPTC	1.99	2.00		ug/L		100	70 - 130
Fluoranthene	1.99	2.07		ug/L		104	70 - 130

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

Lab Sample ID: LCS 380-25484/3-A
Matrix: Water
Analysis Batch: 25689

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25484

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Fluorene	1.99	2.04		ug/L		103	70 - 130
gamma-Chlordane	1.99	1.95		ug/L		98	70 - 130
Heptachlor	1.99	2.07		ug/L		104	70 - 130
Heptachlor epoxide (isomer B)	1.99	1.96		ug/L		99	70 - 130
Hexachlorobenzene	1.99	2.04		ug/L		103	70 - 130
Hexachlorocyclopentadiene	1.99	1.70		ug/L		85	70 - 130
Indeno[1,2,3-cd]pyrene	1.99	2.44		ug/L		123	70 - 130
Isophorone	1.99	1.97		ug/L		99	70 - 130
Lindane	1.99	2.01		ug/L		101	70 - 130
Malathion	1.99	2.25		ug/L		113	70 - 130
Methoxychlor	1.99	1.95		ug/L		98	70 - 130
Metolachlor	1.99	2.16		ug/L		109	70 - 130
Metribuzin	1.99	1.81		ug/L		91	70 - 130
Molinate	1.99	1.93		ug/L		97	70 - 130
Naphthalene	1.99	1.86		ug/L		93	70 - 130
Parathion	1.99	2.13		ug/L		107	70 - 130
Pendimethalin (Penoxaline)	1.99	1.86		ug/L		93	70 - 130
Phenanthrene	1.99	2.08		ug/L		105	70 - 130
Propachlor	1.99	2.09		ug/L		105	70 - 130
Pyrene	1.99	2.20		ug/L		111	70 - 130
Simazine	1.99	2.14		ug/L		107	70 - 130
Terbacil	1.99	2.10		ug/L		106	70 - 130
Terbuthylazine	1.99	1.87		ug/L		94	70 - 130
Thiobencarb	1.99	2.29		ug/L		115	70 - 130
trans-Nonachlor	1.99	2.11		ug/L		106	70 - 130
Trifluralin	1.99	1.84		ug/L		93	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*99*		*70 - 130*
Triphenylphosphate	*108*		*70 - 130*
Perylene-d12	*98*		*70 - 130*

Lab Sample ID: LCSD 380-25484/4-A
Matrix: Water
Analysis Batch: 25689

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25484

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.99	2.04		ug/L		102	70 - 130	4	20
2,4'-DDE	1.99	1.98		ug/L		100	70 - 130	5	20
2,4'-DDT	1.99	1.85		ug/L		93	70 - 130	5	20
2,4-Dinitrotoluene	1.99	2.03		ug/L		102	70 - 130	5	20
2,6-Dinitrotoluene	1.99	1.97		ug/L		99	70 - 130	2	20
4,4'-DDD	1.99	1.85		ug/L		93	70 - 130	7	20
4,4'-DDE	1.99	1.86		ug/L		94	70 - 130	8	20
4,4'-DDT	1.99	1.67		ug/L		84	70 - 130	6	20
Acenaphthene	1.99	1.92		ug/L		97	70 - 130	2	20
Acenaphthylene	1.99	1.90		ug/L		96	70 - 130	1	20
Acetochlor	1.99	2.14		ug/L		108	70 - 130	2	20

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

Lab Sample ID: LCSD 380-25484/4-A
Matrix: Water
Analysis Batch: 25689

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25484

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Alachlor			1.99	1.95		ug/L		98	70 - 130	4	20
alpha-BHC			1.99	1.90		ug/L		96	70 - 130	4	20
alpha-Chlordane			1.99	1.93		ug/L		97	70 - 130	0	20
Anthracene			1.99	2.03		ug/L		102	70 - 130	2	20
Atrazine			1.99	1.98		ug/L		100	70 - 130	6	20
Benz(a)anthracene			1.99	1.80		ug/L		91	70 - 130	8	20
Benzo[a]pyrene			1.99	2.01		ug/L		101	70 - 130	3	20
Benzo[b]fluoranthene			1.99	2.08		ug/L		105	70 - 130	0	20
Benzo[g,h,i]perylene			1.99	2.39		ug/L		120	70 - 130	4	20
Benzo[k]fluoranthene			1.99	2.18		ug/L		110	70 - 130	4	20
beta-BHC			1.99	1.93		ug/L		97	70 - 130	4	20
Bromacil			1.99	1.75		ug/L		88	70 - 130	8	20
Butachlor			1.99	2.24		ug/L		113	70 - 130	1	20
Butylbenzylphthalate			1.99	2.24		ug/L		113	70 - 130	4	20
Caffeine			1.99	1.46		ug/L		73	45 - 137	2	20
Chlorobenzilate			1.99	2.18		ug/L		110	70 - 130	6	20
Chloroneb			1.99	1.87		ug/L		94	70 - 130	2	20
Chlorothalonil (Draconil, Bravo)			1.99	1.92		ug/L		97	70 - 130	7	20
Chlorpyrifos			1.99	2.22		ug/L		112	70 - 130	3	20
Chrysene			1.99	1.92		ug/L		97	70 - 130	0	20
delta-BHC			1.99	1.91		ug/L		96	70 - 130	6	20
Di(2-ethylhexyl)adipate			1.99	2.11		ug/L		106	70 - 130	5	20
Bis(2-ethylhexyl) phthalate			1.99	2.03		ug/L		102	70 - 130	6	20
Diazinon (Qualitative)			1.99	2.05		ug/L		103	15 - 132	1	20
Dibenz(a,h)anthracene			1.99	2.46		ug/L		124	70 - 130	1	20
Diclorvos (DDVP)			1.99	2.03		ug/L		102	70 - 130	2	20
Dieldrin			1.99	1.91		ug/L		96	70 - 130	4	20
Diethylphthalate			1.99	2.08		ug/L		105	70 - 130	1	20
Dimethoate			1.99	1.22		ug/L		62	35 - 100	0	20
Dimethylphthalate			1.99	2.13		ug/L		107	70 - 130	0	20
Di-n-butyl phthalate			3.97	4.27		ug/L		107	70 - 130	1	20
Di-n-octyl phthalate			1.99	1.75		ug/L		88	70 - 130	7	20
Endosulfan I (Alpha)			1.99	1.87		ug/L		94	70 - 130	3	20
Endosulfan II (Beta)			1.99	1.95		ug/L		98	70 - 130	7	20
Endosulfan sulfate			1.99	2.02		ug/L		102	70 - 130	3	20
Endrin			1.99	2.29		ug/L		115	70 - 130	4	20
Endrin aldehyde			1.99	1.95		ug/L		98	70 - 130	3	20
EPTC			1.99	2.04		ug/L		103	70 - 130	2	20
Fluoranthene			1.99	1.93		ug/L		97	70 - 130	7	20
Fluorene			1.99	2.04		ug/L		103	70 - 130	0	20
gamma-Chlordane			1.99	1.94		ug/L		98	70 - 130	1	20
Heptachlor			1.99	2.03		ug/L		102	70 - 130	2	20
Heptachlor epoxide (isomer B)			1.99	1.87		ug/L		94	70 - 130	5	20
Hexachlorobenzene			1.99	2.00		ug/L		100	70 - 130	2	20
Hexachlorocyclopentadiene			1.99	1.73		ug/L		87	70 - 130	2	20
Indeno[1,2,3-cd]pyrene			1.99	2.47		ug/L		124	70 - 130	1	20
Isophorone			1.99	2.01		ug/L		101	70 - 130	2	20
Lindane			1.99	1.94		ug/L		98	70 - 130	4	20
Malathion			1.99	2.13		ug/L		107	70 - 130	5	20

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

Lab Sample ID: LCSD 380-25484/4-A
Matrix: Water
Analysis Batch: 25689

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 25484

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methoxychlor			1.99	1.91		ug/L		96	70 - 130	2	20
Metolachlor			1.99	2.07		ug/L		104	70 - 130	4	20
Metribuzin			1.99	1.68		ug/L		85	70 - 130	7	20
Molinate			1.99	2.00		ug/L		101	70 - 130	3	20
Naphthalene			1.99	1.93		ug/L		97	70 - 130	4	20
Parathion			1.99	1.93		ug/L		97	70 - 130	10	20
Pendimethalin (Penoxaline)			1.99	1.73		ug/L		87	70 - 130	7	20
Phenanthrene			1.99	2.04		ug/L		103	70 - 130	2	20
Propachlor			1.99	2.05		ug/L		103	70 - 130	2	20
Pyrene			1.99	2.06		ug/L		104	70 - 130	7	20
Simazine			1.99	2.00		ug/L		101	70 - 130	6	20
Terbacil			1.99	1.92		ug/L		97	70 - 130	9	20
Terbuthylazine			1.99	1.75		ug/L		88	70 - 130	6	20
Thiobencarb			1.99	2.20		ug/L		111	70 - 130	4	20
trans-Nonachlor			1.99	1.96		ug/L		99	70 - 130	7	20
Trifluralin			1.99	1.78		ug/L		90	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Nitro-m-xylene	*100*		*70 - 130*
Triphenylphosphate	*102*		*70 - 130*
Perylene-d12	*96*		*70 - 130*

Lab Sample ID: MRL 380-25484/2-A
Matrix: Water
Analysis Batch: 25689

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25484

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD			0.0995	0.134		ug/L		134	50 - 150
2,4'-DDE			0.0995	0.0888	J	ug/L		89	50 - 150
2,4'-DDT			0.0995	0.0817	J	ug/L		82	50 - 150
2,4-Dinitrotoluene			0.0995	0.0778	J	ug/L		78	50 - 150
2,6-Dinitrotoluene			0.0995	0.0834	J	ug/L		84	50 - 150
4,4'-DDD			0.0995	0.0857	J	ug/L		86	50 - 150
4,4'-DDE			0.0995	0.0964	J	ug/L		97	50 - 150
4,4'-DDT			0.0995	0.118		ug/L		119	50 - 150
Acenaphthene			0.0995	0.0947	J	ug/L		95	50 - 150
Acenaphthylene			0.0995	0.0861	J	ug/L		87	50 - 150
Acetochlor			0.0497	0.0494	J	ug/L		99	50 - 150
Alachlor			0.0497	0.0506		ug/L		102	50 - 150
alpha-BHC			0.0995	0.119		ug/L		119	50 - 150
alpha-Chlordane			0.0249	ND		ug/L		113	50 - 150
Anthracene			0.0199	0.0230		ug/L		116	50 - 150
Atrazine			0.0497	0.0557		ug/L		112	50 - 150
Benz(a)anthracene			0.0497	0.0372	J	ug/L		75	50 - 150
Benzo[a]pyrene			0.0199	0.0164	J	ug/L		83	50 - 150
Benzo[b]fluoranthene			0.0199	0.0194	J	ug/L		98	50 - 150
Benzo[g,h,i]perylene			0.0497	0.0513		ug/L		103	50 - 150
Benzo[k]fluoranthene			0.0199	0.0179	J	ug/L		90	50 - 150

