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 7:47:17 PM

JOB DESCRIPTION

Rush Weekly Red Hill
RUSH Weekly Red Hill

JOB NUMBER

380-27950-1

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

See page two for job notes and contact information.

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

Rachelle Arada

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Table of Contents

Cover Page 1
Table of Contents 3
Definitions/Glossary 4
Case Narrative 5
Detection Summary 6
Client Sample Results 7
Action Limit Summary 14
Surrogate Summary 15
QC Sample Results 19
QC Association Summary 46
Lab Chronicle 49
Certification Summary 50
Method Summary 52
Sample Summary 53
Subcontract Data 54
Chain of Custody 119
Receipt Checklists 122

Definitions/Glossary

Client: City & County of Honolulu
Project/Site: Rush Weekly Red Hill

Job ID: 380-27950-1

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

Subcontract

Qualifier	Qualifier Description
U	This analyte was not detected.

Glossary

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

Job ID: 380-27950-1

Laboratory: Eurofins Eaton Monrovia

Narrative

Job Narrative
380-27950-1

Comments
No additional comments.

Receipt
The samples were received on 11/10/2022 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, an where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.9º 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
Method 525.2: The following sample was received with insufficient volume: HALAWA SHAFT (331-241-TP401) (380-27950-1).

No additional analytical or quality issues were noted, other than those described above or 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: Rush Weekly Red Hill

Job ID: 380-27950-1

Client Sample ID: HALAWA SHAFT (331-241-TP401) — Lab Sample ID: 380-27950-1
PWSID Number: HI0000331

No Detections.

Client Sample ID: MOANALUA WELLS (331-223-TP202) — Lab Sample ID: 380-27950-2
PWSID Number: HI0000331

No Detections.

Client Sample ID: TB:HALAWA SHAFT (331-241-TP401) — Lab Sample ID: 380-27950-3

No Detections.

Client Sample ID: TB:MOANALUA WELLS (331-223-TP202) — Lab Sample ID: 380-27950-4

No Detections.

This Detection Summary does not include radiochemical test results.

Client: City & County of Honolulu
Project/Site: Rush Weekly Red Hill

Job ID: 380-27950-1

Client Sample ID: HALAWA SHAFT (331-241-TP401)
Date Collected: 11/07/22 10:10
Date Received: 11/10/22 10:00

Lab Sample ID: 380-27950-1
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		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
2,4'-DDE	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
2,4'-DDT	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
2,4-Dinitrotoluene	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
2,6-Dinitrotoluene	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
4,4'-DDD	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
4,4'-DDE	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
4,4'-DDT	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Acenaphthene	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Acenaphthylene	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Acetochlor	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Alachlor	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
alpha-BHC	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
alpha-Chlordane	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Anthracene	ND		0.022		ug/L		11/12/22 09:24	11/14/22 17:50	1
Atrazine	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Benz(a)anthracene	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Benzo[a]pyrene	ND		0.022		ug/L		11/12/22 09:24	11/14/22 17:50	1
Benzo[b]fluoranthene	ND		0.022		ug/L		11/12/22 09:24	11/14/22 17:50	1
Benzo[g,h,i]perylene	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Benzo[k]fluoranthene	ND		0.022		ug/L		11/12/22 09:24	11/14/22 17:50	1
beta-BHC	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Bromacil	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Butachlor	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Butylbenzylphthalate	ND		0.56		ug/L		11/12/22 09:24	11/14/22 17:50	1
Caffeine	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Chlorobenzilate	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Chloroneb	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Chlorothalonil (Draconil, Bravo)	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Chlorpyrifos	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Chrysene	ND		0.022		ug/L		11/12/22 09:24	11/14/22 17:50	1
delta-BHC	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Di(2-ethylhexyl)adipate	ND		0.67		ug/L		11/12/22 09:24	11/14/22 17:50	1
Bis(2-ethylhexyl) phthalate	ND		0.67		ug/L		11/12/22 09:24	11/14/22 17:50	1
Diazinon (Qualitative)	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Dibenz(a,h)anthracene	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Diclorvos (DDVP)	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Dieldrin	ND		0.22		ug/L		11/12/22 09:24	11/14/22 17:50	1
Diethylphthalate	ND		0.56		ug/L		11/12/22 09:24	11/14/22 17:50	1
Dimethoate	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Dimethylphthalate	ND		0.56		ug/L		11/12/22 09:24	11/14/22 17:50	1
Di-n-butyl phthalate	ND		1.1		ug/L		11/12/22 09:24	11/14/22 17:50	1
Di-n-octyl phthalate	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Endosulfan I (Alpha)	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Endosulfan II (Beta)	ND	^3+	0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Endosulfan sulfate	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Endrin	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Endrin aldehyde	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
EPTC	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1

Client Sample ID: HALAWA SHAFT (331-241-TP401)
Date Collected: 11/07/22 10:10
Date Received: 11/10/22 10:00

Lab Sample ID: 380-27950-1
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		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Fluorene	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
gamma-Chlordane	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Heptachlor	ND		0.045		ug/L		11/12/22 09:24	11/14/22 17:50	1
Heptachlor epoxide (isomer B)	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Hexachlorobenzene	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Hexachlorocyclopentadiene	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Indeno[1,2,3-cd]pyrene	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Isophorone	ND		0.56		ug/L		11/12/22 09:24	11/14/22 17:50	1
Lindane	ND		0.045		ug/L		11/12/22 09:24	11/14/22 17:50	1
Malathion	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Methoxychlor	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Metolachlor	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Metribuzin	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Molinate	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Naphthalene	ND		0.34		ug/L		11/12/22 09:24	11/14/22 17:50	1
Parathion	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Pendimethalin (Penoxaline)	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Total Permethrin (mixed isomers)	ND		0.22		ug/L		11/12/22 09:24	11/14/22 17:50	1
Phenanthrene	ND		0.045		ug/L		11/12/22 09:24	11/14/22 17:50	1
Propachlor	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Pyrene	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Simazine	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Terbacil	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Terbuthylazine	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1
Thiobencarb	ND		0.22		ug/L		11/12/22 09:24	11/14/22 17:50	1
trans-Nonachlor	ND		0.056		ug/L		11/12/22 09:24	11/14/22 17:50	1
Trifluralin	ND		0.11		ug/L		11/12/22 09:24	11/14/22 17:50	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*11/12/22 09:24*	*11/14/22 17:50*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*98*		*70 - 130*	*11/12/22 09:24*	*11/14/22 17:50*	*1*
Triphenylphosphate	*115*		*70 - 130*	*11/12/22 09:24*	*11/14/22 17:50*	*1*
Perylene-d12	*98*		*70 - 130*	*11/12/22 09:24*	*11/14/22 17:50*	*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		11/14/22 00:00	11/24/22 18:44	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Acenaphthene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Acenaphthylene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Anthracene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1

Client Sample ID: HALAWA SHAFT (331-241-TP401)

Lab Sample ID: 380-27950-1
Date Collected: 11/07/22 10:10
Matrix: Drinking Water
Date Received: 11/10/22 10:00
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		11/14/22 00:00	11/24/22 18:44	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Biphenyl	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Chrysene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Dibenzothiophene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		11/14/22 00:00	11/24/22 18:44	1
Fluoranthene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Fluorene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Naphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Perylene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Phenanthrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1
Pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 18:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*78*		*45 - 118*	*11/14/22 00:00*	*11/24/22 18:44*	*1*
(d10-Phenanthrene)	*73*		*56 - 123*	*11/14/22 00:00*	*11/24/22 18:44*	*1*
(d12-Chrysene)	*59*		*36 - 142*	*11/14/22 00:00*	*11/24/22 18:44*	*1*
(d12-Perylene)	*52*		*36 - 161*	*11/14/22 00:00*	*11/24/22 18:44*	*1*
(d8-Naphthalene)	*102*		*20 - 112*	*11/14/22 00:00*	*11/24/22 18:44*	*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			11/14/22 19:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*97*		*60 - 140*		*11/14/22 19:08*	*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	0.027		mg/L			11/22/22 16:56	1
JP5	ND	U	0.054		mg/L			11/22/22 16:56	1
JP8	ND	U	0.054		mg/L			11/22/22 16:56	1
MOTOR OIL	ND	U	0.054		mg/L			11/22/22 16:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*82*		*60 - 130*		*11/22/22 16:56*	*1*
HEXACOSANE	*93*		*60 - 130*		*11/22/22 16:56*	*1*

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-27950-2
Date Collected: 11/09/22 09:53
Matrix: Drinking Water
Date Received: 11/10/22 10:00
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		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
2,4'-DDE	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
2,4'-DDT	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Date Collected: 11/09/22 09:53
Date Received: 11/10/22 10:00

Lab Sample ID: 380-27950-2
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		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
2,6-Dinitrotoluene	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
4,4'-DDD	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
4,4'-DDE	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
4,4'-DDT	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Acenaphthene	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Acenaphthylene	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Acetochlor	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Alachlor	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
alpha-BHC	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
alpha-Chlordane	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Anthracene	ND		0.020		ug/L		11/16/22 11:31	11/18/22 16:51	1
Atrazine	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Benz(a)anthracene	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Benzo[a]pyrene	ND		0.020		ug/L		11/16/22 11:31	11/18/22 16:51	1
Benzo[b]fluoranthene	ND		0.020		ug/L		11/16/22 11:31	11/18/22 16:51	1
Benzo[g,h,i]perylene	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Benzo[k]fluoranthene	ND		0.020		ug/L		11/16/22 11:31	11/18/22 16:51	1
beta-BHC	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Bromacil	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Butachlor	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Butylbenzylphthalate	ND		0.50		ug/L		11/16/22 11:31	11/18/22 16:51	1
Caffeine	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Chlorobenzilate	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Chloroneb	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Chlorothalonil (Draconil, Bravo)	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Chlorpyrifos	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Chrysene	ND		0.020		ug/L		11/16/22 11:31	11/18/22 16:51	1
delta-BHC	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Di(2-ethylhexyl)adipate	ND		0.60		ug/L		11/16/22 11:31	11/18/22 16:51	1
Bis(2-ethylhexyl) phthalate	ND		0.60		ug/L		11/16/22 11:31	11/18/22 16:51	1
Diazinon (Qualitative)	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Dibenz(a,h)anthracene	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Diclorvos (DDVP)	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Dieldrin	ND		0.20		ug/L		11/16/22 11:31	11/18/22 16:51	1
Diethylphthalate	ND		0.50		ug/L		11/16/22 11:31	11/18/22 16:51	1
Dimethoate	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Dimethylphthalate	ND		0.50		ug/L		11/16/22 11:31	11/18/22 16:51	1
Di-n-butyl phthalate	ND		1.0		ug/L		11/16/22 11:31	11/18/22 16:51	1
Di-n-octyl phthalate	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Endosulfan I (Alpha)	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Endosulfan II (Beta)	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Endosulfan sulfate	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Endrin	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Endrin aldehyde	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
EPTC	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Fluoranthene	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Fluorene	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
gamma-Chlordane	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Date Collected: 11/09/22 09:53
Date Received: 11/10/22 10:00

Lab Sample ID: 380-27950-2

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		0.040		ug/L		11/16/22 11:31	11/18/22 16:51	1
Heptachlor epoxide (isomer B)	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Hexachlorobenzene	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Hexachlorocyclopentadiene	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Indeno[1,2,3-cd]pyrene	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Isophorone	ND		0.50		ug/L		11/16/22 11:31	11/18/22 16:51	1
Lindane	ND		0.040		ug/L		11/16/22 11:31	11/18/22 16:51	1
Malathion	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Methoxychlor	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Metolachlor	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Metribuzin	ND	^3+	0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Molinate	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Naphthalene	ND		0.30		ug/L		11/16/22 11:31	11/18/22 16:51	1
Parathion	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Pendimethalin (Penoxaline)	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		11/16/22 11:31	11/18/22 16:51	1
Phenanthrene	ND		0.040		ug/L		11/16/22 11:31	11/18/22 16:51	1
Propachlor	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Pyrene	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Simazine	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Terbacil	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Terbuthylazine	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1
Thiobencarb	ND		0.20		ug/L		11/16/22 11:31	11/18/22 16:51	1
trans-Nonachlor	ND		0.050		ug/L		11/16/22 11:31	11/18/22 16:51	1
Trifluralin	ND		0.10		ug/L		11/16/22 11:31	11/18/22 16:51	1

Tentatively Identified Compound	*Est. Result*	*Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Tentatively Identified Compound	*None*		*ug/L*				*11/16/22 11:31*	*11/18/22 16:51*	*1*