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

Job ID: 380-29023-1

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

Lab Sample ID: MRL 380-25484/2-A
Matrix: Water
Analysis Batch: 25689

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25484

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
beta-BHC	0.0995	0.114		ug/L		114	50 - 150
Bromacil	0.0995	0.138		ug/L		139	50 - 150
Butachlor	0.0497	0.0662		ug/L		133	50 - 150
Butylbenzylphthalate	0.149	0.309	J ^3+	ug/L		207	50 - 150
Caffeine	0.0497	0.0387	J	ug/L		78	50 - 150
Chlorobenzilate	0.0995	0.0964	J	ug/L		97	50 - 150
Chloroneb	0.0995	0.108		ug/L		108	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0995	0.131		ug/L		131	50 - 150
Chlorpyrifos	0.0497	0.0566		ug/L		114	50 - 150
Chrysene	0.0199	0.0170	J	ug/L		85	50 - 150
delta-BHC	0.0995	0.125		ug/L		125	50 - 150
Di(2-ethylhexyl)adipate	0.298	0.347	J	ug/L		116	50 - 150
Bis(2-ethylhexyl) phthalate	0.597	0.664		ug/L		111	50 - 150
Diazinon (Qualitative)	0.0995	0.0939	J	ug/L		94	15 - 132
Dibenz(a,h)anthracene	0.0497	0.0515		ug/L		104	50 - 150
Diclorvos (DDVP)	0.0497	0.0575		ug/L		116	50 - 150
Dieldrin	0.0995	0.106	J	ug/L		106	50 - 150
Diethylphthalate	0.149	0.159	J	ug/L		107	50 - 150
Dimethoate	0.0995	0.0383	J	ug/L		38	35 - 100
Dimethylphthalate	0.298	0.311	J	ug/L		104	50 - 150
Di-n-butyl phthalate	0.298	0.326	J	ug/L		109	49 - 243
Di-n-octyl phthalate	0.0995	0.112		ug/L		112	50 - 150
Endosulfan I (Alpha)	0.0995	0.106		ug/L		106	50 - 150
Endosulfan II (Beta)	0.0995	0.130		ug/L		130	50 - 150
Endosulfan sulfate	0.0995	0.0945	J	ug/L		95	50 - 150
Endrin	0.0995	0.135		ug/L		136	50 - 150
Endrin aldehyde	0.0995	ND		ug/L		72	50 - 150
EPTC	0.0995	0.0918	J	ug/L		92	50 - 150
Fluoranthene	0.0497	0.0524	J	ug/L		105	50 - 150
Fluorene	0.0497	0.0518		ug/L		104	50 - 150
gamma-Chlordane	0.0249	0.0265	J	ug/L		107	50 - 150
Heptachlor	0.0398	0.0548		ug/L		138	50 - 150
Heptachlor epoxide (isomer B)	0.0497	0.0516		ug/L		104	50 - 150
Hexachlorobenzene	0.0497	0.0475	J	ug/L		95	50 - 150
Hexachlorocyclopentadiene	0.0497	ND		ug/L		70	50 - 150
Indeno[1,2,3-cd]pyrene	0.0497	0.0546		ug/L		110	50 - 150
Isophorone	0.0995	0.104	J	ug/L		105	50 - 150
Lindane	0.0398	0.0493		ug/L		124	50 - 150
Malathion	0.0995	0.108		ug/L		108	50 - 150
Methoxychlor	0.0995	0.114		ug/L		115	50 - 150
Metolachlor	0.0497	0.0607		ug/L		122	50 - 150
Metribuzin	0.0497	0.0846	^3+	ug/L		170	50 - 150
Molinate	0.0995	0.0895	J	ug/L		90	50 - 150
Naphthalene	0.0995	0.0966	J	ug/L		97	50 - 150
Parathion	0.0995	0.120		ug/L		120	50 - 150
Pendimethalin (Penoxaline)	0.0995	0.113		ug/L		113	50 - 150
Phenanthrene	0.0199	0.0263	J	ug/L		132	50 - 150
Propachlor	0.0497	0.0554		ug/L		111	50 - 150
Pyrene	0.0497	0.0531		ug/L		107	50 - 150

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

Lab Sample ID: MRL 380-25484/2-A
Matrix: Water
Analysis Batch: 25689

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 25484

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
Simazine			0.0497	0.0648		ug/L		130	50 - 150		
Terbacil			0.0995	0.109		ug/L		110	50 - 150		
Terbuthylazine			0.0995	0.109		ug/L		109	50 - 150		
Thiobencarb			0.0995	0.128	J	ug/L		128	50 - 150		
trans-Nonachlor			0.0249	0.0272	J	ug/L		109	50 - 150		
Trifluralin			0.0995	0.107		ug/L		107	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*99*		*70 - 130*
Triphenylphosphate	*107*		*70 - 130*
Perylene-d12	*99*		*70 - 130*

Lab Sample ID: 380-29023-3 MS
Matrix: Drinking Water
Analysis Batch: 25689

Client Sample ID: AIEA GULCH WELLS PUMP 2
Prep Type: Total/NA
Prep Batch: 25484

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
2,4'-DDD	ND		1.95	2.06		ug/L		106	70 - 130		
2,4'-DDE	ND		1.95	2.08		ug/L		107	70 - 130		
2,4'-DDT	ND		1.95	1.96		ug/L		101	70 - 130		
2,4-Dinitrotoluene	ND		1.95	2.26		ug/L		116	70 - 130		
2,6-Dinitrotoluene	ND		1.95	2.04		ug/L		105	70 - 130		
4,4'-DDD	ND		1.95	1.93		ug/L		99	70 - 130		
4,4'-DDE	ND		1.95	1.97		ug/L		101	70 - 130		
4,4'-DDT	ND		1.95	1.79		ug/L		92	70 - 130		
Acenaphthene	ND		1.95	1.91		ug/L		98	70 - 130		
Acenaphthylene	ND		1.95	2.01		ug/L		103	70 - 130		
Acetochlor	ND		1.95	2.13		ug/L		109	70 - 130		
Alachlor	ND		1.95	1.95		ug/L		100	70 - 130		
alpha-BHC	ND		1.95	1.95		ug/L		100	70 - 130		
alpha-Chlordane	ND		1.95	1.95		ug/L		100	70 - 130		
Anthracene	ND		1.95	1.96		ug/L		101	70 - 130		
Atrazine	ND		1.95	2.05		ug/L		105	70 - 130		
Benz(a)anthracene	ND		1.95	1.94		ug/L		99	70 - 130		
Benzo[a]pyrene	ND		1.95	2.01		ug/L		103	70 - 130		
Benzo[b]fluoranthene	ND		1.95	2.06		ug/L		106	70 - 130		
Benzo[g,h,i]perylene	ND		1.95	2.22		ug/L		114	70 - 130		
Benzo[k]fluoranthene	ND		1.95	2.15		ug/L		110	70 - 130		
beta-BHC	ND		1.95	1.97		ug/L		101	70 - 130		
Bromacil	ND		1.95	1.84		ug/L		95	70 - 130		
Butachlor	ND		1.95	2.26		ug/L		116	70 - 130		
Butylbenzylphthalate	ND	^3+	1.95	2.32		ug/L		119	70 - 130		
Caffeine	ND		1.95	1.82		ug/L		93	46 - 144		
Chlorobenzilate	ND		1.95	2.25		ug/L		116	70 - 130		
Chloroneb	ND		1.95	1.89		ug/L		97	70 - 130		
Chlorothalonil (Draconil, Bravo)	ND		1.95	1.99		ug/L		102	70 - 130		
Chlorpyrifos	ND		1.95	2.26		ug/L		116	70 - 130		
Chrysene	ND		1.95	1.91		ug/L		98	70 - 130		

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

Lab Sample ID: 380-29023-3 MS
Matrix: Drinking Water
Analysis Batch: 25689

Client Sample ID: AIEA GULCH WELLS PUMP 2
Prep Type: Total/NA
Prep Batch: 25484

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
delta-BHC	ND		1.95	1.90		ug/L		98	70 - 130
Di(2-ethylhexyl)adipate	ND		1.95	2.26		ug/L		116	70 - 130
Bis(2-ethylhexyl) phthalate	ND		1.95	2.12		ug/L		109	70 - 130
Diazinon (Qualitative)	ND		1.95	2.05		ug/L		105	15 - 132
Dibenz(a,h)anthracene	ND		1.95	2.40		ug/L		123	70 - 130
Diclorvos (DDVP)	ND		1.95	1.97		ug/L		101	70 - 130
Dieldrin	ND		1.95	2.01		ug/L		103	70 - 130
Diethylphthalate	ND		1.95	2.05		ug/L		105	70 - 130
Dimethoate	ND		1.95	1.61		ug/L		83	34 - 111
Dimethylphthalate	ND		1.95	2.10		ug/L		108	70 - 130
Di-n-butyl phthalate	ND		3.89	4.31		ug/L		111	70 - 130
Di-n-octyl phthalate	ND		1.95	1.92		ug/L		99	70 - 130
Endosulfan I (Alpha)	ND		1.95	1.94		ug/L		99	70 - 130
Endosulfan II (Beta)	ND		1.95	2.05		ug/L		105	70 - 130
Endosulfan sulfate	ND		1.95	2.08		ug/L		107	70 - 130
Endrin	ND		1.95	2.39		ug/L		123	70 - 130
Endrin aldehyde	ND		1.95	1.96		ug/L		101	70 - 130
EPTC	ND		1.95	2.10		ug/L		108	70 - 130
Fluoranthene	ND		1.95	2.02		ug/L		104	70 - 130
Fluorene	ND		1.95	2.03		ug/L		104	70 - 130
gamma-Chlordane	ND		1.95	1.97		ug/L		101	70 - 130
Heptachlor	ND		1.95	2.03		ug/L		104	70 - 130
Heptachlor epoxide (isomer B)	ND		1.95	1.93		ug/L		99	70 - 130
Hexachlorobenzene	ND		1.95	2.01		ug/L		103	70 - 130
Hexachlorocyclopentadiene	ND		1.95	1.73		ug/L		89	70 - 130
Indeno[1,2,3-cd]pyrene	ND		1.95	2.35		ug/L		121	70 - 130
Isophorone	ND		1.95	1.92		ug/L		99	70 - 130
Lindane	ND		1.95	1.92		ug/L		99	70 - 130
Malathion	ND		1.95	2.18		ug/L		112	70 - 130
Methoxychlor	ND		1.95	1.89		ug/L		97	70 - 130
Metolachlor	ND		1.95	2.04		ug/L		105	70 - 130
Metribuzin	ND	^3+	1.95	1.93		ug/L		99	70 - 130
Molinate	ND		1.95	2.11		ug/L		109	70 - 130
Naphthalene	ND		1.95	1.86		ug/L		96	70 - 130
Parathion	ND		1.95	2.04		ug/L		105	70 - 130
Pendimethalin (Penoxaline)	ND		1.95	1.86		ug/L		96	70 - 130
Phenanthrene	ND		1.95	2.04		ug/L		105	70 - 130
Propachlor	ND		1.95	2.03		ug/L		104	70 - 130
Pyrene	ND		1.95	2.14		ug/L		110	70 - 130
Simazine	ND		1.95	2.05		ug/L		105	70 - 130
Terbacil	ND		1.95	2.02		ug/L		104	70 - 130
Terbuthylazine	ND		1.95	1.84		ug/L		94	70 - 130
Thiobencarb	ND		1.95	2.29		ug/L		117	70 - 130
trans-Nonachlor	ND		1.95	2.09		ug/L		107	70 - 130
Trifluralin	ND		1.95	1.86		ug/L		96	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*99*		*70 - 130*

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

Lab Sample ID: 380-29023-3 MS
Matrix: Drinking Water
Analysis Batch: 25689

Client Sample ID: AIEA GULCH WELLS PUMP 2
Prep Type: Total/NA
Prep Batch: 25484

Surrogate	MS %Recovery	MS Qualifier	Limits
Triphenylphosphate	*110*		*70 - 130*
Perylene-d12	*102*		*70 - 130*

Lab Sample ID: 380-29023-4 DU
Matrix: Drinking Water
Analysis Batch: 25689

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)
Prep Type: Total/NA
Prep Batch: 25484

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		ND		ug/L		NC	20
Butylbenzylphthalate	ND	^3+	ND		ug/L		NC	20
Caffeine	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

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

Lab Sample ID: 380-29023-4 DU
Matrix: Drinking Water
Analysis Batch: 25689

Client Sample ID: AIEA WELLS PUMPS 1&2 (260)
Prep Type: Total/NA
Prep Batch: 25484

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
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
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	^3+		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	*99*		*70 - 130*
Triphenylphosphate	*103*		*70 - 130*
Perylene-d12	*95*		*70 - 130*

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

Lab Sample ID: 101945-B1
Matrix: BlankMatrix
Analysis Batch: O-40028

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-40028_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Acenaphthene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Acenaphthylene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Anthracene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Biphenyl	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Chrysene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Dibenzothiophene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		11/21/22 00:00	12/03/22 04:24	1
Fluoranthene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Fluorene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Naphthalene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Perylene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Phenanthrene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1
Pyrene	ND		0.005	0.001	µg/L		11/21/22 00:00	12/03/22 04:24	1

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*71*		*27 - 133*	*11/21/22 00:00*	*12/03/22 04:24*	*1*
(d10-Phenanthrene)	*92*		*43 - 129*	*11/21/22 00:00*	*12/03/22 04:24*	*1*
(d12-Chrysene)	*92*		*52 - 144*	*11/21/22 00:00*	*12/03/22 04:24*	*1*
(d12-Perylene)	*82*		*36 - 161*	*11/21/22 00:00*	*12/03/22 04:24*	*1*
(d8-Naphthalene)	*81*		*25 - 125*	*11/21/22 00:00*	*12/03/22 04:24*	*1*

Lab Sample ID: 101945-BS1
Matrix: BlankMatrix
Analysis Batch: O-40028

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-40028_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.382		µg/L		76	31 - 128
1-Methylphenanthrene	0.5	0.368		µg/L		74	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.397		µg/L		79	55 - 122
2,6-Dimethylnaphthalene	0.5	0.404		µg/L		81	48 - 120
2-Methylnaphthalene	0.5	0.385		µg/L		77	47 - 130
Acenaphthene	0.5	0.335		µg/L		67	53 - 131
Acenaphthylene	0.5	0.386		µg/L		77	43 - 140
Anthracene	0.5	0.4		µg/L		80	58 - 135

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

Lab Sample ID: 101945-BS1
Matrix: BlankMatrix
Analysis Batch: O-40028

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-40028_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Benz[a]anthracene	0.5	0.389		µg/L		78	55 - 145
Benzo[a]pyrene	0.5	0.386		µg/L		77	51 - 143
Benzo[b]fluoranthene	0.5	0.542		µg/L		108	46 - 165
Benzo[e]pyrene	0.5	0.485		µg/L		97	42 - 152
Benzo[g,h,i]perylene	0.5	0.389		µg/L		78	63 - 133
Benzo[k]fluoranthene	0.5	0.481		µg/L		96	56 - 145
Biphenyl	0.5	0.401		µg/L		80	56 - 119
Chrysene	0.5	0.339		µg/L		68	56 - 141
Dibenz[a,h]anthracene	0.5	0.508		µg/L		102	55 - 150
Dibenzo[a,l]pyrene	0.5	0.344		µg/L		69	50 - 150
Dibenzothiophene	0.5	0.419		µg/L		84	75 - 113
Disalicylidenepropanediamine	50	28.3		µg/L		57	50 - 150
Fluoranthene	0.5	0.428		µg/L		86	60 - 146
Fluorene	0.5	0.4		µg/L		80	58 - 131
Indeno[1,2,3-cd]pyrene	0.5	0.525		µg/L		105	50 - 151
Naphthalene	0.5	0.373		µg/L		75	41 - 126
Perylene	0.5	0.441		µg/L		88	48 - 141
Phenanthrene	0.5	0.416		µg/L		83	67 - 127
Pyrene	0.5	0.426		µg/L		85	54 - 156

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
(d10-Acenaphthene)	*76*		*27 - 133*
(d10-Phenanthrene)	*83*		*43 - 129*
(d12-Chrysene)	*74*		*52 - 144*
(d12-Perylene)	*81*		*36 - 161*
(d8-Naphthalene)	*78*		*25 - 125*

Lab Sample ID: 101945-BS2
Matrix: BlankMatrix
Analysis Batch: O-40028

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-40028_P

Analyte	Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	0.5	0.34		µg/L		68	31 - 128	11	30
1-Methylphenanthrene	0.5	0.482		µg/L		96	66 - 127	26	30
2,3,5-Trimethylnaphthalene	0.5	0.44		µg/L		88	55 - 122	11	30
2,6-Dimethylnaphthalene	0.5	0.337		µg/L		67	48 - 120	19	30
2-Methylnaphthalene	0.5	0.351		µg/L		70	47 - 130	10	30
Acenaphthene	0.5	0.382		µg/L		76	53 - 131	13	30
Acenaphthylene	0.5	0.353		µg/L		71	43 - 140	8	30
Anthracene	0.5	0.446		µg/L		89	58 - 135	11	30
Benz[a]anthracene	0.5	0.461		µg/L		92	55 - 145	16	30
Benzo[a]pyrene	0.5	0.438		µg/L		88	51 - 143	13	30
Benzo[b]fluoranthene	0.5	0.602		µg/L		120	46 - 165	11	30
Benzo[e]pyrene	0.5	0.557		µg/L		111	42 - 152	13	30
Benzo[g,h,i]perylene	0.5	0.434		µg/L		87	63 - 133	11	30
Benzo[k]fluoranthene	0.5	0.53		µg/L		106	56 - 145	10	30
Biphenyl	0.5	0.319		µg/L		64	56 - 119	22	30
Chrysene	0.5	0.391		µg/L		78	56 - 141	14	30

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

Lab Sample ID: 101945-BS2
Matrix: BlankMatrix
Analysis Batch: O-40028

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-40028_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dibenz[a,h]anthracene			0.5	0.572		µg/L		114	55 - 150	11	30
Dibenzo[a,l]pyrene			0.5	0.397		µg/L		79	50 - 150	14	30
Dibenzothiophene			0.5	0.467		µg/L		93	75 - 113	10	30
Disalicylidenepropanediamine			50	34.4		µg/L		69	50 - 150	21	30
Fluoranthene			0.5	0.477		µg/L		95	60 - 146	10	30
Fluorene			0.5	0.443		µg/L		89	58 - 131	11	30
Indeno[1,2,3-cd]pyrene			0.5	0.593		µg/L		119	50 - 151	12	30
Naphthalene			0.5	0.343		µg/L		69	41 - 126	8	30
Perylene			0.5	0.493		µg/L		99	48 - 141	12	30
Phenanthrene			0.5	0.463		µg/L		93	67 - 127	11	30
Pyrene			0.5	0.481		µg/L		96	54 - 156	12	30

Surrogate	*LCS DUP %Recovery*	*LCS DUP Qualifier*	*Limits*
(d10-Acenaphthene)	*78*		*27 - 133*
(d10-Phenanthrene)	*96*		*43 - 129*
(d12-Chrysene)	*87*		*52 - 144*
(d12-Perylene)	*97*		*36 - 161*
(d8-Naphthalene)	*74*		*25 - 125*

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

Lab Sample ID: 22VGH7K14B
Matrix: WATER
Analysis Batch: 22VGH7K14

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	0.020		mg/L			11/28/22 15:18	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE					*11/28/22 15:18*	*1*

Lab Sample ID: 22VGH7K14L
Matrix: WATER
Analysis Batch: 22VGH7K14

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE			0.500	0.463		mg/L		93	60 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOFLUOROBENZENE	*117*		*70 - 130*

Lab Sample ID: 22K264-01M
Matrix: WATER
Analysis Batch: 22VGH7K14

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		0.500	0.483		mg/L		97	50 - 130

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

Lab Sample ID: 22K264-01M
Matrix: WATER
Analysis Batch: 22VGH7K14

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

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
BROMOFLUOROBENZENE	*116*		*60 - 140*

Lab Sample ID: 22K264-01S
Matrix: WATER
Analysis Batch: 22VGH7K14

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		0.500	0.470		mg/L		94	50 - 130	3	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
BROMOFLUOROBENZENE	*115*		*60 - 140*

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO

Lab Sample ID: 22DSL002WB
Matrix: WATER
Analysis Batch: 22DSL002W

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			12/03/22 17:12	1
JP5	ND	U	0.050		mg/L			12/03/22 17:12	1
JP8	ND	U	0.050		mg/L			12/03/22 17:12	1
MOTOR OIL	ND	U	0.050		mg/L			12/03/22 17:12	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE					*12/03/22 17:12*	*1*
HEXACOSANE					*12/03/22 17:12*	*1*

Lab Sample ID: 22DSL002WL
Matrix: WATER
Analysis Batch: 22DSL002W

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
DIESEL			2.50	2.68		mg/L		107	50 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*103*		*60 - 130*
HEXACOSANE	*104*		*60 - 130*

Lab Sample ID: 22J5L002WL
Matrix: WATER
Analysis Batch: 22DSL002W

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
JP5			2.50	2.79		mg/L		112	30 - 160		

Method: 8015 LL DRO/MRO/JP5/JP8 - 8015 - TPH DRO/ORO (Continued)

Lab Sample ID: 22J5L002WL
Matrix: WATER
Analysis Batch: 22DSL002W

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

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOBENZENE	95		60 - 130
HEXACOSANE	99		60 - 130

Lab Sample ID: 22J8L002WL
Matrix: WATER
Analysis Batch: 22DSL002W

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
JP8			2.50	2.99		mg/L		120	30 - 160		

Surrogate	LCS %Recovery	LCS Qualifier	Limits
BROMOBENZENE	89		60 - 130
HEXACOSANE	105		60 - 130

GC/MS Semi VOA

Prep Batch: 25484

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-29023-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	525.2	
380-29023-2	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	525.2	
380-29023-3	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	
380-29023-4	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	525.2	
MB 380-25484/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-25484/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-25484/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-25484/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-29023-3 MS	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	
380-29023-4 DU	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	525.2	

Analysis Batch: 25689

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-29023-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	525.2	25484
380-29023-2	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	525.2	25484
380-29023-3	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	25484
380-29023-4	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	525.2	25484
MB 380-25484/1-A	Method Blank	Total/NA	Water	525.2	25484
LCS 380-25484/3-A	Lab Control Sample	Total/NA	Water	525.2	25484
LCSD 380-25484/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	25484
MRL 380-25484/2-A	Lab Control Sample	Total/NA	Water	525.2	25484
380-29023-3 MS	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	525.2	25484
380-29023-4 DU	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	525.2	25484