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*93*		*70 - 130*	*11/16/22 11:31*	*11/18/22 16:51*	*1*
Triphenylphosphate	*91*		*70 - 130*	*11/16/22 11:31*	*11/18/22 16:51*	*1*
Perylene-d12	*91*		*70 - 130*	*11/16/22 11:31*	*11/18/22 16:51*	*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		11/14/22 00:00	11/24/22 20:27	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Acenaphthene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Acenaphthylene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Anthracene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-27950-2
Date Collected: 11/09/22 09:53
Matrix: Drinking Water
Date Received: 11/10/22 10:00
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		11/14/22 00:00	11/24/22 20:27	1
Chrysene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Dibenzothiophene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		11/14/22 00:00	11/24/22 20:27	1
Fluoranthene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Fluorene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Naphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Perylene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Phenanthrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1
Pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 20:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*84*		*45 - 118*	*11/14/22 00:00*	*11/24/22 20:27*	*1*
(d10-Phenanthrene)	*71*		*56 - 123*	*11/14/22 00:00*	*11/24/22 20:27*	*1*
(d12-Chrysene)	*59*		*36 - 142*	*11/14/22 00:00*	*11/24/22 20:27*	*1*
(d12-Perylene)	*48*		*36 - 161*	*11/14/22 00:00*	*11/24/22 20:27*	*1*
(d8-Naphthalene)	*100*		*20 - 112*	*11/14/22 00:00*	*11/24/22 20:27*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.020		mg/L			11/14/22 20:57	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*102*		*60 - 140*		*11/14/22 20:57*	*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	0.027		mg/L			11/22/22 17:15	1
JP5	ND	U	0.053		mg/L			11/22/22 17:15	1
JP8	ND	U	0.053		mg/L			11/22/22 17:15	1
MOTOR OIL	ND	U	0.053		mg/L			11/22/22 17:15	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*91*		*60 - 130*		*11/22/22 17:15*	*1*
HEXACOSANE	*103*		*60 - 130*		*11/22/22 17:15*	*1*

Client Sample ID: TB:HALAWA SHAFT (331-241-TP401)

Lab Sample ID: 380-27950-3
Date Collected: 11/07/22 10:10
Matrix: Water
Date Received: 11/10/22 10:00

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			11/14/22 21:33	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*96*		*60 - 140*		*11/14/22 21:33*	*1*

Client: City & County of Honolulu
Project/Site: Rush Weekly Red Hill

Job ID: 380-27950-1

Client Sample ID: TB:MOANALUA WELLS (331-223-TP202)
Date Collected: 11/09/22 09:53
Date Received: 11/10/22 10:00

Lab Sample ID: 380-27950-4
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.020		mg/L			11/14/22 22:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*98*		*60 - 140*		*11/14/22 22:10*	*1*

Action Limit Summary

Client: City & County of Honolulu
Project/Site: Rush Weekly Red Hill

Job ID: 380-27950-1

Client Sample ID: HALAWA SHAFT (331-241-TP401)

Lab Sample ID: 380-27950-1

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	0.056	525.2	Total/NA
Atrazine	ND		ug/L	3	0.056	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.022	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.67	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.67	525.2	Total/NA
Endrin	ND		ug/L	2	0.11	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.045	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.056	525.2	Total/NA
Hexachlorobenzene	ND		ug/L	1	0.056	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.056	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.045	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.11	525.2	Total/NA
Simazine	ND		ug/L	4	0.056	525.2	Total/NA

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-27950-2

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	0.050	525.2	Total/NA
Atrazine	ND		ug/L	3	0.050	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	0.60	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.60	525.2	Total/NA
Endrin	ND		ug/L	2	0.10	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.040	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.050	525.2	Total/NA
Hexachlorobenzene	ND		ug/L	1	0.050	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.050	525.2	Total/NA
Lindane	ND		ug/L	0.2	0.040	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.10	525.2	Total/NA
Simazine	ND		ug/L	4	0.050	525.2	Total/NA

Surrogate Summary

Client: City & County of Honolulu
Project/Site: Rush Weekly Red Hill

Job ID: 380-27950-1

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)
380-27950-1	HALAWA SHAFT (331-241-TP4(	98	115	98
380-27950-2	MOANALUA WELLS (331-223-TP202)	93	91	91

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)		
		2NMX	TPP	PRY
Lab Sample ID	Client Sample ID	(70-130)	(70-130)	(70-130)
380-27564-D-1-A DU	Duplicate	98	114	99
380-27946-B-2-A MS	Matrix Spike	97	94	93
380-27946-B-4-A DU	Duplicate	101	113	94
380-27552-BW-1-A MS	Matrix Spike	99	108	97
LCS 380-24110/3-A	Lab Control Sample	98	104	97
LCS 380-24459/3-A	Lab Control Sample	101	114	98
LCSD 380-24110/4-A	Lab Control Sample Dup	99	99	98
LCSD 380-24459/4-A	Lab Control Sample Dup	99	115	96
MB 380-24110/1-A	Method Blank	98	112	97
MB 380-24459/1-A	Method Blank	101	124	97
MRL 380-24110/2-A	Lab Control Sample	98	109	97
MRL 380-24459/2-A	Lab Control Sample	111	101	72

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)
101857-B1	Method Blank	81	85	75	108	55
101857-BS1	Lab Control Sample	81	79	67	96	65
101857-BS2	Lab Control Sample Dup	91	82	65	106	65

Surrogate Legend

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

Surrogate Summary

Client: City & County of Honolulu
Job ID: 380-27950-1
Project/Site: Rush Weekly Red Hill

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)			
380-27950-1	HALAWA SHAFT (331-241-TP4(	78	73	59	102	52			
380-27950-2	MOANALUA WELLS (331-223-TP202)	84	71	59	100	48			

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)							
380-27950-1	HALAWA SHAFT (331-241-TP4(	97							
380-27950-2	MOANALUA WELLS (331-223-TP202)	102							

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								
22VGH7K07B	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)							
22VGH7K07C	LCD	106							
22VGH7K07L	Lab Control Sample	119							

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)							
380-27950-3	TB:HALAWA SHAFT (331-241-T	96							

Surrogate Summary

Client: City & County of Honolulu
Job ID: 380-27950-1
Project/Site: Rush Weekly Red Hill

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

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

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
380-27950-4	TB:MOANALUA WELLS (331-22	98

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)
22K140-01M	Matrix Spike	119
22K140-01S	Matrix Spike Duplicate	120

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	XACOSAI
Lab Sample ID	Client Sample ID	(60-130)	(60-130)
380-27950-1	HALAWA SHAFT (331-241-TP4(	82	93
380-27950-2	MOANALUA WELLS (331-223-TP202)	91	103

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	XACOSAI
Lab Sample ID	Client Sample ID		
22DSK033WB	Method Blank		

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	XACOSAI
Lab Sample ID	Client Sample ID	(60-130)	(60-130)
22DSK033WC	LCD	99	106
22DSK033WL	Lab Control Sample	104	118
22J5K033WC	LCD	99	109
22J5K033WL	Lab Control Sample	94	106
22J8K033WC	LCD	100	105

Surrogate Summary

Client: City & County of Honolulu
Job ID: 380-27950-1
Project/Site: Rush Weekly Red Hill

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

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

		Percent Surrogate Recovery (Acceptance Limits)									
		BB	XACOSA								
Lab Sample ID	Client Sample ID	(60-130)	(60-130)								
22J8K033WL	Lab Control Sample	97	105								

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

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

Lab Sample ID: MB 380-24110/1-A
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24110

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
2,4'-DDE	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
2,4'-DDT	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
2,4-Dinitrotoluene	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
2,6-Dinitrotoluene	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
4,4'-DDD	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
4,4'-DDE	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
4,4'-DDT	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Acenaphthene	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Acenaphthylene	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Acetochlor	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Alachlor	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
alpha-BHC	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
alpha-Chlordane	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Anthracene	ND		0.020		ug/L		11/12/22 09:24	11/14/22 10:05	1
Atrazine	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Benz(a)anthracene	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Benzo[a]pyrene	ND		0.020		ug/L		11/12/22 09:24	11/14/22 10:05	1
Benzo[b]fluoranthene	ND		0.020		ug/L		11/12/22 09:24	11/14/22 10:05	1
Benzo[g,h,i]perylene	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Benzo[k]fluoranthene	ND		0.020		ug/L		11/12/22 09:24	11/14/22 10:05	1
beta-BHC	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Bromacil	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Butachlor	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Butylbenzylphthalate	ND		0.49		ug/L		11/12/22 09:24	11/14/22 10:05	1
Caffeine	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Chlorobenzilate	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Chloroneb	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Chlorothalonil (Draconil, Bravo)	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Chlorpyrifos	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Chrysene	ND		0.020		ug/L		11/12/22 09:24	11/14/22 10:05	1
delta-BHC	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Di(2-ethylhexyl)adipate	ND		0.59		ug/L		11/12/22 09:24	11/14/22 10:05	1
Bis(2-ethylhexyl) phthalate	ND		0.59		ug/L		11/12/22 09:24	11/14/22 10:05	1
Diazinon (Qualitative)	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Dibenz(a,h)anthracene	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Diclorvos (DDVP)	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Dieldrin	ND		0.20		ug/L		11/12/22 09:24	11/14/22 10:05	1
Diethylphthalate	ND		0.49		ug/L		11/12/22 09:24	11/14/22 10:05	1
Dimethoate	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Dimethylphthalate	ND		0.49		ug/L		11/12/22 09:24	11/14/22 10:05	1
Di-n-butyl phthalate	ND		0.98		ug/L		11/12/22 09:24	11/14/22 10:05	1
Di-n-octyl phthalate	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Endosulfan I (Alpha)	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Endosulfan II (Beta)	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Endosulfan sulfate	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Endrin	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Endrin aldehyde	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1

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

Lab Sample ID: MB 380-24110/1-A
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24110

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
EPTC	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Fluoranthene	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Fluorene	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
gamma-Chlordane	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Heptachlor	ND		0.039		ug/L		11/12/22 09:24	11/14/22 10:05	1
Heptachlor epoxide (isomer B)	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Hexachlorobenzene	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Hexachlorocyclopentadiene	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Indeno[1,2,3-cd]pyrene	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Isophorone	ND		0.49		ug/L		11/12/22 09:24	11/14/22 10:05	1
Lindane	ND		0.039		ug/L		11/12/22 09:24	11/14/22 10:05	1
Malathion	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Methoxychlor	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Metolachlor	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Metribuzin	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Molinate	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Naphthalene	ND		0.29		ug/L		11/12/22 09:24	11/14/22 10:05	1
Parathion	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Pendimethalin (Penoxaline)	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		11/12/22 09:24	11/14/22 10:05	1
Phenanthrene	ND		0.039		ug/L		11/12/22 09:24	11/14/22 10:05	1
Propachlor	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Pyrene	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Simazine	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Terbacil	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Terbuthylazine	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1
Thiobencarb	ND		0.20		ug/L		11/12/22 09:24	11/14/22 10:05	1
trans-Nonachlor	ND		0.049		ug/L		11/12/22 09:24	11/14/22 10:05	1
Trifluralin	ND		0.098		ug/L		11/12/22 09:24	11/14/22 10:05	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Cyclopentane, 1,2,3,4,5-pentamethyl-	*0.980*	*T J N*	*ug/L*		*2.29*	*1000152-79-7*	*11/12/22 09:24*	*11/14/22 10:05*	*1*
Sulfurous acid, cyclohexylmethyl octadecyl ester	*0.972*	*T J N*	*ug/L*		*2.37*	*1000309-22-6*	*11/12/22 09:24*	*11/14/22 10:05*	*1*
Unknown	*2.04*	*T J*	*ug/L*		*2.49*		*11/12/22 09:24*	*11/14/22 10:05*	*1*
n-Hexadecanoic acid	*2.76*	*T J N*	*ug/L*		*5.94*	*57-10-3*	*11/12/22 09:24*	*11/14/22 10:05*	*1*
Unknown	*4.34*	*T J*	*ug/L*		*6.64*		*11/12/22 09:24*	*11/14/22 10:05*	*1*
Hexadecanamide	*0.948*	*T J N*	*ug/L*		*6.81*	*629-54-9*	*11/12/22 09:24*	*11/14/22 10:05*	*1*
9-Octadecenamide, (Z)-	*10.8*	*T J N*	*ug/L*		*7.70*	*301-02-0*	*11/12/22 09:24*	*11/14/22 10:05*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*98*		*70 - 130*	*11/12/22 09:24*	*11/14/22 10:05*	*1*
Triphenylphosphate	*112*		*70 - 130*	*11/12/22 09:24*	*11/14/22 10:05*	*1*
Perylene-d12	*97*		*70 - 130*	*11/12/22 09:24*	*11/14/22 10:05*	*1*

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

Lab Sample ID: LCS 380-24110/3-A
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24110