Subcontract

Analysis Batch: O-40028

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-29023-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-40028_P
380-29023-2	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-40028_P
380-29023-3	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-40028_P
380-29023-4	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-40028_P
101945-B1	Method Blank	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-40028_P
101945-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-40028_P
101945-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-40028_P

Analysis Batch: 22DSL002W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-29023-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
380-29023-2	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
380-29023-3	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	

Subcontract (Continued)

Analysis Batch: 22DSL002W (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-29023-4	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
22DSL002WB	Method Blank	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	
22DSL002WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	
22J5L002WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	
22J8L002WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	

Analysis Batch: 22VGH7K14

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-29023-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-29023-2	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-29023-3	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-29023-4	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-29023-5	TB: AIEA GULCH WELLS PUMP 1	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-29023-6	TB: AIEA GULCH WELLS PUMP 2	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-29023-7	TB: AIEA WELLS PUMPS 1&2 (260)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-29023-8	TB: HALAWA WELLS UNITS 1 & 2	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
22VGH7K14B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22VGH7K14L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22K264-01M	Matrix Spike	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22K264-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Prep Batch: O-40028_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-29023-1	AIEA GULCH WELLS PUMP 1	Total/NA	Drinking Water	EPA_625	

Subcontract (Continued)

Prep Batch: O-40028_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-29023-2	HALAWA WELLS UNITS 1 & 2	Total/NA	Drinking Water	EPA_625	
380-29023-3	AIEA GULCH WELLS PUMP 2	Total/NA	Drinking Water	EPA_625	
380-29023-4	AIEA WELLS PUMPS 1&2 (260)	Total/NA	Drinking Water	EPA_625	
101945-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
101945-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
101945-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

Lab Chronicle

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

Job ID: 380-29023-1

Client Sample ID: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-29023-1

Date Collected: 11/21/22 10:50

Matrix: Drinking Water

Date Received: 11/22/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			25484	OTM3	EA MON	12/01/22 06:49
Total/NA	Analysis	525.2		1	25689	Q8LA	EA MON	12/05/22 11:07
Total/NA	Prep	EPA_625		1	O-40028_P			11/23/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-40028	YC		12/03/22 13:19
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7K14	SCerva		11/28/22 17:10
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	22DSL002W	SDees		12/03/22 20:16

Client Sample ID: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-29023-2

Date Collected: 11/21/22 10:10

Matrix: Drinking Water

Date Received: 11/22/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			25484	OTM3	EA MON	12/01/22 06:49
Total/NA	Analysis	525.2		1	25689	Q8LA	EA MON	12/05/22 11:26
Total/NA	Prep	EPA_625		1	O-40028_P			11/23/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-40028	YC		12/03/22 15:07
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7K14	SCerva		11/28/22 18:59
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	22DSL002W	SDees		12/03/22 20:35

Client Sample ID: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-29023-3

Date Collected: 11/21/22 11:08

Matrix: Drinking Water

Date Received: 11/22/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			25484	OTM3	EA MON	12/01/22 06:49
Total/NA	Analysis	525.2		1	25689	Q8LA	EA MON	12/05/22 11:46
Total/NA	Prep	EPA_625		1	O-40028_P			11/23/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-40028	YC		12/03/22 16:54
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7K14	SCerva		11/28/22 19:36
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	22DSL002W	SDees		12/03/22 20:53

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

Lab Sample ID: 380-29023-4

Date Collected: 11/21/22 10:29

Matrix: Drinking Water

Date Received: 11/22/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			25484	OTM3	EA MON	12/01/22 06:49
Total/NA	Analysis	525.2		1	25689	Q8LA	EA MON	12/05/22 12:06

Lab Chronicle

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

Job ID: 380-29023-1

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

Lab Sample ID: 380-29023-4
Matrix: Drinking Water
Date Collected: 11/21/22 10:29
Date Received: 11/22/22 09:50

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-40028_P			11/23/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-40028	YC		12/03/22 18:41
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7K14	SCerva		11/28/22 20:12
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	22DSL002W	SDees		12/03/22 21:11

Client Sample ID: TB: AIEA GULCH WELLS PUMP 1

Lab Sample ID: 380-29023-5
Matrix: Water
Date Collected: 11/21/22 10:50
Date Received: 11/22/22 09:50

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	22VGH7K14	SCerva		11/28/22 20:48

Client Sample ID: TB: AIEA GULCH WELLS PUMP 2

Lab Sample ID: 380-29023-6
Matrix: Water
Date Collected: 11/21/22 11:08
Date Received: 11/22/22 09:50

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	22VGH7K14	SCerva		11/28/22 22:01

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

Lab Sample ID: 380-29023-7
Matrix: Water
Date Collected: 11/21/22 10:29
Date Received: 11/22/22 09:50

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	22VGH7K14	SCerva		11/28/22 22:37

Client Sample ID: TB: HALAWA WELLS UNITS 1 & 2

Lab Sample ID: 380-29023-8
Matrix: Water
Date Collected: 11/21/22 10:10
Date Received: 11/22/22 09:50

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	22VGH7K14	SCerva		11/28/22 23:13

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: 380-29023-1

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	Caffeine
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

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	Isophorone
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: 380-29023-1

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: 380-29023-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-29023-1	AIEA GULCH WELLS PUMP 1	Drinking Water	11/21/22 10:50	11/22/22 09:50	HI0000331
380-29023-2	HALAWA WELLS UNITS 1 & 2	Drinking Water	11/21/22 10:10	11/22/22 09:50	HI0000331
380-29023-3	AIEA GULCH WELLS PUMP 2	Drinking Water	11/21/22 11:08	11/22/22 09:50	HI0000331
380-29023-4	AIEA WELLS PUMPS 1&2 (260)	Drinking Water	11/21/22 10:29	11/22/22 09:50	HI0000331
380-29023-5	TB: AIEA GULCH WELLS PUMP 1	Water	11/21/22 10:50	11/22/22 09:50	
380-29023-6	TB: AIEA GULCH WELLS PUMP 2	Water	11/21/22 11:08	11/22/22 09:50	
380-29023-7	TB: AIEA WELLS PUMPS 1&2 (260)	Water	11/21/22 10:29	11/22/22 09:50	
380-29023-8	TB: HALAWA WELLS UNITS 1 & 2	Water	11/21/22 10:10	11/22/22 09:50	

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

Date: 12-16-2022
EMAX Batch No.: 22K264

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-29023

Enclosed is the Laboratory report for samples received on 11/28/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-29023-1	K264-01	11/21/22	WATER	TPH GASOLINE TPH
380-29023-2	K264-02	11/21/22	WATER	TPH GASOLINE TPH
380-29023-3	K264-03	11/21/22	WATER	TPH GASOLINE TPH
380-29023-4	K264-04	11/21/22	WATER	TPH GASOLINE TPH
380-29023-5	K264-05	11/21/22	WATER	TPH GASOLINE
380-29023-6	K264-06	11/21/22	WATER	TPH GASOLINE
380-29023-7	K264-07	11/21/22	WATER	TPH GASOLINE
380-29023-8	K264-08	11/21/22	WATER	TPH GASOLINE
380-29023-1MS	K264-01M	11/21/22	WATER	TPH GASOLINE
380-29023-1MSD	K264-01S	11/21/22	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

22K264

Chain of Custody Record

eurofins | Environment Testing

12/28/2022

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-29269.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: EMAX Laboratories Inc		Accreditations Required (See note): State - Hawaii		Job #: 380-29023-1
Address: 3051 Fujita Street, ,	Due Date Requested: 12/8/2022			
City: Torrance	TAT Requested (days):			
State, Zip: CA, 90505				
Phone:	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#:			

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:

Analysis Requested

	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 LL DRO/MRO/JP5/JP8)/ 8015 LL DRO/MRO/JP5/JP8	Total Number of containers	Special Instructions/Note:
				Preservation Code:							
1	AIEA GULCH WELLS PUMP 1 (380-29023-1)	11/21/22	10:50 Hawaiian		Water			X	X	6	See Attached Instructions
2	HALAWA WELLS UNITS 1 & 2 (380-29023-2)	11/21/22	10:10 Hawaiian		Water			X	X	6	See Attached Instructions
3	AIEA GULCH WELLS PUMP 2 (380-29023-3)	11/21/22	11:08 Hawaiian		Water			X	X	6	See Attached Instructions
4	AIEA WELLS PUMPS 1&2 (260) (380-29023-4)	11/21/22	10:29 Hawaiian		Water			X	X	6	See Attached Instructions
5	TB: AIEA GULCH WELLS PUMP 1 (380-29023-5)	11/21/22	10:50 Hawaiian		Water			X		2	See Attached Instructions
6	TB: AIEA GULCH WELLS PUMP 2 (380-29023-6)	11/21/22	11:08 Hawaiian		Water			X		2	See Attached Instructions
7	TB: AIEA WELLS PUMPS 1&2 (260) (380-29023-7)	11/21/22	10:29 Hawaiian		Water			X		2	See Attached Instructions
8	TB: HALAWA WELLS UNITS 1 & 2 (380-29023-8)	11/21/22	10:10 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 *Unconfirmed*	***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) Primary Deliverable Rank: 2	Special Instructions/QC Requirements:

Empty Kit Relinquished by:		Date:		Time:		Method of Shipment:	
Relinquished by: G. RETTNER	Date/Time: 11/23/2022 09:45	Company EEA	Received by:	Date/Time: 11/28/22 11:54	Company EMAX		
Relinquished by:	Date/Time: 11-28-22 1154	Company EEA	Received by:	Date/Time:	Company		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company		

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No.:
Cooler Temperature(s) °C and Other Remarks: Temp. 1.8	

Ver: 06/08/2021

SAMPLE RECEIPT FORM 1

EMAX LABORATORIES, INC.

Type of Delivery	Airbill / Tracking Number	ECN 22K264 Cecilia Chavez
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient ~~Maria Rivera~~ MR 11/28/22
☐ EMAX Courier ☒ Client Delivery		Date 11/28/22 Time 11:54

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: Relinquished SW 11/23/22

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 1.8 °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
1-4	5, 6, 11, 12, 17, 18, 23, 24	D1	JPS / JP8 not indicated on label	R1
5-7	25-30	D22	2nd timeldate reads: 11/11/22 at 12:00	
8	31, 32	D22	2nd Date reads: 10/13/22	

11/28/22

11/29/22

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

NOTES/OBSERVATIONS:

SAMPLE MATRIX IS DRINKING WATER? ☐ YES ☐ NO

LEGEND:

☐ **Continue to next page.**

Code	Description- Sample Management
(D1)	Analysis is not indicated in label
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 label date/time 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 11/28/22 11/28/22

SRF — Date 11/28/22

PM — Date 11/29/22

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

380-29023

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

SDG#: 22K264

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-29023

SDG : 22K264

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

A total of eight(8) water samples were received on 11/28/22 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. VGH7K14B - 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. VGH7K14L/VGH7K14C 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 K264-01M/K264-01S. 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 : 380-29023

SDG NO. : 22K264
Instrument ID : H7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VGH7K14B	1	NA	11/28/2215:18	11/28/2215:18	AK28005A	AK28004A	22VGH7K14	Method Blank
LCS1W	VGH7K14L	1	NA	11/28/2215:56	11/28/2215:56	AK28006A	AK28004A	22VGH7K14	Lab Control Sample (LCS)
LCD1W	VGH7K14C	1	NA	11/28/2216:33	11/28/2216:33	AK28007A	AK28004A	22VGH7K14	LCS Duplicate
380-29023-1	K264-01	1	NA	11/28/2217:10	11/28/2217:10	AK28008A	AK28004A	22VGH7K14	Field Sample
380-29023-1MS	K264-01M	1	NA	11/28/2217:47	11/28/2217:47	AK28009A	AK28004A	22VGH7K14	Matrix Spike Sample (MS)
380-29023-1MSD	K264-01S	1	NA	11/28/2218:23	11/28/2218:23	AK28010A	AK28004A	22VGH7K14	MS Duplicate (MSD)
380-29023-2	K264-02	1	NA	11/28/2218:59	11/28/2218:59	AK28011A	AK28004A	22VGH7K14	Field Sample
380-29023-3	K264-03	1	NA	11/28/2219:36	11/28/2219:36	AK28012A	AK28004A	22VGH7K14	Field Sample
380-29023-4	K264-04	1	NA	11/28/2220:12	11/28/2220:12	AK28013A	AK28004A	22VGH7K14	Field Sample
380-29023-5	K264-05	1	NA	11/28/2220:48	11/28/2220:48	AK28014A	AK28004A	22VGH7K14	Field Sample
380-29023-6	K264-06	1	NA	11/28/2222:01	11/28/2222:01	AK28016A	AK28015A	22VGH7K14	Field Sample
380-29023-7	K264-07	1	NA	11/28/2222:37	11/28/2222:37	AK28017A	AK28015A	22VGH7K14	Field Sample
380-29023-8	K264-08	1	NA	11/28/2223:13	11/28/2223:13	AK28018A	AK28015A	22VGH7K14	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:	11/21/22 10:50
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	11/28/22 17:10
Sample ID	: 380-29023-1	Date Analyzed:	11/28/22 17:10
Lab Samp ID:	K264-01	Dilution Factor:	1
Lab File ID:	AK28008A	Matrix:	WATER
Ext Btch ID:	22VGH7K14	% Moisture:	NA
Calib. Ref.:	AK28004A	Instrument ID:	H7

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	0.0366	0.0400	91	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:	11/21/22 10:10
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	11/28/22 18:59
Sample ID	: 380-29023-2	Date Analyzed:	11/28/22 18:59
Lab Samp ID:	K264-02	Dilution Factor:	1
Lab File ID:	AK28011A	Matrix:	WATER
Ext Btch ID:	22VGH7K14	% Moisture:	NA
Calib. Ref.:	AK28004A	Instrument ID:	H7

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	0.0391	0.0400	98	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:	11/21/22 11:08
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	11/28/22 19:36
Sample ID	: 380-29023-3	Date Analyzed:	11/28/22 19:36
Lab Samp ID:	K264-03	Dilution Factor:	1
Lab File ID:	AK28012A	Matrix:	WATER
Ext Btch ID:	22VGH7K14	% Moisture:	NA
Calib. Ref.:	AK28004A	Instrument ID:	H7

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	0.0381	0.0400	95	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:	11/21/22 10:29
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	11/28/22 20:12
Sample ID	: 380-29023-4	Date Analyzed:	11/28/22 20:12
Lab Samp ID:	K264-04	Dilution Factor:	1
Lab File ID:	AK28013A	Matrix:	WATER
Ext Btch ID:	22VGH7K14	% Moisture:	NA
Calib. Ref.:	AK28004A	Instrument ID:	H7

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:	11/21/22 10:50
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	11/28/22 20:48
Sample ID	: 380-29023-5	Date Analyzed:	11/28/22 20:48
Lab Samp ID:	K264-05	Dilution Factor:	1
Lab File ID:	AK28014A	Matrix:	WATER
Ext Btch ID:	22VGH7K14	% Moisture:	NA
Calib. Ref.:	AK28004A	Instrument ID:	H7

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	0.0378	0.0400	94	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:	11/21/22 11:08
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	11/28/22 22:01
Sample ID	: 380-29023-6	Date Analyzed:	11/28/22 22:01
Lab Samp ID:	K264-06	Dilution Factor:	1
Lab File ID:	AK28016A	Matrix:	WATER
Ext Btch ID:	22VGH7K14	% Moisture:	NA
Calib. Ref.:	AK28015A	Instrument ID:	H7

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	0.0364	0.0400	91	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:	11/21/22 10:29
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	11/28/22 22:37
Sample ID	: 380-29023-7	Date Analyzed:	11/28/22 22:37
Lab Samp ID:	K264-07	Dilution Factor:	1
Lab File ID:	AK28017A	Matrix:	WATER
Ext Btch ID:	22VGH7K14	% Moisture:	NA
Calib. Ref.:	AK28015A	Instrument ID:	H7

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	0.0359	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:	11/21/22 10:10
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	11/28/22 23:13
Sample ID	: 380-29023-8	Date Analyzed:	11/28/22 23:13
Lab Samp ID:	K264-08	Dilution Factor:	1
Lab File ID:	AK28018A	Matrix:	WATER
Ext Btch ID:	22VGH7K14	% Moisture:	NA
Calib. Ref.:	AK28015A	Instrument ID:	H7

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	0.0385	0.0400	96	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:	11/28/22 15:18
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	11/28/22 15:18
Sample ID	: MBLK1W	Date Analyzed:	11/28/22 15:18
Lab Samp ID:	VGH7K14B	Dilution Factor:	1
Lab File ID:	AK28005A	Matrix:	WATER
Ext Btch ID:	22VGH7K14	% Moisture:	NA
Calib. Ref.:	AK28004A	Instrument ID:	H7

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	0.0378	0.0400	95	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 : 380-29023
BATCH NO. : 22K264
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VGH7K14B	VGH7K14L	VGH7K14C
LAB FILE ID	: AK28005A	AK28006A	AK28007A
DATE PREPARED	: 11/28/22 15:18	11/28/22 15:56	11/28/22 16:33
DATE ANALYZED	: 11/28/22 15:18	11/28/22 15:56	11/28/22 16:33
PREP BATCH	: 22VGH7K14	22VGH7K14	22VGH7K14
CALIBRATION REF	: AK28004A	AK28004A	AK28004A

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	0.463	93	0.500	0.506	101	9	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0466	117	0.0400	0.0504	126	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 : 380-29023
BATCH NO. : 22K264
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-29023-1	380-29023-1MS	380-29023-1MSD
LAB SAMPLE ID	: K264-01	K264-01M	K264-01S
LAB FILE ID	: AK28008A	AK28009A	AK28010A
DATE PREPARED	: 11/28/22 17:10	11/28/22 17:47	11/28/22 18:23
DATE ANALYZED	: 11/28/22 17:10	11/28/22 17:47	11/28/22 18:23
PREP BATCH	: 22VGH7K14	22VGH7K14	22VGH7K14
CALIBRATION REF	: AK28004A	AK28004A	AK28004A

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	0.483	97	0.500	0.470	94	3	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0464	116	0.0400	0.0458	115	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-29023

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22K264

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-29023

SDG : 22K264

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

A total of four(4) water samples were received on 11/28/22 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. DSL002WB - 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. DSL002WL/DSL002WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

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.

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-29023

SDG : 22K264

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of four(4) water samples were received on 11/28/22 to be analyzed for 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. DSL002WB - 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. J5L002WL/J5L002WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

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.

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-29023

SDG : 22K264

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of four(4) water samples were received on 11/28/22 to be analyzed for 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. DSL002WB - 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. J8L002WL/J8L002WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG.

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 : 380-29023

SDG NO. : 22K264
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
MBLK1W	DSL002WB	1	NA	12/03/2217:12	12/01/2213:30	LL03017A	LL03003A	22DSL002W	Method Blank
LCS1W	DSL002WL	1	NA	12/03/2217:31	12/01/2213:30	LL03018A	LL03003A	22DSL002W	Lab Control Sample (LCS)
LCD1W	DSL002WC	1	NA	12/03/2217:49	12/01/2213:30	LL03019A	LL03003A	22DSL002W	LCS Duplicate
380-29023-1	K264-01	1	NA	12/03/2220:16	12/01/2213:30	LL03027A	LL03024A	22DSL002W	Field Sample
380-29023-2	K264-02	1	NA	12/03/2220:35	12/01/2213:30	LL03028A	LL03024A	22DSL002W	Field Sample
380-29023-3	K264-03	1	NA	12/03/2220:53	12/01/2213:30	LL03029A	LL03024A	22DSL002W	Field Sample
380-29023-4	K264-04	1	NA	12/03/2221:11	12/01/2213:30	LL03030A	LL03024A	22DSL002W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-29023

SDG NO. : 22K264
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
MBLK1W	DSL002WB	1	NA	12/03/2217:12	12/01/2213:30	LL03017A	LL03004A	22DSL002W	Method Blank
LCS1W	J5L002WL	1	NA	12/03/2218:08	12/01/2213:30	LL03020A	LL03004A	22DSL002W	Lab Control Sample (LCS)
LCD1W	J5L002WC	1	NA	12/03/2218:26	12/01/2213:30	LL03021A	LL03004A	22DSL002W	LCS Duplicate
380-29023-1	K264-01	1	NA	12/03/2220:16	12/01/2213:30	LL03027A	LL03025A	22DSL002W	Field Sample
380-29023-2	K264-02	1	NA	12/03/2220:35	12/01/2213:30	LL03028A	LL03025A	22DSL002W	Field Sample
380-29023-3	K264-03	1	NA	12/03/2220:53	12/01/2213:30	LL03029A	LL03025A	22DSL002W	Field Sample
380-29023-4	K264-04	1	NA	12/03/2221:11	12/01/2213:30	LL03030A	LL03025A	22DSL002W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-29023

SDG NO. : 22K264
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
MBLK1W	DSL002WB	1	NA	12/03/2217:12	12/01/2213:30	LL03017A	LL03005A	22DSL002W	Method Blank
LCS1W	J8L002WL	1	NA	12/03/2218:44	12/01/2213:30	LL03022A	LL03005A	22DSL002W	Lab Control Sample (LCS)
LCD1W	J8L002WC	1	NA	12/03/2219:03	12/01/2213:30	LL03023A	LL03005A	22DSL002W	LCS Duplicate
380-29023-1	K264-01	1	NA	12/03/2220:16	12/01/2213:30	LL03027A	LL03026A	22DSL002W	Field Sample
380-29023-2	K264-02	1	NA	12/03/2220:35	12/01/2213:30	LL03028A	LL03026A	22DSL002W	Field Sample
380-29023-3	K264-03	1	NA	12/03/2220:53	12/01/2213:30	LL03029A	LL03026A	22DSL002W	Field Sample
380-29023-4	K264-04	1	NA	12/03/2221:11	12/01/2213:30	LL03030A	LL03026A	22DSL002W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/21/22 10:50
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: 380-29023-1	Date Analyzed:	12/03/22 20:16
Lab Samp ID:	22K264-01	Dilution Factor:	1
Lab File ID:	LL03027A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03024A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.028	0.014
Motor Oil	ND	0.055	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.513	0.550	93	60-130
Hexacosane	0.152	0.138	110	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	: 910ml	Final Volume :	5ml
Prepared by	: POreto	Analyzed by :	SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/21/22 10:50
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: 380-29023-1	Date Analyzed:	12/03/22 20:16
Lab Samp ID:	22K264-01	Dilution Factor:	1
Lab File ID:	LL03027A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03025A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.055	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.513	0.550	93	60-130
Hexacosane	0.152	0.138	110	60-130