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.96	1.97		ug/L		101	70 - 130
2,4'-DDE	1.96	1.74		ug/L		89	70 - 130
2,4'-DDT	1.96	1.87		ug/L		96	70 - 130
2,4-Dinitrotoluene	1.96	1.88		ug/L		96	70 - 130
2,6-Dinitrotoluene	1.96	2.11		ug/L		108	70 - 130
4,4'-DDD	1.96	1.90		ug/L		97	70 - 130
4,4'-DDE	1.96	1.92		ug/L		98	70 - 130
4,4'-DDT	1.96	1.78		ug/L		91	70 - 130
Acenaphthene	1.96	1.89		ug/L		97	70 - 130
Acenaphthylene	1.96	2.07		ug/L		106	70 - 130
Acetochlor	1.96	2.02		ug/L		103	70 - 130
Alachlor	1.96	2.01		ug/L		103	70 - 130
alpha-BHC	1.96	1.90		ug/L		97	70 - 130
alpha-Chlordane	1.96	2.12		ug/L		108	70 - 130
Anthracene	1.96	1.95		ug/L		100	70 - 130
Atrazine	1.96	2.14		ug/L		109	70 - 130
Benz(a)anthracene	1.96	2.00		ug/L		102	70 - 130
Benzo[a]pyrene	1.96	2.16		ug/L		111	70 - 130
Benzo[b]fluoranthene	1.96	2.20		ug/L		112	70 - 130
Benzo[g,h,i]perylene	1.96	2.19		ug/L		112	70 - 130
Benzo[k]fluoranthene	1.96	2.14		ug/L		109	70 - 130
beta-BHC	1.96	1.83		ug/L		94	70 - 130
Bromacil	1.96	2.41		ug/L		123	70 - 130
Butachlor	1.96	2.07		ug/L		106	70 - 130
Butylbenzylphthalate	1.96	2.26		ug/L		115	70 - 130
Caffeine	1.96	1.78		ug/L		91	45 - 137
Chlorobenzilate	1.96	2.37		ug/L		121	70 - 130
Chloroneb	1.96	2.03		ug/L		104	70 - 130
Chlorothalonil (Draconil, Bravo)	1.96	1.85		ug/L		94	70 - 130
Chlorpyrifos	1.96	2.10		ug/L		107	70 - 130
Chrysene	1.96	2.08		ug/L		106	70 - 130
delta-BHC	1.96	1.86		ug/L		95	70 - 130
Di(2-ethylhexyl)adipate	1.96	2.28		ug/L		117	70 - 130
Bis(2-ethylhexyl) phthalate	1.96	2.05		ug/L		105	70 - 130
Diazinon (Qualitative)	1.96	2.04		ug/L		105	15 - 132
Dibenz(a,h)anthracene	1.96	2.31		ug/L		118	70 - 130
Diclorvos (DDVP)	1.96	2.24		ug/L		115	70 - 130
Dieldrin	1.96	1.82		ug/L		93	70 - 130
Diethylphthalate	1.96	2.04		ug/L		104	70 - 130
Dimethoate	1.96	1.72		ug/L		88	35 - 100
Dimethylphthalate	1.96	2.08		ug/L		107	70 - 130
Di-n-butyl phthalate	3.91	3.80		ug/L		97	70 - 130
Di-n-octyl phthalate	1.96	2.01		ug/L		103	70 - 130
Endosulfan I (Alpha)	1.96	1.95		ug/L		100	70 - 130
Endosulfan II (Beta)	1.96	1.98		ug/L		101	70 - 130
Endosulfan sulfate	1.96	1.83		ug/L		94	70 - 130
Endrin	1.96	2.29		ug/L		117	70 - 130
Endrin aldehyde	1.96	1.86		ug/L		95	70 - 130

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

Lab Sample ID: LCS 380-24110/3-A
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24110

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
EPTC	1.96	2.11		ug/L		108	70 - 130
Fluoranthene	1.96	2.02		ug/L		103	70 - 130
Fluorene	1.96	1.97		ug/L		101	70 - 130
gamma-Chlordane	1.96	2.13		ug/L		109	70 - 130
Heptachlor	1.96	1.90		ug/L		97	70 - 130
Heptachlor epoxide (isomer B)	1.96	2.05		ug/L		105	70 - 130
Hexachlorobenzene	1.96	1.93		ug/L		98	70 - 130
Hexachlorocyclopentadiene	1.96	1.78		ug/L		91	70 - 130
Indeno[1,2,3-cd]pyrene	1.96	2.25		ug/L		115	70 - 130
Isophorone	1.96	2.13		ug/L		109	70 - 130
Lindane	1.96	1.80		ug/L		92	70 - 130
Malathion	1.96	2.24		ug/L		114	70 - 130
Methoxychlor	1.96	2.13		ug/L		109	70 - 130
Metolachlor	1.96	2.04		ug/L		104	70 - 130
Metribuzin	1.96	1.89		ug/L		97	70 - 130
Molinate	1.96	2.16		ug/L		110	70 - 130
Naphthalene	1.96	1.85		ug/L		95	70 - 130
Parathion	1.96	2.44		ug/L		125	70 - 130
Pendimethalin (Penoxaline)	1.96	1.75		ug/L		89	70 - 130
Phenanthrene	1.96	1.99		ug/L		102	70 - 130
Propachlor	1.96	2.00		ug/L		102	70 - 130
Pyrene	1.96	2.03		ug/L		104	70 - 130
Simazine	1.96	2.28		ug/L		117	70 - 130
Terbacil	1.96	2.23		ug/L		114	70 - 130
Terbuthylazine	1.96	2.13		ug/L		109	70 - 130
Thiobencarb	1.96	2.15		ug/L		110	70 - 130
trans-Nonachlor	1.96	2.01		ug/L		103	70 - 130
Trifluralin	1.96	1.61		ug/L		82	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*98*		*70 - 130*
Triphenylphosphate	*104*		*70 - 130*
Perylene-d12	*97*		*70 - 130*

Lab Sample ID: LCSD 380-24110/4-A
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24110

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.95	1.89		ug/L		97	70 - 130	4	20
2,4'-DDE	1.95	1.68		ug/L		86	70 - 130	3	20
2,4'-DDT	1.95	1.78		ug/L		91	70 - 130	5	20
2,4-Dinitrotoluene	1.95	1.71		ug/L		87	70 - 130	9	20
2,6-Dinitrotoluene	1.95	2.03		ug/L		104	70 - 130	4	20
4,4'-DDD	1.95	1.80		ug/L		92	70 - 130	5	20
4,4'-DDE	1.95	1.82		ug/L		93	70 - 130	5	20
4,4'-DDT	1.95	1.69		ug/L		87	70 - 130	5	20
Acenaphthene	1.95	1.89		ug/L		97	70 - 130	0	20

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

Lab Sample ID: LCSD 380-24110/4-A
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24110

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acenaphthylene			1.95	2.02		ug/L		103	70 - 130	2	20
Acetochlor			1.95	1.99		ug/L		102	70 - 130	2	20
Alachlor			1.95	1.97		ug/L		101	70 - 130	2	20
alpha-BHC			1.95	1.80		ug/L		92	70 - 130	5	20
alpha-Chlordane			1.95	2.06		ug/L		105	70 - 130	3	20
Anthracene			1.95	1.89		ug/L		97	70 - 130	3	20
Atrazine			1.95	2.00		ug/L		102	70 - 130	7	20
Benz(a)anthracene			1.95	1.86		ug/L		95	70 - 130	7	20
Benzo[a]pyrene			1.95	2.16		ug/L		111	70 - 130	0	20
Benzo[b]fluoranthene			1.95	2.17		ug/L		111	70 - 130	1	20
Benzo[g,h,i]perylene			1.95	2.22		ug/L		114	70 - 130	1	20
Benzo[k]fluoranthene			1.95	2.16		ug/L		111	70 - 130	1	20
beta-BHC			1.95	1.74		ug/L		89	70 - 130	5	20
Bromacil			1.95	2.26		ug/L		116	70 - 130	6	20
Butachlor			1.95	1.96		ug/L		100	70 - 130	6	20
Butylbenzylphthalate			1.95	2.17		ug/L		111	70 - 130	4	20
Caffeine			1.95	1.66		ug/L		85	45 - 137	7	20
Chlorobenzilate			1.95	2.24		ug/L		115	70 - 130	5	20
Chloroneb			1.95	1.95		ug/L		100	70 - 130	4	20
Chlorothalonil (Draconil, Bravo)			1.95	1.78		ug/L		91	70 - 130	4	20
Chlorpyrifos			1.95	2.05		ug/L		105	70 - 130	2	20
Chrysene			1.95	1.99		ug/L		102	70 - 130	4	20
delta-BHC			1.95	1.79		ug/L		92	70 - 130	4	20
Di(2-ethylhexyl)adipate			1.95	2.15		ug/L		110	70 - 130	6	20
Bis(2-ethylhexyl) phthalate			1.95	2.03		ug/L		104	70 - 130	1	20
Diazinon (Qualitative)			1.95	1.97		ug/L		101	15 - 132	4	20
Dibenz(a,h)anthracene			1.95	2.33		ug/L		119	70 - 130	1	20
Diclorvos (DDVP)			1.95	2.20		ug/L		113	70 - 130	2	20
Dieldrin			1.95	1.78		ug/L		91	70 - 130	2	20
Diethylphthalate			1.95	1.93		ug/L		99	70 - 130	5	20
Dimethoate			1.95	1.50		ug/L		77	35 - 100	13	20
Dimethylphthalate			1.95	2.03		ug/L		104	70 - 130	3	20
Di-n-butyl phthalate			3.91	3.72		ug/L		95	70 - 130	2	20
Di-n-octyl phthalate			1.95	1.90		ug/L		97	70 - 130	5	20
Endosulfan I (Alpha)			1.95	1.88		ug/L		96	70 - 130	4	20
Endosulfan II (Beta)			1.95	1.94		ug/L		99	70 - 130	2	20
Endosulfan sulfate			1.95	1.76		ug/L		90	70 - 130	4	20
Endrin			1.95	2.22		ug/L		114	70 - 130	3	20
Endrin aldehyde			1.95	1.85		ug/L		95	70 - 130	0	20
EPTC			1.95	2.10		ug/L		107	70 - 130	1	20
Fluoranthene			1.95	1.94		ug/L		99	70 - 130	4	20
Fluorene			1.95	1.93		ug/L		99	70 - 130	2	20
gamma-Chlordane			1.95	2.04		ug/L		104	70 - 130	5	20
Heptachlor			1.95	1.85		ug/L		95	70 - 130	3	20
Heptachlor epoxide (isomer B)			1.95	1.97		ug/L		101	70 - 130	4	20
Hexachlorobenzene			1.95	1.85		ug/L		95	70 - 130	4	20
Hexachlorocyclopentadiene			1.95	1.75		ug/L		90	70 - 130	2	20
Indeno[1,2,3-cd]pyrene			1.95	2.26		ug/L		116	70 - 130	1	20
Isophorone			1.95	2.09		ug/L		107	70 - 130	2	20

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

Lab Sample ID: LCSD 380-24110/4-A
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24110

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Lindane			1.95	1.77		ug/L		90	70 - 130	2	20
Malathion			1.95	2.17		ug/L		111	70 - 130	3	20
Methoxychlor			1.95	2.12		ug/L		109	70 - 130	0	20
Metolachlor			1.95	1.98		ug/L		102	70 - 130	3	20
Metribuzin			1.95	1.83		ug/L		94	70 - 130	3	20
Molinate			1.95	2.09		ug/L		107	70 - 130	3	20
Naphthalene			1.95	1.84		ug/L		94	70 - 130	1	20
Parathion			1.95	2.28		ug/L		117	70 - 130	7	20
Pendimethalin (Penoxaline)			1.95	1.67		ug/L		85	70 - 130	5	20
Phenanthrene			1.95	1.96		ug/L		100	70 - 130	1	20
Propachlor			1.95	1.91		ug/L		98	70 - 130	4	20
Pyrene			1.95	1.93		ug/L		99	70 - 130	5	20
Simazine			1.95	2.15		ug/L		110	70 - 130	6	20
Terbacil			1.95	2.10		ug/L		107	70 - 130	6	20
Terbuthylazine			1.95	2.02		ug/L		104	70 - 130	5	20
Thiobencarb			1.95	2.08		ug/L		106	70 - 130	4	20
trans-Nonachlor			1.95	1.97		ug/L		101	70 - 130	2	20
Trifluralin			1.95	1.54		ug/L		79	70 - 130	4	20

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

Lab Sample ID: MRL 380-24110/2-A
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24110

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
2,4'-DDD			0.0976	0.0723	J	ug/L		74	50 - 150		
2,4'-DDE			0.0976	0.0961	J	ug/L		98	50 - 150		
2,4'-DDT			0.0976	0.0834	J	ug/L		85	50 - 150		
2,4-Dinitrotoluene			0.0976	0.122		ug/L		126	50 - 150		
2,6-Dinitrotoluene			0.0976	0.0936	J	ug/L		96	50 - 150		
4,4'-DDD			0.0976	0.0943	J	ug/L		97	50 - 150		
4,4'-DDE			0.0976	0.0720	J	ug/L		74	50 - 150		
4,4'-DDT			0.0976	0.0816	J	ug/L		84	50 - 150		
Acenaphthene			0.0976	0.0950	J	ug/L		97	50 - 150		
Acenaphthylene			0.0976	0.0931	J	ug/L		95	50 - 150		
Acetochlor			0.0488	0.0415	J	ug/L		85	50 - 150		
Alachlor			0.0488	0.0519		ug/L		106	50 - 150		
alpha-BHC			0.0976	0.0941	J	ug/L		96	50 - 150		
alpha-Chlordane			0.0244	ND		ug/L		95	50 - 150		
Anthracene			0.0195	ND		ug/L		97	50 - 150		
Atrazine			0.0488	0.0512		ug/L		105	50 - 150		
Benz(a)anthracene			0.0488	0.0499		ug/L		102	50 - 150		
Benzo[a]pyrene			0.0195	0.0211		ug/L		108	50 - 150		
Benzo[b]fluoranthene			0.0195	0.0221		ug/L		113	50 - 150		

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

Lab Sample ID: MRL 380-24110/2-A
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24110