Notes:
RL : Reporting Limit
Parameter H-C Range
JP5 C8-C18
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/21/22 10:50
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: 380-29023-1	Date Analyzed:	12/03/22 20:16
Lab Samp ID:	22K264-01	Dilution Factor:	1
Lab File ID:	LL03027A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03026A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.055	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.513	0.550	93	60-130
Hexacosane	0.152	0.138	110	60-130

Notes:
RL : Reporting Limit
Parameter H-C Range
JP8 C8-C18
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 910ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/21/22 10:10
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: 380-29023-2	Date Analyzed:	12/03/22 20:35
Lab Samp ID:	22K264-02	Dilution Factor:	1
Lab File ID:	LL03028A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03024A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.025	0.013
Motor Oil	ND	0.051	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.392	0.505	78	60-130
Hexacosane	0.123	0.126	98	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	: 990ml	Final Volume	: 5ml
Prepared by	: POreto	Analyzed by	: SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/21/22 10:10
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: 380-29023-2	Date Analyzed:	12/03/22 20:35
Lab Samp ID:	22K264-02	Dilution Factor:	1
Lab File ID:	LL03028A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03025A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.051	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.392	0.505	78	60-130
Hexacosane	0.123	0.126	98	60-130

Notes:
RL : Reporting Limit
Parameter H-C Range
JP5 C8-C18
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 990ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/21/22 10:10
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: 380-29023-2	Date Analyzed:	12/03/22 20:35
Lab Samp ID:	22K264-02	Dilution Factor:	1
Lab File ID:	LL03028A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03026A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.051	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.392	0.505	78	60-130
Hexacosane	0.123	0.126	98	60-130

Notes:
RL : Reporting Limit
Parameter H-C Range
JP8 C8-C18
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 990ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/21/22 11:08
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: 380-29023-3	Date Analyzed:	12/03/22 20:53
Lab Samp ID:	22K264-03	Dilution Factor:	1
Lab File ID:	LL03029A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03024A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.026	0.013
Motor Oil	ND	0.052	0.026

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.406	0.520	78	60-130
Hexacosane	0.130	0.130	100	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	: 960ml	Final Volume	: 5ml
Prepared by	: POreto	Analyzed by	: SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/21/22 11:08
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: 380-29023-3	Date Analyzed:	12/03/22 20:53
Lab Samp ID:	22K264-03	Dilution Factor:	1
Lab File ID:	LL03029A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03025A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.052	0.026

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.406	0.520	78	60-130
Hexacosane	0.130	0.130	100	60-130

Notes:
RL : Reporting Limit
Parameter H-C Range
JP5 C8-C18
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 960ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/21/22 11:08
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: 380-29023-3	Date Analyzed:	12/03/22 20:53
Lab Samp ID:	22K264-03	Dilution Factor:	1
Lab File ID:	LL03029A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03026A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.052	0.026

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.406	0.520	78	60-130
Hexacosane	0.130	0.130	100	60-130

Notes:
RL : Reporting Limit

Parameter	H-C Range
JP8	C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 960ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/21/22 10:29
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: 380-29023-4	Date Analyzed:	12/03/22 21:11
Lab Samp ID:	22K264-04	Dilution Factor:	1
Lab File ID:	LL03030A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03024A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.025	0.013
Motor Oil	ND	0.051	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.406	0.505	80	60-130
Hexacosane	0.136	0.126	108	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	: 990ml	Final Volume :	5ml
Prepared by	: POreto	Analyzed by :	SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/21/22 10:29
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: 380-29023-4	Date Analyzed:	12/03/22 21:11
Lab Samp ID:	22K264-04	Dilution Factor:	1
Lab File ID:	LL03030A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03025A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.051	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.406	0.505	80	60-130
Hexacosane	0.136	0.126	108	60-130

Notes:
RL : Reporting Limit

Parameter	H-C Range
JP5	C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 990ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/21/22 10:29
Project	: 380-29023	Date Received:	11/28/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: 380-29023-4	Date Analyzed:	12/03/22 21:11
Lab Samp ID:	22K264-04	Dilution Factor:	1
Lab File ID:	LL03030A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03026A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.051	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.406	0.505	80	60-130
Hexacosane	0.136	0.126	108	60-130

Notes:
RL : Reporting Limit

Parameter	H-C Range
JP8	C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount	: 990ml	Final Volume	: 5ml
Prepared by	: POreto	Analyzed by	: SDeeso

QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	12/01/22 13:30
Project	: 380-29023	Date Received:	12/01/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: MBLK1W	Date Analyzed:	12/03/22 17:12
Lab Samp ID:	DSL002WB	Dilution Factor:	1
Lab File ID:	LL03017A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03003A	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	0.436	0.500	87	60-130
Hexacosane	0.138	0.125	110	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	: POreto	Analyzed by	: SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-29023
BATCH NO. : 22K264
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSL002WB	DSL002WL	DSL002WC
LAB FILE ID	: LL03017A	LL03018A	LL03019A
DATE PREPARED	: 12/01/22 13:30	12/01/22 13:30	12/01/22 13:30
DATE ANALYZED	: 12/03/22 17:12	12/03/22 17:31	12/03/22 17:49
PREP BATCH	: 22DSL002W	22DSL002W	22DSL002W
CALIBRATION REF	: LL03003A	LL03003A	LL03003A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.50	2.68	107	2.50	2.66	106	1	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.513	103	0.500	0.509	102	60-130
Hexacosane	0.125	0.130	104	0.125	0.139	111	60-130

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

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	12/01/22 13:30
Project	: 380-29023	Date Received:	12/01/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: MBLK1W	Date Analyzed:	12/03/22 17:12
Lab Samp ID:	DSL002WB	Dilution Factor:	1
Lab File ID:	LL03017A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03004A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.050	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.436	0.500	87	60-130
Hexacosane	0.138	0.125	110	60-130

Notes:
RL : Reporting Limit

Parameter	H-C Range
JP5	C8-C18

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 : POreto Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-29023
BATCH NO. : 22K264
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSL002WB	J5L002WL	J5L002WC
LAB FILE ID	: LL03017A	LL03020A	LL03021A
DATE PREPARED	: 12/01/22 13:30	12/01/22 13:30	12/01/22 13:30
DATE ANALYZED	: 12/03/22 17:12	12/03/22 18:08	12/03/22 18:26
PREP BATCH	: 22DSL002W	22DSL002W	22DSL002W
CALIBRATION REF	: LL03004A	LL03004A	LL03004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.50	2.79	112	2.50	2.80	112	0	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.473	95	0.500	0.520	104	60-130
Hexacosane	0.125	0.124	99	0.125	0.130	104	60-130

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

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	12/01/22 13:30
Project	: 380-29023	Date Received:	12/01/22
Batch No.	: 22K264	Date Extracted:	12/01/22 13:30
Sample ID	: MBLK1W	Date Analyzed:	12/03/22 17:12
Lab Samp ID:	DSL002WB	Dilution Factor:	1
Lab File ID:	LL03017A	Matrix:	WATER
Ext Btch ID:	22DSL002W	% Moisture:	NA
Calib. Ref.:	LL03005A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.050	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.436	0.500	87	60-130
Hexacosane	0.138	0.125	110	60-130

Notes:
RL : Reporting Limit

Parameter	H-C Range
JP8	C8-C18

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 : POreto Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-29023
BATCH NO. : 22K264
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSL002WB	J8L002WL	J8L002WC
LAB FILE ID	: LL03017A	LL03022A	LL03023A
DATE PREPARED	: 12/01/22 13:30	12/01/22 13:30	12/01/22 13:30
DATE ANALYZED	: 12/03/22 17:12	12/03/22 18:44	12/03/22 19:03
PREP BATCH	: 22DSL002W	22DSL002W	22DSL002W
CALIBRATION REF	: LL03005A	LL03005A	LL03005A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.50	2.99	120	2.50	2.99	120	0	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.444	89	0.500	0.505	101	60-130
Hexacosane	0.125	0.131	105	0.125	0.133	106	60-130

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

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

December 08, 2022

Rosalynn Dang
Eurofins Eaton Analytical
750 Royal Oaks Drive
Suite 100
Monrovia, CA 91016-

Project Name: RED-HILL Project # 38001111 Job # 380-29023-1
Physis Project ID: 1407003-341

Dear Rosalynn,

Enclosed are the analytical results for samples submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 11/23/2022. A total of 4 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: 1407003-341

RED-HILL Project # 38001111 Job # 380-29023-1

Total Samples: 4

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
101946	AIEA GULCH WELLS PUMP 1	380-29023-1	11/21/2022	10:50	Samplewater	Not Specified
101947	HALAWA WELLS UNITS 1 & 2	380-29023-2	11/21/2022	10:10	Samplewater	Not Specified
101948	AIEA GULCH WELLS PUMP 2	380-29023-3	11/21/2022	11:08	Samplewater	Not Specified
101949	AIEA WELLS PUMPS 1&2 (260)	380-29023-4	11/21/2022	10:29	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: 1407003-341
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-29023-1

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 101946-R1	**AIEA GULCH WELLS PUMP 1 380-2**	**Matrix:**	**Samplewater**				**Sampled:**	**21-Nov-22**	**10:50**	**Received:**	**23-Nov-22**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40028	23-Nov-22	03-Dec-22
Sample ID: 101947-R1	**HALAWA WELLS UNITS 1 & 2 380-2**	**Matrix:**	**Samplewater**				**Sampled:**	**21-Nov-22**	**10:10**	**Received:**	**23-Nov-22**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40028	23-Nov-22	03-Dec-22
Sample ID: 101948-R1	**AIEA GULCH WELLS PUMP 2 380-2**	**Matrix:**	**Samplewater**				**Sampled:**	**21-Nov-22**	**11:08**	**Received:**	**23-Nov-22**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40028	23-Nov-22	03-Dec-22
Sample ID: 101949-R1	**AIEA WELLS PUMPS 1&2 (260) 380-**	**Matrix:**	**Samplewater**				**Sampled:**	**21-Nov-22**	**10:29**	**Received:**	**23-Nov-22**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40028	23-Nov-22	03-Dec-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 101946-R1	**AIEA GULCH WELLS PUMP 1 380-2**	**Matrix: Samplewater**					**Sampled:**	**21-Nov-22 10:50**		**Received:**	**23-Nov-22**
(d10-Acenaphthene)	EPA 625.1	% Recovery	93	1			Total		O-40028	23-Nov-22	03-Dec-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	93	1			Total		O-40028	23-Nov-22	03-Dec-22
(d12-Chrysene)	EPA 625.1	% Recovery	92	1			Total		O-40028	23-Nov-22	03-Dec-22
(d12-Perylene)	EPA 625.1	% Recovery	85	1			Total		O-40028	23-Nov-22	03-Dec-22
(d8-Naphthalene)	EPA 625.1	% Recovery	73	1			Total		O-40028	23-Nov-22	03-Dec-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22

PHYSIS Project ID: 1407003-341
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-29023-1