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[g,h,i]perylene	0.0488	0.0535		ug/L		110	50 - 150
Benzo[k]fluoranthene	0.0195	0.0193	J	ug/L		99	50 - 150
beta-BHC	0.0976	0.0947	J	ug/L		97	50 - 150
Bromacil	0.0976	0.109		ug/L		112	50 - 150
Butachlor	0.0488	0.0521		ug/L		107	50 - 150
Butylbenzylphthalate	0.146	0.201	J	ug/L		137	50 - 150
Caffeine	0.0488	0.0380	J	ug/L		78	50 - 150
Chlorobenzilate	0.0976	0.127		ug/L		130	50 - 150
Chloroneb	0.0976	0.102		ug/L		105	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0976	0.145		ug/L		149	50 - 150
Chlorpyrifos	0.0488	0.0509		ug/L		104	50 - 150
Chrysene	0.0195	0.0189	J	ug/L		97	50 - 150
delta-BHC	0.0976	0.115		ug/L		118	50 - 150
Di(2-ethylhexyl)adipate	0.293	0.419	J	ug/L		143	50 - 150
Bis(2-ethylhexyl) phthalate	0.585	0.683		ug/L		117	50 - 150
Diazinon (Qualitative)	0.0976	0.0908	J	ug/L		93	15 - 132
Dibenz(a,h)anthracene	0.0488	0.0513		ug/L		105	50 - 150
Diclorvos (DDVP)	0.0488	0.0698		ug/L		143	50 - 150
Dieldrin	0.0976	0.0998	J	ug/L		102	50 - 150
Diethylphthalate	0.146	0.185	J	ug/L		127	50 - 150
Dimethoate	0.0976	0.0798	J	ug/L		82	35 - 100
Dimethylphthalate	0.293	0.313	J	ug/L		107	50 - 150
Di-n-butyl phthalate	0.293	0.383	J	ug/L		131	49 - 243
Di-n-octyl phthalate	0.0976	0.129		ug/L		132	50 - 150
Endosulfan I (Alpha)	0.0976	0.0692	J	ug/L		71	50 - 150
Endosulfan II (Beta)	0.0976	0.213	^3+	ug/L		218	50 - 150
Endosulfan sulfate	0.0976	0.0981		ug/L		101	50 - 150
Endrin	0.0976	0.122		ug/L		125	50 - 150
Endrin aldehyde	0.0976	ND		ug/L		83	50 - 150
EPTC	0.0976	0.0983		ug/L		101	50 - 150
Fluoranthene	0.0488	0.0495	J	ug/L		101	50 - 150
Fluorene	0.0488	0.0522		ug/L		107	50 - 150
gamma-Chlordane	0.0244	0.0218	J	ug/L		89	50 - 150
Heptachlor	0.0390	0.0449		ug/L		115	50 - 150
Heptachlor epoxide (isomer B)	0.0488	0.0426	J	ug/L		87	50 - 150
Hexachlorobenzene	0.0488	ND		ug/L		82	50 - 150
Hexachlorocyclopentadiene	0.0488	0.0385	J	ug/L		79	50 - 150
Indeno[1,2,3-cd]pyrene	0.0488	0.0493		ug/L		101	50 - 150
Isophorone	0.0976	0.106	J	ug/L		109	50 - 150
Lindane	0.0390	0.0383	J	ug/L		98	50 - 150
Malathion	0.0976	0.104		ug/L		106	50 - 150
Methoxychlor	0.0976	0.0842	J	ug/L		86	50 - 150
Metolachlor	0.0488	0.0526		ug/L		108	50 - 150
Metribuzin	0.0488	0.0356	J	ug/L		73	50 - 150
Molinate	0.0976	0.103		ug/L		105	50 - 150
Naphthalene	0.0976	0.0952	J	ug/L		98	50 - 150
Parathion	0.0976	0.107		ug/L		110	50 - 150
Pendimethalin (Penoxaline)	0.0976	0.138		ug/L		141	50 - 150
Phenanthrene	0.0195	0.0248	J	ug/L		127	50 - 150

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

Lab Sample ID: MRL 380-24110/2-A
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24110

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Propachlor	0.0488	0.0493		ug/L		101	50 - 150
Pyrene	0.0488	0.0496		ug/L		102	50 - 150
Simazine	0.0488	0.0556		ug/L		114	50 - 150
Terbacil	0.0976	0.128		ug/L		132	50 - 150
Terbuthylazine	0.0976	0.0937	J	ug/L		96	50 - 150
Thiobencarb	0.0976	0.129	J	ug/L		132	50 - 150
trans-Nonachlor	0.0244	ND		ug/L		95	50 - 150
Trifluralin	0.0976	0.113		ug/L		116	50 - 150

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*98*		*70 - 130*
Triphenylphosphate	*109*		*70 - 130*
Perylene-d12	*97*		*70 - 130*

Lab Sample ID: 380-27552-BW-1-A MS
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 24110

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	ND		1.94	1.96		ug/L		101	70 - 130
2,4'-DDE	ND		1.94	1.69		ug/L		87	70 - 130
2,4'-DDT	ND		1.94	1.89		ug/L		98	70 - 130
2,4-Dinitrotoluene	ND		1.94	1.87		ug/L		97	70 - 130
2,6-Dinitrotoluene	ND		1.94	2.11		ug/L		109	70 - 130
4,4'-DDD	ND		1.94	1.87		ug/L		96	70 - 130
4,4'-DDE	ND		1.94	1.91		ug/L		98	70 - 130
4,4'-DDT	ND		1.94	1.82		ug/L		94	70 - 130
Acenaphthene	ND		1.94	1.87		ug/L		97	70 - 130
Acenaphthylene	ND		1.94	2.09		ug/L		108	70 - 130
Acetochlor	ND		1.94	2.07		ug/L		107	70 - 130
Alachlor	ND		1.94	2.08		ug/L		107	70 - 130
alpha-BHC	ND		1.94	1.83		ug/L		94	70 - 130
alpha-Chlordane	ND		1.94	2.16		ug/L		112	70 - 130
Anthracene	ND		1.94	1.93		ug/L		100	70 - 130
Atrazine	ND		1.94	2.08		ug/L		107	70 - 130
Benz(a)anthracene	ND		1.94	1.96		ug/L		101	70 - 130
Benzo[a]pyrene	ND		1.94	2.10		ug/L		108	70 - 130
Benzo[b]fluoranthene	ND		1.94	2.15		ug/L		111	70 - 130
Benzo[g,h,i]perylene	ND		1.94	2.20		ug/L		113	70 - 130
Benzo[k]fluoranthene	ND		1.94	2.14		ug/L		110	70 - 130
beta-BHC	ND		1.94	1.76		ug/L		91	70 - 130
Bromacil	ND	F1	1.94	2.55	F1	ug/L		132	70 - 130
Butachlor	ND		1.94	2.09		ug/L		108	70 - 130
Butylbenzylphthalate	ND		1.94	2.25		ug/L		116	70 - 130
Caffeine	ND		1.94	1.84		ug/L		95	46 - 144
Chlorobenzilate	ND		1.94	2.47		ug/L		128	70 - 130
Chloroneb	ND		1.94	1.93		ug/L		100	70 - 130
Chlorothalonil (Draconil, Bravo)	ND		1.94	1.84		ug/L		95	70 - 130

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

Lab Sample ID: 380-27552-BW-1-A MS
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 24110

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Chlorpyrifos	ND		1.94	2.05		ug/L		106	70 - 130
Chrysene	ND		1.94	2.00		ug/L		103	70 - 130
delta-BHC	ND		1.94	1.84		ug/L		95	70 - 130
Di(2-ethylhexyl)adipate	ND		1.94	2.24		ug/L		116	70 - 130
Bis(2-ethylhexyl) phthalate	ND		1.94	2.09		ug/L		108	70 - 130
Diazinon (Qualitative)	ND		1.94	2.05		ug/L		106	15 - 132
Dibenz(a,h)anthracene	ND		1.94	2.33		ug/L		120	70 - 130
Diclorvos (DDVP)	ND		1.94	2.22		ug/L		115	70 - 130
Dieldrin	ND		1.94	1.78		ug/L		92	70 - 130
Diethylphthalate	ND		1.94	2.02		ug/L		104	70 - 130
Dimethoate	ND		1.94	1.76		ug/L		91	34 - 111
Dimethylphthalate	ND		1.94	1.99		ug/L		103	70 - 130
Di-n-butyl phthalate	ND		3.87	3.88		ug/L		97	70 - 130
Di-n-octyl phthalate	ND		1.94	2.07		ug/L		107	70 - 130
Endosulfan I (Alpha)	ND		1.94	1.95		ug/L		101	70 - 130
Endosulfan II (Beta)	ND	^3+	1.94	2.04		ug/L		105	70 - 130
Endosulfan sulfate	ND		1.94	1.84		ug/L		95	70 - 130
Endrin	ND	F1	1.94	2.60	F1	ug/L		134	70 - 130
Endrin aldehyde	ND		1.94	1.66		ug/L		86	70 - 130
EPTC	ND		1.94	2.17		ug/L		112	70 - 130
Fluoranthene	ND		1.94	2.01		ug/L		104	70 - 130
Fluorene	ND		1.94	1.92		ug/L		99	70 - 130
gamma-Chlordane	ND		1.94	2.17		ug/L		112	70 - 130
Heptachlor	ND		1.94	1.97		ug/L		102	70 - 130
Heptachlor epoxide (isomer B)	ND		1.94	2.15		ug/L		111	70 - 130
Hexachlorobenzene	ND		1.94	1.79		ug/L		92	70 - 130
Hexachlorocyclopentadiene	ND		1.94	1.78		ug/L		92	70 - 130
Indeno[1,2,3-cd]pyrene	ND		1.94	2.27		ug/L		117	70 - 130
Isophorone	ND		1.94	2.10		ug/L		108	70 - 130
Lindane	ND		1.94	1.77		ug/L		92	70 - 130
Malathion	ND		1.94	2.37		ug/L		122	70 - 130
Methoxychlor	ND		1.94	2.23		ug/L		115	70 - 130
Metolachlor	0.059		1.94	2.13		ug/L		107	70 - 130
Metribuzin	ND		1.94	1.84		ug/L		95	70 - 130
Molinate	ND		1.94	2.14		ug/L		111	70 - 130
Naphthalene	ND		1.94	1.85		ug/L		96	70 - 130
Parathion	ND	F1	1.94	2.70	F1	ug/L		140	70 - 130
Pendimethalin (Penoxaline)	ND		1.94	1.82		ug/L		94	70 - 130
Phenanthrene	ND		1.94	1.99		ug/L		103	70 - 130
Propachlor	ND		1.94	2.04		ug/L		105	70 - 130
Pyrene	ND		1.94	2.02		ug/L		104	70 - 130
Simazine	ND		1.94	2.22		ug/L		115	70 - 130
Terbacil	ND		1.94	2.23		ug/L		115	70 - 130
Terbuthylazine	ND		1.94	2.09		ug/L		108	70 - 130
Thiobencarb	ND		1.94	2.18		ug/L		113	70 - 130
trans-Nonachlor	ND		1.94	1.98		ug/L		102	70 - 130
Trifluralin	ND		1.94	1.66		ug/L		86	70 - 130

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

Lab Sample ID: 380-27552-BW-1-A MS
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 24110

Surrogate	MS %Recovery	MS Qualifier	Limits
2-Nitro-m-xylene	99		70 - 130
Triphenylphosphate	108		70 - 130
Perylene-d12	97		70 - 130

Lab Sample ID: 380-27564-D-1-A DU
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 24110

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			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

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

Lab Sample ID: 380-27564-D-1-A DU
Matrix: Water
Analysis Batch: 24186

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 24110

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
Dimethoate	ND			ND		ug/L				NC	20
Dimethylphthalate	ND			ND		ug/L				NC	20
Di-n-butyl phthalate	ND			ND		ug/L				NC	20
Di-n-octyl phthalate	ND			ND		ug/L				NC	20
Endosulfan I (Alpha)	ND			ND		ug/L				NC	20
Endosulfan II (Beta)	ND	^3+		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			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	*98*		*70 - 130*
Triphenylphosphate	*114*		*70 - 130*
Perylene-d12	*99*		*70 - 130*

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

Lab Sample ID: MB 380-24459/1-A
Matrix: Water
Analysis Batch: 24584

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24459

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
2,4'-DDE	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
2,4'-DDT	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
2,4-Dinitrotoluene	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
2,6-Dinitrotoluene	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
4,4'-DDD	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
4,4'-DDE	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
4,4'-DDT	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Acenaphthene	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Acenaphthylene	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Acetochlor	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Alachlor	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
alpha-BHC	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
alpha-Chlordane	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Anthracene	ND		0.020		ug/L		11/16/22 11:31	11/17/22 15:49	1
Atrazine	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Benz(a)anthracene	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Benzo[a]pyrene	ND		0.020		ug/L		11/16/22 11:31	11/17/22 15:49	1
Benzo[b]fluoranthene	ND		0.020		ug/L		11/16/22 11:31	11/17/22 15:49	1
Benzo[g,h,i]perylene	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Benzo[k]fluoranthene	ND		0.020		ug/L		11/16/22 11:31	11/17/22 15:49	1
beta-BHC	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Bromacil	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Butachlor	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Butylbenzylphthalate	ND		0.50		ug/L		11/16/22 11:31	11/17/22 15:49	1
Caffeine	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Chlorobenzilate	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Chloroneb	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Chlorothalonil (Draconil, Bravo)	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Chlorpyrifos	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Chrysene	ND		0.020		ug/L		11/16/22 11:31	11/17/22 15:49	1
delta-BHC	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Di(2-ethylhexyl)adipate	ND		0.60		ug/L		11/16/22 11:31	11/17/22 15:49	1
Bis(2-ethylhexyl) phthalate	ND		0.60		ug/L		11/16/22 11:31	11/17/22 15:49	1
Diazinon (Qualitative)	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Dibenz(a,h)anthracene	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Diclorvos (DDVP)	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Dieldrin	ND		0.20		ug/L		11/16/22 11:31	11/17/22 15:49	1
Diethylphthalate	ND		0.50		ug/L		11/16/22 11:31	11/17/22 15:49	1
Dimethoate	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Dimethylphthalate	ND		0.50		ug/L		11/16/22 11:31	11/17/22 15:49	1
Di-n-butyl phthalate	ND		0.99		ug/L		11/16/22 11:31	11/17/22 15:49	1
Di-n-octyl phthalate	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Endosulfan I (Alpha)	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Endosulfan II (Beta)	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Endosulfan sulfate	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Endrin	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Endrin aldehyde	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1