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-40028	23-Nov-22	03-Dec-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 101947-R1	**HALAWA WELLS UNITS 1 & 2 380-2**	**Matrix: Samplewater**					**Sampled:**	**21-Nov-22 10:10**		**Received:**	**23-Nov-22**
(d10-Acenaphthene)	EPA 625.1	% Recovery	93	1			Total		O-40028	23-Nov-22	03-Dec-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	93	1			Total		O-40028	23-Nov-22	03-Dec-22
(d12-Chrysene)	EPA 625.1	% Recovery	94	1			Total		O-40028	23-Nov-22	03-Dec-22
(d12-Perylene)	EPA 625.1	% Recovery	88	1			Total		O-40028	23-Nov-22	03-Dec-22
(d8-Naphthalene)	EPA 625.1	% Recovery	86	1			Total		O-40028	23-Nov-22	03-Dec-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22

PHYSIS Project ID: 1407003-341
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-29023-1

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-40028	23-Nov-22	03-Dec-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 101948-R1	**AIEA GULCH WELLS PUMP 2 380-2**	**Matrix: Samplewater**					**Sampled:**	**21-Nov-22 11:08**		**Received:**	**23-Nov-22**
(d10-Acenaphthene)	EPA 625.1	% Recovery	72	1			Total		O-40028	23-Nov-22	03-Dec-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	93	1			Total		O-40028	23-Nov-22	03-Dec-22
(d12-Chrysene)	EPA 625.1	% Recovery	93	1			Total		O-40028	23-Nov-22	03-Dec-22
(d12-Perylene)	EPA 625.1	% Recovery	85	1			Total		O-40028	23-Nov-22	03-Dec-22
(d8-Naphthalene)	EPA 625.1	% Recovery	83	1			Total		O-40028	23-Nov-22	03-Dec-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-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-40028	23-Nov-22	03-Dec-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 101949-R1	**AIEA WELLS PUMPS 1&2 (260) 380-**	**Matrix: Samplewater**					**Sampled:**	**21-Nov-22 10:29**		**Received:**	**23-Nov-22**
(d10-Acenaphthene)	EPA 625.1	% Recovery	89	1			Total		O-40028	23-Nov-22	03-Dec-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	91	1			Total		O-40028	23-Nov-22	03-Dec-22
(d12-Chrysene)	EPA 625.1	% Recovery	92	1			Total		O-40028	23-Nov-22	03-Dec-22
(d12-Perylene)	EPA 625.1	% Recovery	86	1			Total		O-40028	23-Nov-22	03-Dec-22
(d8-Naphthalene)	EPA 625.1	% Recovery	78	1			Total		O-40028	23-Nov-22	03-Dec-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22

PHYSIS Project ID: 1407003-341
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-29023-1

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-40028	23-Nov-22	03-Dec-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40028	23-Nov-22	03-Dec-22

QUALITY CONTROL REPORT

PHYSIS Project ID: 1407003-341
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-29023-1

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: 101945-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**			**Received:**			
		Method: EPA 625.1				Batch ID: O-40028		Prepared: 21-Nov-22			Analyzed: 03-Dec-22			
Disalicylidenepropanediamin	Total	ND	1	0.05	0.1	µg/L								
Sample ID: 101945-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**			**Received:**			
		Method: EPA 625.1				Batch ID: O-40028		Prepared: 21-Nov-22			Analyzed: 03-Dec-22			
Disalicylidenepropanediamin	Total	28.3	1	0.05	0.1	µg/L	50	0	57	50 - 150% PASS				
Sample ID: 101945-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**			**Received:**			
		Method: EPA 625.1				Batch ID: O-40028		Prepared: 21-Nov-22			Analyzed: 03-Dec-22			
Disalicylidenepropanediamin	Total	34.4	1	0.05	0.1	µg/L	50	0	69	50 - 150% PASS		21	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: 101945-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**					**Received:**	
	Method: EPA 625.1					Batch ID: O-40028		Prepared: 21-Nov-22				Analyzed: 03-Dec-22	
(d10-Acenaphthene)	Total	71	1			% Recovery	100	71	27 - 133%	PASS			
(d10-Phenanthrene)	Total	92	1			% Recovery	100	92	43 - 129%	PASS			
(d12-Chrysene)	Total	92	1			% Recovery	100	92	52 - 144%	PASS			
(d12-Perylene)	Total	82	1			% Recovery	100	82	36 - 161%	PASS			
(d8-Naphthalene)	Total	81	1			% Recovery	100	81	25 - 125%	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: 1407003-341
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-29023-1

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							

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: 101945-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
	Method: EPA 625.1					Batch ID: O-40028		Prepared: 21-Nov-22				Analyzed: 03-Dec-22	
(d10-Acenaphthene)	Total	76	1			% Recovery	100	0	76	27 - 133%	PASS		
(d10-Phenanthrene)	Total	83	1			% Recovery	100	0	83	43 - 129%	PASS		
(d12-Chrysene)	Total	74	1			% Recovery	100	0	74	52 - 144%	PASS		
(d12-Perylene)	Total	81	1			% Recovery	100	0	81	36 - 161%	PASS		
(d8-Naphthalene)	Total	78	1			% Recovery	100	0	78	25 - 125%	PASS		
1-Methylnaphthalene	Total	0.382	1	0.001	0.005	µg/L	0.5	0	76	31 - 128%	PASS		
1-Methylphenanthrene	Total	0.368	1	0.001	0.005	µg/L	0.5	0	74	66 - 127%	PASS		
2,3,5-Trimethylnaphthalene	Total	0.397	1	0.001	0.005	µg/L	0.5	0	79	55 - 122%	PASS		
2,6-Dimethylnaphthalene	Total	0.404	1	0.001	0.005	µg/L	0.5	0	81	48 - 120%	PASS		
2-Methylnaphthalene	Total	0.385	1	0.001	0.005	µg/L	0.5	0	77	47 - 130%	PASS		
Acenaphthene	Total	0.335	1	0.001	0.005	µg/L	0.5	0	67	53 - 131%	PASS		
Acenaphthylene	Total	0.386	1	0.001	0.005	µg/L	0.5	0	77	43 - 140%	PASS		
Anthracene	Total	0.4	1	0.001	0.005	µg/L	0.5	0	80	58 - 135%	PASS		
Benz[a]anthracene	Total	0.389	1	0.001	0.005	µg/L	0.5	0	78	55 - 145%	PASS		
Benzo[a]pyrene	Total	0.386	1	0.001	0.005	µg/L	0.5	0	77	51 - 143%	PASS		
Benzo[b]fluoranthene	Total	0.542	1	0.001	0.005	µg/L	0.5	0	108	46 - 165%	PASS		
Benzo[e]pyrene	Total	0.485	1	0.001	0.005	µg/L	0.5	0	97	42 - 152%	PASS		
Benzo[g,h,i]perylene	Total	0.389	1	0.001	0.005	µg/L	0.5	0	78	63 - 133%	PASS		
Benzo[k]fluoranthene	Total	0.481	1	0.001	0.005	µg/L	0.5	0	96	56 - 145%	PASS		
Biphenyl	Total	0.401	1	0.001	0.005	µg/L	0.5	0	80	56 - 119%	PASS		
Chrysene	Total	0.339	1	0.001	0.005	µg/L	0.5	0	68	56 - 141%	PASS		
Dibenz[a,h]anthracene	Total	0.508	1	0.001	0.005	µg/L	0.5	0	102	55 - 150%	PASS		
Dibenzo[a,l]pyrene	Total	0.344	1	0.001	0.005	µg/L	0.5	0	69	50 - 150%	PASS		
Dibenzothiophene	Total	0.419	1	0.001	0.005	µg/L	0.5	0	84	75 - 113%	PASS		

PHYSIS Project ID: 1407003-341
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-29023-1

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	0.428	1	0.001	0.005	µg/L	0.5	0	86	60 - 146%	PASS			
Fluorene	Total	0.4	1	0.001	0.005	µg/L	0.5	0	80	58 - 131%	PASS			
Indeno[1,2,3-cd]pyrene	Total	0.525	1	0.001	0.005	µg/L	0.5	0	105	50 - 151%	PASS			
Naphthalene	Total	0.373	1	0.001	0.005	µg/L	0.5	0	75	41 - 126%	PASS			
Perylene	Total	0.441	1	0.001	0.005	µg/L	0.5	0	88	48 - 141%	PASS			
Phenanthrene	Total	0.416	1	0.001	0.005	µg/L	0.5	0	83	67 - 127%	PASS			
Pyrene	Total	0.426	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	QA CODEc
Sample ID: 101945-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**		
		Method: EPA 625.1				Batch ID: O-40028		Prepared: 21-Nov-22				Analyzed: 03-Dec-22		
(d10-Acenaphthene)	Total	78	1			% Recovery	100	0	78	27 - 133%	PASS	3	30	PASS
(d10-Phenanthrene)	Total	96	1			% Recovery	100	0	96	43 - 129%	PASS	15	30	PASS
(d12-Chrysene)	Total	87	1			% Recovery	100	0	87	52 - 144%	PASS	16	30	PASS
(d12-Perylene)	Total	97	1			% Recovery	100	0	97	36 - 161%	PASS	18	30	PASS
(d8-Naphthalene)	Total	74	1			% Recovery	100	0	74	25 - 125%	PASS	5	30	PASS
1-Methylnaphthalene	Total	0.34	1	0.001	0.005	µg/L	0.5	0	68	31 - 128%	PASS	11	30	PASS
1-Methylphenanthrene	Total	0.482	1	0.001	0.005	µg/L	0.5	0	96	66 - 127%	PASS	26	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.44	1	0.001	0.005	µg/L	0.5	0	88	55 - 122%	PASS	11	30	PASS
2,6-Dimethylnaphthalene	Total	0.337	1	0.001	0.005	µg/L	0.5	0	67	48 - 120%	PASS	19	30	PASS
2-Methylnaphthalene	Total	0.351	1	0.001	0.005	µg/L	0.5	0	70	47 - 130%	PASS	10	30	PASS
Acenaphthene	Total	0.382	1	0.001	0.005	µg/L	0.5	0	76	53 - 131%	PASS	13	30	PASS
Acenaphthylene	Total	0.353	1	0.001	0.005	µg/L	0.5	0	71	43 - 140%	PASS	8	30	PASS
Anthracene	Total	0.446	1	0.001	0.005	µg/L	0.5	0	89	58 - 135%	PASS	11	30	PASS
Benz[a]anthracene	Total	0.461	1	0.001	0.005	µg/L	0.5	0	92	55 - 145%	PASS	16	30	PASS
Benzo[a]pyrene	Total	0.438	1	0.001	0.005	µg/L	0.5	0	88	51 - 143%	PASS	13	30	PASS
Benzo[b]fluoranthene	Total	0.602	1	0.001	0.005	µg/L	0.5	0	120	46 - 165%	PASS	11	30	PASS
Benzo[e]pyrene	Total	0.557	1	0.001	0.005	µg/L	0.5	0	111	42 - 152%	PASS	13	30	PASS
Benzo[g,h,i]perylene	Total	0.434	1	0.001	0.005	µg/L	0.5	0	87	63 - 133%	PASS	11	30	PASS
Benzo[k]fluoranthene	Total	0.53	1	0.001	0.005	µg/L	0.5	0	106	56 - 145%	PASS	10	30	PASS
Biphenyl	Total	0.319	1	0.001	0.005	µg/L	0.5	0	64	56 - 119%	PASS	22	30	PASS
Chrysene	Total	0.391	1	0.001	0.005	µg/L	0.5	0	78	56 - 141%	PASS	14	30	PASS
Dibenz[a,h]anthracene	Total	0.572	1	0.001	0.005	µg/L	0.5	0	114	55 - 150%	PASS	11	30	PASS
Dibenzo[a,l]pyrene	Total	0.397	1	0.001	0.005	µg/L	0.5	0	79	50 - 150%	PASS	14	30	PASS
Dibenzothiophene	Total	0.467	1	0.001	0.005	µg/L	0.5	0	93	75 - 113%	PASS	10	30	PASS