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

Lab Sample ID: MB 380-24459/1-A
Matrix: Water
Analysis Batch: 24584

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 24459

Analyte	MB Result	MB Qualifier	RL		Unit	D	Prepared	Analyzed	Dil Fac
EPTC	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Fluoranthene	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Fluorene	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
gamma-Chlordane	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Heptachlor	ND		0.040		ug/L		11/16/22 11:31	11/17/22 15:49	1
Heptachlor epoxide (isomer B)	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Hexachlorobenzene	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Hexachlorocyclopentadiene	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Indeno[1,2,3-cd]pyrene	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Isophorone	ND		0.50		ug/L		11/16/22 11:31	11/17/22 15:49	1
Lindane	ND		0.040		ug/L		11/16/22 11:31	11/17/22 15:49	1
Malathion	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Methoxychlor	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Metolachlor	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Metribuzin	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Molinate	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Naphthalene	ND		0.30		ug/L		11/16/22 11:31	11/17/22 15:49	1
Parathion	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Pendimethalin (Penoxaline)	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Total Permethrin (mixed isomers)	ND		0.20		ug/L		11/16/22 11:31	11/17/22 15:49	1
Phenanthrene	ND		0.040		ug/L		11/16/22 11:31	11/17/22 15:49	1
Propachlor	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Pyrene	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Simazine	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Terbacil	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Terbuthylazine	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1
Thiobencarb	ND		0.20		ug/L		11/16/22 11:31	11/17/22 15:49	1
trans-Nonachlor	ND		0.050		ug/L		11/16/22 11:31	11/17/22 15:49	1
Trifluralin	ND		0.099		ug/L		11/16/22 11:31	11/17/22 15:49	1

Tentatively Identified Compound	*MB Est. Result*	*MB Qualifier*	*Unit*	*D*	*RT*	*CAS No.*	*Prepared*	*Analyzed*	*Dil Fac*
Unknown	*1.58*	*T J*	*ug/L*		*2.35*		*11/16/22 11:31*	*11/17/22 15:49*	*1*

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Nitro-m-xylene	*101*		*70 - 130*	*11/16/22 11:31*	*11/17/22 15:49*	*1*
Triphenylphosphate	*124*		*70 - 130*	*11/16/22 11:31*	*11/17/22 15:49*	*1*
Perylene-d12	*97*		*70 - 130*	*11/16/22 11:31*	*11/17/22 15:49*	*1*

Lab Sample ID: LCS 380-24459/3-A
Matrix: Water
Analysis Batch: 24584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24459

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
2,4'-DDD			1.99	1.99		ug/L		100	70 - 130		
2,4'-DDE			1.99	2.00		ug/L		101	70 - 130		
2,4'-DDT			1.99	2.08		ug/L		105	70 - 130		
2,4-Dinitrotoluene			1.99	1.94		ug/L		98	70 - 130		
2,6-Dinitrotoluene			1.99	2.09		ug/L		105	70 - 130		

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

Lab Sample ID: LCS 380-24459/3-A
Matrix: Water
Analysis Batch: 24584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24459

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
4,4'-DDD	1.99	2.09		ug/L		105	70 - 130
4,4'-DDE	1.99	2.06		ug/L		104	70 - 130
4,4'-DDT	1.99	2.08		ug/L		105	70 - 130
Acenaphthene	1.99	1.91		ug/L		96	70 - 130
Acenaphthylene	1.99	1.90		ug/L		96	70 - 130
Acetochlor	1.99	1.92		ug/L		96	70 - 130
Alachlor	1.99	2.03		ug/L		102	70 - 130
alpha-BHC	1.99	2.06		ug/L		104	70 - 130
alpha-Chlordane	1.99	2.19		ug/L		110	70 - 130
Anthracene	1.99	1.91		ug/L		96	70 - 130
Atrazine	1.99	2.25		ug/L		113	70 - 130
Benz(a)anthracene	1.99	2.05		ug/L		103	70 - 130
Benzo[a]pyrene	1.99	2.11		ug/L		106	70 - 130
Benzo[b]fluoranthene	1.99	2.04		ug/L		103	70 - 130
Benzo[g,h,i]perylene	1.99	2.11		ug/L		106	70 - 130
Benzo[k]fluoranthene	1.99	2.08		ug/L		105	70 - 130
beta-BHC	1.99	2.06		ug/L		104	70 - 130
Bromacil	1.99	2.40		ug/L		121	70 - 130
Butachlor	1.99	2.21		ug/L		111	70 - 130
Butylbenzylphthalate	1.99	2.05		ug/L		103	70 - 130
Caffeine	1.99	1.59		ug/L		80	45 - 137
Chlorobenzilate	1.99	2.17		ug/L		109	70 - 130
Chloroneb	1.99	2.01		ug/L		101	70 - 130
Chlorothalonil (Draconil, Bravo)	1.99	2.18		ug/L		110	70 - 130
Chlorpyrifos	1.99	2.12		ug/L		107	70 - 130
Chrysene	1.99	1.96		ug/L		99	70 - 130
delta-BHC	1.99	2.09		ug/L		105	70 - 130
Di(2-ethylhexyl)adipate	1.99	2.04		ug/L		103	70 - 130
Bis(2-ethylhexyl) phthalate	1.99	1.91		ug/L		96	70 - 130
Diazinon (Qualitative)	1.99	1.85		ug/L		93	15 - 132
Dibenz(a,h)anthracene	1.99	2.34		ug/L		118	70 - 130
Diclorvos (DDVP)	1.99	2.04		ug/L		103	70 - 130
Dieldrin	1.99	1.97		ug/L		99	70 - 130
Diethylphthalate	1.99	1.95		ug/L		98	70 - 130
Dimethoate	1.99	1.47		ug/L		74	35 - 100
Dimethylphthalate	1.99	2.16		ug/L		109	70 - 130
Di-n-butyl phthalate	3.97	4.09		ug/L		103	70 - 130
Di-n-octyl phthalate	1.99	1.80		ug/L		91	70 - 130
Endosulfan I (Alpha)	1.99	2.01		ug/L		101	70 - 130
Endosulfan II (Beta)	1.99	2.00		ug/L		101	70 - 130
Endosulfan sulfate	1.99	2.32		ug/L		117	70 - 130
Endrin	1.99	1.94		ug/L		98	70 - 130
Endrin aldehyde	1.99	2.02		ug/L		102	70 - 130
EPTC	1.99	1.88		ug/L		95	70 - 130
Fluoranthene	1.99	2.07		ug/L		104	70 - 130
Fluorene	1.99	1.95		ug/L		98	70 - 130
gamma-Chlordane	1.99	2.07		ug/L		105	70 - 130
Heptachlor	1.99	1.83		ug/L		92	70 - 130
Heptachlor epoxide (isomer B)	1.99	2.12		ug/L		107	70 - 130

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

Lab Sample ID: LCS 380-24459/3-A
Matrix: Water
Analysis Batch: 24584

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24459

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Hexachlorobenzene			1.99	1.96		ug/L		99	70 - 130		
Hexachlorocyclopentadiene			1.99	2.16		ug/L		109	70 - 130		
Indeno[1,2,3-cd]pyrene			1.99	2.33		ug/L		117	70 - 130		
Isophorone			1.99	1.95		ug/L		98	70 - 130		
Lindane			1.99	2.09		ug/L		105	70 - 130		
Malathion			1.99	2.18		ug/L		110	70 - 130		
Methoxychlor			1.99	2.19		ug/L		110	70 - 130		
Metolachlor			1.99	2.08		ug/L		105	70 - 130		
Metribuzin			1.99	2.19		ug/L		111	70 - 130		
Molinate			1.99	2.00		ug/L		101	70 - 130		
Naphthalene			1.99	1.86		ug/L		94	70 - 130		
Parathion			1.99	1.96		ug/L		99	70 - 130		
Pendimethalin (Penoxaline)			1.99	2.02		ug/L		102	70 - 130		
Phenanthrene			1.99	1.89		ug/L		95	70 - 130		
Propachlor			1.99	2.16		ug/L		109	70 - 130		
Pyrene			1.99	2.04		ug/L		103	70 - 130		
Simazine			1.99	2.24		ug/L		113	70 - 130		
Terbacil			1.99	2.14		ug/L		108	70 - 130		
Terbuthylazine			1.99	2.22		ug/L		112	70 - 130		
Thiobencarb			1.99	1.98		ug/L		100	70 - 130		
trans-Nonachlor			1.99	2.29		ug/L		115	70 - 130		
Trifluralin			1.99	2.03		ug/L		102	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Nitro-m-xylene	*101*		*70 - 130*
Triphenylphosphate	*114*		*70 - 130*
Perylene-d12	*98*		*70 - 130*

Lab Sample ID: LCSD 380-24459/4-A
Matrix: Water
Analysis Batch: 24584

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24459

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD			1.99	2.01		ug/L		101	70 - 130	1	20
2,4'-DDE			1.99	2.04		ug/L		103	70 - 130	2	20
2,4'-DDT			1.99	2.09		ug/L		105	70 - 130	0	20
2,4-Dinitrotoluene			1.99	2.00		ug/L		101	70 - 130	3	20
2,6-Dinitrotoluene			1.99	2.15		ug/L		108	70 - 130	3	20
4,4'-DDD			1.99	2.13		ug/L		107	70 - 130	2	20
4,4'-DDE			1.99	2.09		ug/L		105	70 - 130	1	20
4,4'-DDT			1.99	2.16		ug/L		109	70 - 130	4	20
Acenaphthene			1.99	1.88		ug/L		95	70 - 130	2	20
Acenaphthylene			1.99	1.89		ug/L		95	70 - 130	1	20
Acetochlor			1.99	2.05		ug/L		103	70 - 130	7	20
Alachlor			1.99	2.05		ug/L		103	70 - 130	1	20
alpha-BHC			1.99	2.11		ug/L		106	70 - 130	3	20
alpha-Chlordane			1.99	2.28		ug/L		115	70 - 130	4	20
Anthracene			1.99	1.91		ug/L		96	70 - 130	0	20

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

Lab Sample ID: LCSD 380-24459/4-A
Matrix: Water
Analysis Batch: 24584

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24459

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Atrazine			1.99	2.35		ug/L		119	70 - 130	5	20
Benz(a)anthracene			1.99	2.08		ug/L		105	70 - 130	1	20
Benzo[a]pyrene			1.99	2.03		ug/L		102	70 - 130	4	20
Benzo[b]fluoranthene			1.99	2.00		ug/L		101	70 - 130	2	20
Benzo[g,h,i]perylene			1.99	2.06		ug/L		104	70 - 130	3	20
Benzo[k]fluoranthene			1.99	2.02		ug/L		102	70 - 130	3	20
beta-BHC			1.99	2.26		ug/L		114	70 - 130	9	20
Bromacil			1.99	2.45		ug/L		124	70 - 130	2	20
Butachlor			1.99	2.22		ug/L		112	70 - 130	0	20
Butylbenzylphthalate			1.99	2.10		ug/L		106	70 - 130	2	20
Caffeine			1.99	1.66		ug/L		84	45 - 137	4	20
Chlorobenzilate			1.99	2.25		ug/L		113	70 - 130	4	20
Chloroneb			1.99	2.04		ug/L		103	70 - 130	2	20
Chlorothalonil (Draconil, Bravo)			1.99	2.23		ug/L		112	70 - 130	2	20
Chlorpyrifos			1.99	2.11		ug/L		106	70 - 130	1	20
Chrysene			1.99	1.97		ug/L		99	70 - 130	0	20
delta-BHC			1.99	2.22		ug/L		112	70 - 130	6	20
Di(2-ethylhexyl)adipate			1.99	2.12		ug/L		107	70 - 130	4	20
Bis(2-ethylhexyl) phthalate			1.99	2.01		ug/L		101	70 - 130	5	20
Diazinon (Qualitative)			1.99	1.98		ug/L		100	15 - 132	7	20
Dibenz(a,h)anthracene			1.99	2.25		ug/L		113	70 - 130	4	20
Diclorvos (DDVP)			1.99	2.03		ug/L		102	70 - 130	0	20
Dieldrin			1.99	1.96		ug/L		99	70 - 130	0	20
Diethylphthalate			1.99	2.04		ug/L		103	70 - 130	5	20
Dimethoate			1.99	1.59		ug/L		80	35 - 100	8	20
Dimethylphthalate			1.99	2.15		ug/L		109	70 - 130	0	20
Di-n-butyl phthalate			3.97	3.91		ug/L		99	70 - 130	5	20
Di-n-octyl phthalate			1.99	1.85		ug/L		93	70 - 130	2	20
Endosulfan I (Alpha)			1.99	2.02		ug/L		102	70 - 130	0	20
Endosulfan II (Beta)			1.99	2.02		ug/L		102	70 - 130	1	20
Endosulfan sulfate			1.99	2.30		ug/L		116	70 - 130	1	20
Endrin			1.99	1.93		ug/L		97	70 - 130	1	20
Endrin aldehyde			1.99	1.99		ug/L		100	70 - 130	2	20
EPTC			1.99	1.88		ug/L		95	70 - 130	0	20
Fluoranthene			1.99	2.10		ug/L		106	70 - 130	1	20
Fluorene			1.99	2.00		ug/L		101	70 - 130	3	20
gamma-Chlordane			1.99	2.12		ug/L		107	70 - 130	2	20
Heptachlor			1.99	1.84		ug/L		93	70 - 130	0	20
Heptachlor epoxide (isomer B)			1.99	2.13		ug/L		107	70 - 130	0	20
Hexachlorobenzene			1.99	2.00		ug/L		101	70 - 130	2	20
Hexachlorocyclopentadiene			1.99	2.14		ug/L		108	70 - 130	1	20
Indeno[1,2,3-cd]pyrene			1.99	2.24		ug/L		113	70 - 130	4	20
Isophorone			1.99	1.82		ug/L		92	70 - 130	7	20
Lindane			1.99	2.20		ug/L		111	70 - 130	5	20
Malathion			1.99	2.26		ug/L		114	70 - 130	4	20
Methoxychlor			1.99	2.23		ug/L		112	70 - 130	2	20
Metolachlor			1.99	2.14		ug/L		108	70 - 130	3	20
Metribuzin			1.99	2.26		ug/L		114	70 - 130	3	20
Molinate			1.99	1.96		ug/L		99	70 - 130	2	20

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

Lab Sample ID: LCSD 380-24459/4-A
Matrix: Water
Analysis Batch: 24584

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 24459

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Naphthalene			1.99	1.81		ug/L		91	70 - 130	3	20
Parathion			1.99	1.95		ug/L		98	70 - 130	1	20
Pendimethalin (Penoxaline)			1.99	2.08		ug/L		105	70 - 130	3	20
Phenanthrene			1.99	1.89		ug/L		95	70 - 130	0	20
Propachlor			1.99	2.19		ug/L		110	70 - 130	1	20
Pyrene			1.99	2.09		ug/L		105	70 - 130	2	20
Simazine			1.99	2.39		ug/L		121	70 - 130	7	20
Terbacil			1.99	2.20		ug/L		111	70 - 130	3	20
Terbuthylazine			1.99	2.38		ug/L		120	70 - 130	7	20
Thiobencarb			1.99	1.98		ug/L		100	70 - 130	0	20
trans-Nonachlor			1.99	2.27		ug/L		114	70 - 130	1	20
Trifluralin			1.99	2.06		ug/L		104	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Nitro-m-xylene	*99*		*70 - 130*
Triphenylphosphate	*115*		*70 - 130*
Perylene-d12	*96*		*70 - 130*

Lab Sample ID: MRL 380-24459/2-A
Matrix: Water
Analysis Batch: 24669

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24459

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
2,4'-DDD			0.0994	0.122		ug/L		123	50 - 150		
2,4'-DDE			0.0994	0.0945	J	ug/L		95	50 - 150		
2,4'-DDT			0.0994	0.0932	J	ug/L		94	50 - 150		
2,4-Dinitrotoluene			0.0994	0.0724	J	ug/L		73	50 - 150		
2,6-Dinitrotoluene			0.0994	0.0868	J	ug/L		87	50 - 150		
4,4'-DDD			0.0994	0.101		ug/L		101	50 - 150		
4,4'-DDE			0.0994	0.0721	J	ug/L		72	50 - 150		
4,4'-DDT			0.0994	0.129		ug/L		130	50 - 150		
Acenaphthene			0.0994	0.0958	J	ug/L		96	50 - 150		
Acenaphthylene			0.0994	0.0774	J	ug/L		78	50 - 150		
Acetochlor			0.0497	0.0374	J	ug/L		75	50 - 150		
Alachlor			0.0497	0.0517		ug/L		104	50 - 150		
alpha-BHC			0.0994	0.112		ug/L		112	50 - 150		
alpha-Chlordane			0.0249	ND		ug/L		85	50 - 150		
Anthracene			0.0199	ND		ug/L		95	50 - 150		
Atrazine			0.0497	0.0653		ug/L		131	50 - 150		
Benz(a)anthracene			0.0497	0.0582		ug/L		117	50 - 150		
Benzo[a]pyrene			0.0199	0.0151	J	ug/L		76	50 - 150		
Benzo[b]fluoranthene			0.0199	0.0200		ug/L		100	50 - 150		
Benzo[g,h,i]perylene			0.0497	0.0449	J	ug/L		90	50 - 150		
Benzo[k]fluoranthene			0.0199	0.0214		ug/L		108	50 - 150		
beta-BHC			0.0994	0.108		ug/L		109	50 - 150		
Bromacil			0.0994	0.139		ug/L		140	50 - 150		
Butachlor			0.0497	0.0578		ug/L		116	50 - 150		
Butylbenzylphthalate			0.149	0.153	J	ug/L		102	50 - 150		

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

Lab Sample ID: MRL 380-24459/2-A
Matrix: Water
Analysis Batch: 24669

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24459

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Caffeine	0.0497	0.0297	J	ug/L		60	50 - 150
Chlorobenzilate	0.0994	0.0942	J	ug/L		95	50 - 150
Chloroneb	0.0994	0.103		ug/L		104	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0994	0.135		ug/L		135	50 - 150
Chlorpyrifos	0.0497	0.0544		ug/L		109	50 - 150
Chrysene	0.0199	0.0199	J	ug/L		100	50 - 150
delta-BHC	0.0994	0.130		ug/L		131	50 - 150
Di(2-ethylhexyl)adipate	0.298	0.310	J	ug/L		104	50 - 150
Bis(2-ethylhexyl) phthalate	0.596	0.640		ug/L		107	50 - 150
Diazinon (Qualitative)	0.0994	0.0993		ug/L		100	15 - 132
Dibenz(a,h)anthracene	0.0497	0.0449	J	ug/L		90	50 - 150
Diclorvos (DDVP)	0.0497	0.0624		ug/L		126	50 - 150
Dieldrin	0.0994	0.0876	J	ug/L		88	50 - 150
Diethylphthalate	0.149	0.148	J	ug/L		99	50 - 150
Dimethoate	0.0994	0.0516	J	ug/L		52	35 - 100
Dimethylphthalate	0.298	0.281	J	ug/L		94	50 - 150
Di-n-butyl phthalate	0.298	0.339	J	ug/L		114	49 - 243
Di-n-octyl phthalate	0.0994	0.110		ug/L		110	50 - 150
Endosulfan I (Alpha)	0.0994	0.0893	J	ug/L		90	50 - 150
Endosulfan II (Beta)	0.0994	0.104		ug/L		104	50 - 150
Endosulfan sulfate	0.0994	0.0858	J	ug/L		86	50 - 150
Endrin	0.0994	0.135		ug/L		136	50 - 150
Endrin aldehyde	0.0994	ND		ug/L		53	50 - 150
EPTC	0.0994	0.105		ug/L		105	50 - 150
Fluoranthene	0.0497	0.0529	J	ug/L		106	50 - 150
Fluorene	0.0497	ND		ug/L		97	50 - 150
gamma-Chlordane	0.0249	0.0216	J	ug/L		87	50 - 150
Heptachlor	0.0398	0.0549		ug/L		138	50 - 150
Heptachlor epoxide (isomer B)	0.0497	0.0362	J	ug/L		73	50 - 150
Hexachlorobenzene	0.0497	0.0474	J	ug/L		95	50 - 150
Hexachlorocyclopentadiene	0.0497	0.0419	J	ug/L		84	50 - 150
Indeno[1,2,3-cd]pyrene	0.0497	0.0434	J	ug/L		87	50 - 150
Isophorone	0.0994	0.104	J	ug/L		104	50 - 150
Lindane	0.0398	0.0460		ug/L		116	50 - 150
Malathion	0.0994	0.0946	J	ug/L		95	50 - 150
Methoxychlor	0.0994	0.125		ug/L		126	50 - 150
Metolachlor	0.0497	0.0532		ug/L		107	50 - 150
Metribuzin	0.0497	0.0908	^3+	ug/L		183	50 - 150
Molinate	0.0994	0.107		ug/L		108	50 - 150
Naphthalene	0.0994	0.105	J	ug/L		106	50 - 150
Parathion	0.0994	0.121		ug/L		122	50 - 150
Pendimethalin (Penoxaline)	0.0994	0.119		ug/L		120	50 - 150
Phenanthrene	0.0199	0.0215	J	ug/L		108	50 - 150
Propachlor	0.0497	0.0471	J	ug/L		95	50 - 150
Pyrene	0.0497	0.0561		ug/L		113	50 - 150
Simazine	0.0497	0.0664		ug/L		133	50 - 150
Terbacil	0.0994	0.0958	J	ug/L		96	50 - 150
Terbuthylazine	0.0994	0.126		ug/L		127	50 - 150
Thiobencarb	0.0994	0.123	J	ug/L		124	50 - 150

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

Lab Sample ID: MRL 380-24459/2-A
Matrix: Water
Analysis Batch: 24669

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 24459

Analyte			Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits		
trans-Nonachlor			0.0249	0.0276	J	ug/L		111	50 - 150		
Trifluralin			0.0994	0.105		ug/L		106	50 - 150		

Surrogate	*MRL %Recovery*	*MRL Qualifier*	*Limits*
2-Nitro-m-xylene	*111*		*70 - 130*
Triphenylphosphate	*101*		*70 - 130*
Perylene-d12	*72*		*70 - 130*

Lab Sample ID: 380-27946-B-2-A MS
Matrix: Water
Analysis Batch: 24669

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 24459

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
2,4'-DDD	ND		1.95	1.60		ug/L		82	70 - 130		
2,4'-DDE	ND		1.95	1.70		ug/L		87	70 - 130		
2,4'-DDT	ND		1.95	1.71		ug/L		88	70 - 130		
2,4-Dinitrotoluene	ND		1.95	1.87		ug/L		96	70 - 130		
2,6-Dinitrotoluene	ND		1.95	1.76		ug/L		91	70 - 130		
4,4'-DDD	ND		1.95	1.53		ug/L		79	70 - 130		
4,4'-DDE	ND		1.95	1.55		ug/L		80	70 - 130		
4,4'-DDT	ND		1.95	1.54		ug/L		79	70 - 130		
Acenaphthene	ND		1.95	1.72		ug/L		88	70 - 130		
Acenaphthylene	ND		1.95	1.82		ug/L		93	70 - 130		
Acetochlor	ND		1.95	1.85		ug/L		95	70 - 130		
Alachlor	ND		1.95	1.88		ug/L		96	70 - 130		
alpha-BHC	ND		1.95	1.96		ug/L		100	70 - 130		
alpha-Chlordane	ND		1.95	1.37		ug/L		70	70 - 130		
Anthracene	ND		1.95	2.03		ug/L		104	70 - 130		
Atrazine	ND		1.95	1.78		ug/L		91	70 - 130		
Benz(a)anthracene	ND		1.95	1.89		ug/L		97	70 - 130		
Benzo[a]pyrene	ND		1.95	2.04		ug/L		105	70 - 130		
Benzo[b]fluoranthene	ND		1.95	1.97		ug/L		101	70 - 130		
Benzo[g,h,i]perylene	ND		1.95	2.10		ug/L		108	70 - 130		
Benzo[k]fluoranthene	ND		1.95	2.14		ug/L		110	70 - 130		
beta-BHC	ND		1.95	1.91		ug/L		98	70 - 130		
Bromacil	ND		1.95	2.02		ug/L		104	70 - 130		
Butachlor	ND		1.95	1.76		ug/L		90	70 - 130		
Butylbenzylphthalate	ND		1.95	1.96		ug/L		100	70 - 130		
Caffeine	ND		1.95	1.56		ug/L		77	46 - 144		
Chlorobenzilate	ND		1.95	2.06		ug/L		106	70 - 130		
Chloroneb	ND		1.95	1.92		ug/L		98	70 - 130		
Chlorothalonil (Draconil, Bravo)	ND		1.95	1.61		ug/L		83	70 - 130		
Chlorpyrifos	ND		1.95	1.99		ug/L		102	70 - 130		
Chrysene	ND		1.95	2.00		ug/L		102	70 - 130		
delta-BHC	ND		1.95	1.66		ug/L		85	70 - 130		
Di(2-ethylhexyl)adipate	ND		1.95	1.94		ug/L		100	70 - 130		
Bis(2-ethylhexyl) phthalate	ND		1.95	1.96		ug/L		101	70 - 130		
Diazinon (Qualitative)	ND		1.95	1.80		ug/L		93	15 - 132		