PHYSIS Project ID: 1407003-341
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-29023-1

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	0.477	1	0.001	0.005	µg/L	0.5	0	95	60 - 146%	PASS	10	30	PASS	
Fluorene	Total	0.443	1	0.001	0.005	µg/L	0.5	0	89	58 - 131%	PASS	11	30	PASS	
Indeno[1,2,3-cd]pyrene	Total	0.593	1	0.001	0.005	µg/L	0.5	0	119	50 - 151%	PASS	12	30	PASS	
Naphthalene	Total	0.343	1	0.001	0.005	µg/L	0.5	0	69	41 - 126%	PASS	8	30	PASS	
Perylene	Total	0.493	1	0.001	0.005	µg/L	0.5	0	99	48 - 141%	PASS	12	30	PASS	
Phenanthrene	Total	0.463	1	0.001	0.005	µg/L	0.5	0	93	67 - 127%	PASS	11	30	PASS	
Pyrene	Total	0.481	1	0.001	0.005	µg/L	0.5	0	96	54 - 156%	PASS	12	30	PASS	

TENTATIVELY IDENTIFIED COMPOUNDS

Sample ID: 101946

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
28.9974	5.4965	1111	Anthracene-D10-	1719-06-8	96
26.2829	10.4534	2113	Benzoic acid, 2-ethylhexyl ester	5444-75-7	99
10.4303	1.1316	229	Succinimide	123-56-8	99

Concentration estimated using the response for Anthracene-d10

Sample ID: 101947

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
28.9935	7.3551	1111	Anthracene-D10-	1719-06-8	97
26.2846	13.6920	2068	Benzoic acid, 2-ethylhexyl ester	5444-75-7	99
10.4348	1.7136	259	Succinimide	123-56-8	99

Concentration estimated using the response for Anthracene-d10

Sample ID: 101948

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
28.9955	6.5435	1111	Anthracene-D10-	1719-06-8	96
26.2843	10.7395	1824	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98
10.4321	1.1052	188	Succinimide	123-56-8	98

Concentration estimated using the response for Anthracene-d10

Sample ID: 101949

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
28.9871	6.0623	1111	Anthracene-D10-	1719-06-8	96
26.2813	14.1891	2601	Benzoic acid, 2-ethylhexyl ester	5444-75-7	99
10.4334	1.0816	198	Succinimide	123-56-8	99

Concentration estimated using the response for Anthracene-d10

Sample ID: Lab Blank Batch O-40028

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
28.9887	7.8272	1111	Anthracene-D10-	1719-06-8	97
26.2813	17.9453	2547	Benzoic acid, 2-ethylhexyl ester	5444-75-7	98

Concentration estimated using the response for Anthracene-d10

CHAIN OF CUSTODY

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

Chain of Custody Record

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12/28/2022

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-29270.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: Physis Environmental Laboratories		Accreditations Required (See note): State - Hawaii		Job #: 380-29023-1
Address: 1904 Wright Circle, ,	Due Date Requested: 12/8/2022			
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 - 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 (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 (380-29023-1)	11/21/22	10:50 Hawaiian		Water			X	2	See Attached Instructions
HALAWA WELLS UNITS 1 & 2 (380-29023-2)	11/21/22	10:10 Hawaiian		Water			X	2	See Attached Instructions
AIEA GULCH WELLS PUMP 2 (380-29023-3)	11/21/22	11:08 Hawaiian		Water			X	2	See Attached Instructions
AIEA WELLS PUMPS 1&2 (260) (380-29023-4)	11/21/22	10:29 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 are 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	[signature]	11/23/22 1020	EOA	[signature]	11/23/22 1020	Physis
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	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

Shipping Order Form

eurofins | Environment Testing

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

Shipping Order ID: 19982 **Ship Via: Lab Courier (UNASSIGNED)** **Due On: 11/23/2022 11:59:00PM**

Ship To Information

Project Manager:

Company Name: *Physis Environmental Laboratories*
Attention: *Shipping/Receiving*
Address 1: *1904 Wright Circle*
Address 2:
Address 3:
City: *Anaheim*
State: *CA*
Zip: *92806*
Phone #:
Project Ref:

Notes to Bottle/Shipping Department

Shipping Method: **Standard packing**

- ☑ Ready to Fill
- ☐ Preprinted COC
  - ☐ 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.

ICOC No:
380-29270

Containers

Count	Container Type	Preservative
8	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate

Subcontract Method Instructions

Sample IDs	Method	Method Description	Method Comments
1, 2, 3, 4	SUBCONTRACT	SUB (625 PAH Physis LL (EAL) + TICs)/ 625 PAH Physis LL (EAL) + TICs	PAH Fraction TICs

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

Bottle Order Information

Bottle Order:
Bottle Order #:
Request From Client: 11/23/2022
Date Order Posted:
Order Status: Ready To Process
Prepared By:
Deliver By Date: ***11/23/2022 11:59:00PM***
Lab Project Number:
PWSID:

Order Completion Information

Creator: Gustavo Sanchez Velasquez
Filled by:
Sent Date:
Sent Via:
Tracking #:

12/28/2022

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative | Comment

Page 134 of 140

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.

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

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

Project Iteration ID: 1407003-341
Client Name: Eurofins Eaton Analytical
Project Name: RED-HILL Project # 38001111 Job # 380-29023-1
COC Page Number: 6 of 6
Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: [illegible]
2. Date Received: 11/23/22
3. Time Received: 1020
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)
   - 1 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): 5.4 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: [illegible]

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:

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: BAILEY	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-9764-2757.1
Client Contact: Dr. Ron Fenstemacher	Phone: 1-808-748-6840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 1 of 3
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State, Zip: HI, 96843	Compliance Project: Δ 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	nov. 21, 2022	1050	G	Water			X	X	X	X	X		COOLER #2 (630A) 3.8°-3.7° GEL FROZEN
AIEA GULCH WELLS PUMP 2				Water									TRACKING # 7705 5765 2399
AIEA WELLS PUMPS 1&2 (260)				Water									COOLER #3 (630A) 5.3°-5.2° GEL FROZEN
HALAWA SHAFT				Water									TRACKING # 7705 5765 1830 (FED EX)
HALAWA WELLS UNITS 1&2				Water									
MOANALUA WELLS				Water									
AIEA GULCH WELLS PUMP 1				Water									
AIEA GULCH WELLS PUMP 2				Water									
AIEA WELLS PUMPS 1&2 (260)				Water									
HALAWA SHAFT				Water									
HALAWA WELLS UNITS 1&2	nov. 21, 2022	1010	G	Water			X	X	X	X	X		

380-29023 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: COOLER #1 (FED EX) 7705 5765 2572

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

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
BAILEY	nov. 21, 2022 1400	HBWS	4401	11/22/22 9:50	EST
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: 6184 13.0-02=2.8 GEL

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: BAILEY	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-9764-2757.2
Client Contact: Dr. Ron Fenstemacher	Phone: 1-808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 2 of 3
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State, Zip: HI, 96843	Compliance Project: Δ 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		
MOANALUA WELLS				Water									COOLER #2 - 7705 5765 2399
AIEA GULCH WELLS PUMP 1				Water									(630A) 3.8° 3.7° GEL FROZEN
AIEA GULCH WELLS PUMP 2	nov. 21, 2022	1108	G	Water			X	X	X	X	X		COOLER #3 7705 5765 1830
AIEA WELLS PUMPS 1&2 (260)				Water									(630A) 5.3°-5.2 GEL FROZEN
HALAWA SHAFT				Water									(FED EX)
HALAWA WELLS UNITS 1&2				Water									
MOANALUA WELLS				Water									
AIEA GULCH WELLS PUMP 1				Water									
AIEA GULCH WELLS PUMP 2				Water									
AIEA WELLS PUMPS 1&2 (260)	nov. 21, 2022	1029	G	Water			X	X	X	X	X		
HALAWA SHAFT				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: COOLER #1

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FED EX 7705 5765 2572

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
BAILEY	nov. 21, 2022 1400	HBWS	[signature]	11/22/22 9:50	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: 6(8A) / 3.0 → 2.2, 8 GEL

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: BAILEY	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-9764-2757.3
Client Contact: Dr. Ron Fenstemacher	Phone: 1-808-748-5840	E-Mail: Rachelle.Arada@et.eurofinsus.com	State of Origin:	Page: Page 3 of 3
Company: City & County of Honolulu	PWSID:			Job #:
Address: 630 South Beretania Street Chemistry Lab	Due Date Requested:			
City: Honolulu	TAT Requested (days):			
State, Zip: HI, 96843	Compliance Project: Δ 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		
HALAWA WELLS UNITS 1&2				Water									COOLER #2 7705 5765 2399
MOANALUA WELLS				Water									(630A) 3.8°-3.7° GEL FROZEN
TB AIEA GULCH WELLS PUMP1	nov. 21, 2022	1050		Water							X		COOLER #3 7705 5765 1830
TB AIEA GULCH WELLS PUMP2	nov. 21, 2022	1108		Water							X		(630A) 5.3°-5.2° GEL FROZEN
TB AIEA WELLS PUMPS 1&2 (260)	nov. 21, 2022	1029		Water							X		(FED EX)
TB HALAWA SHAFT				Water									
TB HALAWA WELLS UNITS 1&2	nov. 21, 2022	1010		Water							X		
TB MOANALUA WELLS				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: COOLER #1

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: 7705 5765 2572 (FED EX)

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
BAILEY	nov. 21, 2022 1400	HBWS	4401	11/22/22 9:50	
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: 6 (8A) / 3.0-0 C = 2.8 GEL

Order Information

Bottle Order: RUSH RED-HILL WEEKLY
Bottle Order #: 2757
Request From Client: 7/20/2022
Date Order Posted: 7/20/2022 11:12:54AM
Order Status: Ready To Process
Prepared By: Davis Haley
Deliver By Date: ***11/21/2022 11:59:00PM***
Lab Project Number: 38001111
PWSID:

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 #
6	2	12	Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	Water	Normal	625 PAH	
6	4	24	Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Normal		
6	2	12	Amber Glass 1 L - NaThiosulfate 8mL HCL	Sodium Thiosulfate/Hydrochloric Acid	SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	Water	Normal		
6	2	12	Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	525.2_PREC - (MOD) 525plus Plus TICs	Water	Normal		
6	2	12	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	12
Amber Glass 1 liter - Sodium Thiosulfate	Sodium Thiosulfate	12
Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	12
VOA Vial 40mL - NaThiosulfate/HCL	Sodium Thiosulfate/Hydrochloric Aci	12
Voa Vial 40ml - SodiumThio w/HCl-dropper	Sodium Thiosulfate	24
	Total Bottles:	72

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

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-29023-1

Login Number: 29023
List Number: 1
Creator: Elyas, Matthew

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	