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

Lab Sample ID: 380-27946-B-2-A MS
Matrix: Water
Analysis Batch: 24669

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 24459

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
Dibenz(a,h)anthracene	ND		1.95	2.14		ug/L		110	70 - 130
Diclorvos (DDVP)	ND		1.95	1.97		ug/L		101	70 - 130
Dieldrin	ND		1.95	1.55		ug/L		80	70 - 130
Diethylphthalate	ND		1.95	1.80		ug/L		92	70 - 130
Dimethoate	ND		1.95	1.25		ug/L		64	34 - 111
Dimethylphthalate	ND		1.95	1.92		ug/L		98	70 - 130
Di-n-butyl phthalate	ND		3.90	3.96		ug/L		98	70 - 130
Di-n-octyl phthalate	ND		1.95	1.81		ug/L		93	70 - 130
Endosulfan I (Alpha)	ND		1.95	1.66		ug/L		85	70 - 130
Endosulfan II (Beta)	ND	F1	1.95	0.655	F1	ug/L		34	70 - 130
Endosulfan sulfate	ND		1.95	1.51		ug/L		78	70 - 130
Endrin	ND		1.95	1.91		ug/L		98	70 - 130
Endrin aldehyde	ND	F1	1.95	1.25	F1	ug/L		64	70 - 130
EPTC	ND		1.95	1.82		ug/L		93	70 - 130
Fluoranthene	ND		1.95	1.61		ug/L		82	70 - 130
Fluorene	ND		1.95	1.95		ug/L		100	70 - 130
gamma-Chlordane	ND		1.95	1.44		ug/L		74	70 - 130
Heptachlor	ND		1.95	1.75		ug/L		90	70 - 130
Heptachlor epoxide (isomer B)	ND		1.95	1.65		ug/L		85	70 - 130
Hexachlorobenzene	ND		1.95	1.60		ug/L		82	70 - 130
Hexachlorocyclopentadiene	ND		1.95	1.62		ug/L		83	70 - 130
Indeno[1,2,3-cd]pyrene	ND		1.95	2.15		ug/L		110	70 - 130
Isophorone	ND		1.95	1.83		ug/L		94	70 - 130
Lindane	ND		1.95	1.92		ug/L		98	70 - 130
Malathion	ND		1.95	2.19		ug/L		113	70 - 130
Methoxychlor	ND		1.95	1.58		ug/L		81	70 - 130
Metolachlor	ND		1.95	2.20		ug/L		113	70 - 130
Metribuzin	ND	^3+	1.95	1.74		ug/L		89	70 - 130
Molinate	ND		1.95	1.86		ug/L		96	70 - 130
Naphthalene	ND		1.95	1.67		ug/L		86	70 - 130
Parathion	ND		1.95	1.99		ug/L		102	70 - 130
Pendimethalin (Penoxaline)	ND		1.95	1.60		ug/L		82	70 - 130
Phenanthrene	ND		1.95	2.04		ug/L		105	70 - 130
Propachlor	ND		1.95	1.88		ug/L		97	70 - 130
Pyrene	ND		1.95	1.91		ug/L		98	70 - 130
Simazine	ND		1.95	1.97		ug/L		101	70 - 130
Terbacil	ND		1.95	1.87		ug/L		96	70 - 130
Terbuthylazine	ND		1.95	1.76		ug/L		91	70 - 130
Thiobencarb	ND		1.95	2.04		ug/L		105	70 - 130
trans-Nonachlor	ND		1.95	1.56		ug/L		80	70 - 130
Trifluralin	ND		1.95	1.40		ug/L		72	70 - 130

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
2-Nitro-m-xylene	*97*		*70 - 130*
Triphenylphosphate	*94*		*70 - 130*
Perylene-d12	*93*		*70 - 130*

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

Lab Sample ID: 380-27946-B-4-A DU
Matrix: Water
Analysis Batch: 24584

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 24459

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	^3+		ND		ug/L				NC	20
Butachlor	ND			ND		ug/L				NC	20
Butylbenzylphthalate	ND			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	^3+		ND		ug/L				NC	20
Dieldrin	ND			ND		ug/L				NC	20
Diethylphthalate	ND			ND		ug/L				NC	20
Dimethoate	ND			ND		ug/L				NC	20
Dimethylphthalate	ND			ND		ug/L				NC	20
Di-n-butyl phthalate	ND			ND		ug/L				NC	20
Di-n-octyl phthalate	ND			ND		ug/L				NC	20
Endosulfan I (Alpha)	ND			ND		ug/L				NC	20
Endosulfan II (Beta)	ND			ND		ug/L				NC	20
Endosulfan sulfate	ND			ND		ug/L				NC	20
Endrin	ND			ND		ug/L				NC	20
Endrin aldehyde	ND			ND		ug/L				NC	20

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

Lab Sample ID: 380-27946-B-4-A DU
Matrix: Water
Analysis Batch: 24584

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 24459

Analyte	Sample Result	Sample Qualifier		DU Result	DU Qualifier	Unit	D			RPD	RPD Limit
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			ND		ug/L				NC	20
Molinate	ND			ND		ug/L				NC	20
Naphthalene	ND			ND		ug/L				NC	20
Parathion	ND	^3+		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	^3-		ND		ug/L				NC	20
Trifluralin	ND			ND		ug/L				NC	20

Surrogate	*DU %Recovery*	*DU Qualifier*	*Limits*
2-Nitro-m-xylene	*101*		*70 - 130*
Triphenylphosphate	*113*		*70 - 130*
Perylene-d12	*94*		*70 - 130*

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

Lab Sample ID: 101857-B1
Matrix: BlankMatrix
Analysis Batch: O-40024

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-40024_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Acenaphthene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Acenaphthylene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1

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

Lab Sample ID: 101857-B1
Matrix: BlankMatrix
Analysis Batch: O-40024

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-40024_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Anthracene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Biphenyl	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Chrysene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Dibenzothiophene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		11/14/22 00:00	11/24/22 13:34	1
Fluoranthene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Fluorene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Naphthalene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Perylene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Phenanthrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1
Pyrene	ND		0.005	0.001	µg/L		11/14/22 00:00	11/24/22 13:34	1

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*81*		*27 - 133*	*11/14/22 00:00*	*11/24/22 13:34*	*1*
(d10-Phenanthrene)	*85*		*43 - 129*	*11/14/22 00:00*	*11/24/22 13:34*	*1*
(d12-Chrysene)	*75*		*52 - 144*	*11/14/22 00:00*	*11/24/22 13:34*	*1*
(d12-Perylene)	*55*		*36 - 161*	*11/14/22 00:00*	*11/24/22 13:34*	*1*
(d8-Naphthalene)	*108*		*25 - 125*	*11/14/22 00:00*	*11/24/22 13:34*	*1*

Lab Sample ID: 101857-BS1
Matrix: BlankMatrix
Analysis Batch: O-40024

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-40024_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.584		µg/L		117	31 - 128
1-Methylphenanthrene	0.25	0.212		µg/L		85	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.32		µg/L		64	55 - 122
2,6-Dimethylnaphthalene	0.5	0.408		µg/L		82	48 - 120
2-Methylnaphthalene	0.5	0.616		µg/L		123	47 - 130
Acenaphthene	0.5	0.397		µg/L		79	53 - 131
Acenaphthylene	0.5	0.346		µg/L		69	43 - 140
Anthracene	0.5	0.397		µg/L		79	58 - 135
Benz[a]anthracene	0.25	0.15		µg/L		60	55 - 145
Benzo[a]pyrene	0.5	0.458		µg/L		92	51 - 143
Benzo[b]fluoranthene	0.5	0.253		µg/L		51	46 - 165
Benzo[e]pyrene	0.5	0.272		µg/L		54	42 - 152
Benzo[g,h,i]perylene	0.5	0.403		µg/L		81	63 - 133
Benzo[k]fluoranthene	0.5	0.286		µg/L		57	56 - 145
Biphenyl	0.5	0.521		µg/L		104	56 - 119

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

Lab Sample ID: 101857-BS1
Matrix: BlankMatrix
Analysis Batch: O-40024

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-40024_P

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Chrysene			0.25	0.278		µg/L		111	56 - 141		
Dibenz[a,h]anthracene			0.25	0.252		µg/L		101	55 - 150		
Dibenzo[a,l]pyrene			0.5	0.316		µg/L		63	50 - 150		
Dibenzothiophene			0.5	0.489		µg/L		98	75 - 113		
Disalicylidenepropanediamine			50	27.7		µg/L		55	50 - 150		
Fluoranthene			0.25	0.203		µg/L		81	60 - 146		
Fluorene			0.5	0.338		µg/L		68	58 - 131		
Indeno[1,2,3-cd]pyrene			0.25	0.236		µg/L		94	50 - 151		
Naphthalene			1	0.615		µg/L		62	41 - 126		
Perylene			0.5	0.344		µg/L		69	48 - 141		
Phenanthrene			0.5	0.397		µg/L		79	67 - 127		
Pyrene			0.25	0.183		µg/L		73	54 - 156		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
(d10-Acenaphthene)	*81*		*27 - 133*
(d10-Phenanthrene)	*79*		*43 - 129*
(d12-Chrysene)	*67*		*52 - 144*
(d12-Perylene)	*65*		*36 - 161*
(d8-Naphthalene)	*96*		*25 - 125*

Lab Sample ID: 101857-BS2
Matrix: BlankMatrix
Analysis Batch: O-40024

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-40024_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene			0.5	0.619		µg/L		124	31 - 128	6	30
1-Methylphenanthrene			0.25	0.21		µg/L		84	66 - 127	1	30
2,3,5-Trimethylnaphthalene			0.5	0.317		µg/L		63	55 - 122	2	30
2,6-Dimethylnaphthalene			0.5	0.434		µg/L		87	48 - 120	6	30
2-Methylnaphthalene			0.5	0.626		µg/L		125	47 - 130	2	30
Acenaphthene			0.5	0.457		µg/L		91	53 - 131	14	30
Acenaphthylene			0.5	0.411		µg/L		82	43 - 140	17	30
Anthracene			0.5	0.41		µg/L		82	58 - 135	4	30
Benz[a]anthracene			0.25	0.138		µg/L		55	55 - 145	9	30
Benzo[a]pyrene			0.5	0.453		µg/L		91	51 - 143	1	30
Benzo[b]fluoranthene			0.5	0.249		µg/L		50	46 - 165	2	30
Benzo[e]pyrene			0.5	0.269		µg/L		54	42 - 152	0	30
Benzo[g,h,i]perylene			0.5	0.423		µg/L		85	63 - 133	5	30
Benzo[k]fluoranthene			0.5	0.29		µg/L		58	56 - 145	2	30
Biphenyl			0.5	0.541		µg/L		108	56 - 119	4	30
Chrysene			0.25	0.271		µg/L		108	56 - 141	3	30
Dibenz[a,h]anthracene			0.25	0.251		µg/L		100	55 - 150	1	30
Dibenzo[a,l]pyrene			0.5	0.312		µg/L		62	50 - 150	2	30
Dibenzothiophene			0.5	0.408		µg/L		82	75 - 113	18	30
Disalicylidenepropanediamine			50	32.1		µg/L		64	50 - 150	15	30
Fluoranthene			0.25	0.201		µg/L		80	60 - 146	1	30
Fluorene			0.5	0.321		µg/L		64	58 - 131	6	30
Indeno[1,2,3-cd]pyrene			0.25	0.247		µg/L		99	50 - 151	5	30

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

Lab Sample ID: 101857-BS2
Matrix: BlankMatrix
Analysis Batch: O-40024

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-40024_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Naphthalene			1	0.686		µg/L		69	41 - 126	11	30
Perylene			0.5	0.363		µg/L		73	48 - 141	6	30
Phenanthrene			0.5	0.407		µg/L		81	67 - 127	2	30
Pyrene			0.25	0.179		µg/L		72	54 - 156	1	30

Surrogate	*LCS DUP %Recovery*	*LCS DUP Qualifier*	*Limits*
(d10-Acenaphthene)	*91*		*27 - 133*
(d10-Phenanthrene)	*82*		*43 - 129*
(d12-Chrysene)	*65*		*52 - 144*
(d12-Perylene)	*65*		*36 - 161*
(d8-Naphthalene)	*106*		*25 - 125*

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

Lab Sample ID: 22VGH7K07B
Matrix: WATER
Analysis Batch: 22VGH7K07

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			11/14/22 15:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE					*11/14/22 15:30*	*1*

Lab Sample ID: 22VGH7K07L
Matrix: WATER
Analysis Batch: 22VGH7K07

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	0.439		mg/L		88	60 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOFLUOROBENZENE	*119*		*70 - 130*

Lab Sample ID: 22K140-01M
Matrix: WATER
Analysis Batch: 22VGH7K07

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	0.440		mg/L		88	50 - 130		

Surrogate	*MS %Recovery*	*MS Qualifier*	*Limits*
BROMOFLUOROBENZENE	*119*		*60 - 140*

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

Lab Sample ID: 22K140-01S
Matrix: WATER
Analysis Batch: 22VGH7K07

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	0.420		mg/L		84	50 - 130	5	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
BROMOFLUOROBENZENE	*120*		*60 - 140*

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

Lab Sample ID: 22DSK033WB
Matrix: WATER
Analysis Batch: 22DSK033W

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			11/22/22 14:47	1
JP5	ND	U	0.050		mg/L			11/22/22 14:47	1
JP8	ND	U	0.050		mg/L			11/22/22 14:47	1
MOTOR OIL	ND	U	0.050		mg/L			11/22/22 14:47	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE					*11/22/22 14:47*	*1*
HEXACOSANE					*11/22/22 14:47*	*1*

Lab Sample ID: 22DSK033WL
Matrix: WATER
Analysis Batch: 22DSK033W

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	2.84		mg/L		114	50 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*104*		*60 - 130*
HEXACOSANE	*118*		*60 - 130*

Lab Sample ID: 22J5K033WL
Matrix: WATER
Analysis Batch: 22DSK033W

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	2.50		mg/L		100	30 - 160		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*94*		*60 - 130*
HEXACOSANE	*106*		*60 - 130*

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

Lab Sample ID: 22J8K033WL
Matrix: WATER
Analysis Batch: 22DSK033W

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	2.85		mg/L		114	30 - 160		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*97*		*60 - 130*
HEXACOSANE	*105*		*60 - 130*

GC/MS Semi VOA

Prep Batch: 24110

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-27950-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	525.2	
MB 380-24110/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-24110/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-24110/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-24110/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-27552-BW-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-27564-D-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 24186

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-27950-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	525.2	24110
MB 380-24110/1-A	Method Blank	Total/NA	Water	525.2	24110
LCS 380-24110/3-A	Lab Control Sample	Total/NA	Water	525.2	24110
LCSD 380-24110/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	24110
MRL 380-24110/2-A	Lab Control Sample	Total/NA	Water	525.2	24110
380-27552-BW-1-A MS	Matrix Spike	Total/NA	Water	525.2	24110
380-27564-D-1-A DU	Duplicate	Total/NA	Water	525.2	24110

Prep Batch: 24459

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-27950-2	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	525.2	
MB 380-24459/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-24459/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-24459/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-24459/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-27946-B-2-A MS	Matrix Spike	Total/NA	Water	525.2	
380-27946-B-4-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 24584

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
MB 380-24459/1-A	Method Blank	Total/NA	Water	525.2	24459
LCS 380-24459/3-A	Lab Control Sample	Total/NA	Water	525.2	24459
LCSD 380-24459/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	24459
380-27946-B-4-A DU	Duplicate	Total/NA	Water	525.2	24459

Analysis Batch: 24669

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-27950-2	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	525.2	24459
MRL 380-24459/2-A	Lab Control Sample	Total/NA	Water	525.2	24459
380-27946-B-2-A MS	Matrix Spike	Total/NA	Water	525.2	24459

Subcontract

Analysis Batch: O-40024

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-27950-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-40024_P
380-27950-2	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-40024_P
101857-B1	Method Blank	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-40024_P

Subcontract (Continued)

Analysis Batch: O-40024 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
101857-BS1	Lab Control Sample	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-40024_P
101857-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	625 PAH Physis LL (EAL) + TICs	O-40024_P

Analysis Batch: 22DSK033W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-27950-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
380-27950-2	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	8015 LL DRO/MRO/JP5/JP8	
22DSK033WB	Method Blank	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	
22DSK033WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	
22J5K033WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	
22J8K033WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO/JP5/JP8	

Analysis Batch: 22VGH7K07

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-27950-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-27950-2	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-27950-3	TB:HALAWA SHAFT (331-241-TP401)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-27950-4	TB:MOANALUA WELLS (331-223-TP202)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
22VGH7K07B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22VGH7K07L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22K140-01M	Matrix Spike	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22K140-01S	Matrix Spike Duplicate	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Prep Batch: O-40024_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-27950-1	HALAWA SHAFT (331-241-TP401)	Total/NA	Drinking Water	EPA_625	
380-27950-2	MOANALUA WELLS (331-223-TP202)	Total/NA	Drinking Water	EPA_625	

Subcontract (Continued)

Prep Batch: O-40024_P (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
101857-B1	Method Blank	Total/NA	BlankMatrix	EPA_625	
101857-BS1	Lab Control Sample	Total/NA	BlankMatrix	EPA_625	
101857-BS2	Lab Control Sample Dup	Total/NA	BlankMatrix	EPA_625	

Lab Chronicle

Client: City & County of Honolulu
Project/Site: Rush Weekly Red Hill

Job ID: 380-27950-1

Client Sample ID: HALAWA SHAFT (331-241-TP401)

Lab Sample ID: 380-27950-1
Matrix: Drinking Water
Date Collected: 11/07/22 10:10
Date Received: 11/10/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			24110	N8NE	EA MON	11/12/22 09:24
Total/NA	Analysis	525.2		1	24186	Q8LA	EA MON	11/14/22 17:50
Total/NA	Prep	EPA_625		1	O-40024_P			11/14/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-40024	YC		11/24/22 18:44
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7K07	SCerva		11/14/22 19:08
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	22DSK033W	SDees		11/22/22 16:56

Client Sample ID: MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-27950-2
Matrix: Drinking Water
Date Collected: 11/09/22 09:53
Date Received: 11/10/22 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			24459	N8NE	EA MON	11/16/22 11:31
Total/NA	Analysis	525.2		1	24669	Q8LA	EA MON	11/18/22 16:51
Total/NA	Prep	EPA_625		1	O-40024_P			11/14/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-40024	YC		11/24/22 20:27
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7K07	SCerva		11/14/22 20:57
Total/NA	Analysis	8015 LL DRO/MRO/JP5/JP8		1	22DSK033W	SDees		11/22/22 17:15

Client Sample ID: TB:HALAWA SHAFT (331-241-TP401)

Lab Sample ID: 380-27950-3
Matrix: Water
Date Collected: 11/07/22 10:10
Date Received: 11/10/22 10:00

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	22VGH7K07	SCerva		11/14/22 21:33

Client Sample ID: TB:MOANALUA WELLS (331-223-TP202)

Lab Sample ID: 380-27950-4
Matrix: Water
Date Collected: 11/09/22 09:53
Date Received: 11/10/22 10:00

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	22VGH7K07	SCerva		11/14/22 22:10

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: Rush Weekly Red Hill

Job ID: 380-27950-1

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: Rush Weekly Red Hill

Job ID: 380-27950-1

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: Rush Weekly Red Hill

Job ID: 380-27950-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received	PWSID Number
380-27950-1	HALAWA SHAFT (331-241-TP401)	Drinking Water	11/07/22 10:10	11/10/22 10:00	HI0000331
380-27950-2	MOANALUA WELLS (331-223-TP202)	Drinking Water	11/09/22 09:53	11/10/22 10:00	HI0000331
380-27950-3	TB:HALAWA SHAFT (331-241-TP401)	Water	11/07/22 10:10	11/10/22 10:00	
380-27950-4	TB:MOANALUA WELLS (331-223-TP202)	Water	11/09/22 09:53	11/10/22 10:00	

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

Date: 12-13-2022
EMAX Batch No.: 22K140

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-27950

Enclosed is the Laboratory report for samples received on 11/14/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-27950-1	K140-01	11/07/22	WATER	TPH GASOLINE
				TPH
380-27950-2	K140-02	11/09/22	WATER	TPH GASOLINE
				TPH
380-27950-3	K140-03	11/07/22	WATER	TPH GASOLINE
380-27950-4	K140-04	11/09/22	WATER	TPH GASOLINE
380-27950-1MS	K140-01M	11/07/22	WATER	TPH GASOLINE
380-27950-1MSD	K140-01S	11/07/22	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

Chain of Custody Record

22K140

eurofins | Environment Testing

12/28/2022

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-28214.1
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 #: 380-27950-1
Address: 3051 Fujita Street, ,	Due Date Requested: 11/25/2022			
City: Torrance	TAT Requested (days):			
State, Zip: CA, 90505				
Phone:	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#:			

Analysis Requested

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

	Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)	SUB (8015 LL DRO/MRO/JP5/JP8)/ 8015 LL DRO/MRO/JP5/JP8	Total Number of containers	Special Instructions/Note:
				Preservation Code:							
1	HALAWA SHAFT (331-241-TP401) (380-27950-1)	11/7/22	10:10 Hawaiian		Water			X	X	6	See Attached Instructions
2	MOANALUA WELLS (331-223-TP202) (380-27950-2)	11/9/22	09:53 Hawaiian		Water			X	X	3	See Attached Instructions
3	TB:HALAWA SHAFT-331-241-TP401 (380-27950-3)	11/7/22	10:10 Hawaiian		Water			X		2	See Attached Instructions
4	TB:MOANALUA WELLS (331-223-TP202) (380-27950-4)	11/9/22	09:53 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:	Date/Time: 11/11/22	Company EEA	Received by:		Date/Time: 11-14-22 1110	Company EEA
Relinquished by:	Date/Time:	Company	Received by:		Date/Time: 11/14/22 11:10	Company EMAX
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: 0.9	

Ver: 06/08/2021

SAMPLE RECEIPT FORM 1

EMAX LABORATORIES, INC.

Type of Delivery	Airbill / Tracking Number	ECN 22K140
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Cecilia Chavez
☐ EMAX Courier ☑ Client Delivery		Date 11/14/22 Time 1110

COC INSPECTION

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

Note: _____

PACKAGING INSPECTION

Container	☑ Cooler	☐ Box	☐ Other		
Condition	☐ Custody Seal	☐ Intact	☐ Damaged		
Packaging	☑ Bubble Pack	☐ Styrofoam	☐ Popcorn	☐ Sufficient	☐ _____
Temperatures	☑ Cooler 1 0.9 °C	☐ Cooler 2 _____ °C	☐ Cooler 3 _____ °C	☐ Cooler 4 _____ °C	☐ Cooler 5 _____ °C
(Cool, ≤6 °C but not frozen)	☐ 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
2		D11	received 6 containers	R8
3	13,14	D22	① 11/7/22 ~~1000~~ 1010 (11/14)	R1
			② 11/2/22 1pm	
4	15,16	D22	① 11/9/22 953	↓
			② 11/2/22 1pm	

11/14/22

MB 11/15/22

☐ 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: Samples 1,2 containers 5,6,11,12 analyses on label is cutoff.

SAMPLE MATRIX IS DRINKING WATER? ☐ YES ☐ NO Samples 1-4 all vials. preservative only reads for Sodium thiosulfate. while ~~other label~~ 11/14 other label reads sodium thiosulfate w/ HCl

☐ Continue to next page.

LEGEND:

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

Code	Description-Sample Management
D13	Out of Holding Time
D14	Bubble is >6mm
D15	No trip blank in cooler
D16	Preservation not indicated in _____
D17	Preservation mismatch COC vs label
D18	Insufficient chemical preservative
D19	Insufficient Sample
D20	No filtration info for dissolved analysis
D21	No sample for moisture determination
D22	2 dates ; times
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	Informed Client.
R9	
R10	
R11	
R12	

REVIEWS:

Sample Labeling JHOWIN ZAMORA Date 11/14/22 11/14/22

SRF Date 11/14/22

PM MB Date 11/15/22

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

380-27950

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

SDG#: 22K140

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-27950

SDG : 22K140

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

A total of four(4) water samples were received on 11/14/22 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. VGH7K07B - 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. VGH7K07L/VGH7K07C 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 K140-01M/K140-01S. 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 : 380-27950

SDG NO. : 22K140
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	VGH7K07B	1	NA	11/14/2215:30	11/14/2215:30	AK14005A	AK14003A	22VGH7K07	Method Blank
LCD1W	VGH7K07C	1	NA	11/14/2216:42	11/14/2216:42	AK14007A	AK14003A	22VGH7K07	LCS Duplicate
380-27950-1	K140-01	1	NA	11/14/2219:08	11/14/2219:08	AK14011A	AK14003A	22VGH7K07	Field Sample
380-27950-1MS	K140-01M	1	NA	11/14/2219:44	11/14/2219:44	AK14012A	AK14003A	22VGH7K07	Matrix Spike Sample (MS)
380-27950-1MSD	K140-01S	1	NA	11/14/2220:21	11/14/2220:21	AK14013A	AK14003A	22VGH7K07	MS Duplicate (MSD)
380-27950-2	K140-02	1	NA	11/14/2220:57	11/14/2220:57	AK14014A	AK14003A	22VGH7K07	Field Sample
380-27950-3	K140-03	1	NA	11/14/2221:33	11/14/2221:33	AK14015A	AK14003A	22VGH7K07	Field Sample
380-27950-4	K140-04	1	NA	11/14/2222:10	11/14/2222:10	AK14016A	AK14003A	22VGH7K07	Field Sample
LCS1W	VGH7K07L	1	NA	11/14/2222:46	11/14/2222:46	AK14017A	AK14003A	22VGH7K07	Lab Control Sample (LCS)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/07/22 10:10
Project	: 380-27950	Date Received:	11/14/22
Batch No.	: 22K140	Date Extracted:	11/14/22 19:08
Sample ID	: 380-27950-1	Date Analyzed:	11/14/22 19:08
Lab Samp ID:	K140-01	Dilution Factor:	1
Lab File ID:	AK14011A	Matrix:	WATER
Ext Btch ID:	22VGH7K07	% Moisture:	NA
Calib. Ref.:	AK14003A	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	0.0388	0.0400	97	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:	11/09/22 09:53
Project	: 380-27950	Date Received:	11/14/22
Batch No.	: 22K140	Date Extracted:	11/14/22 20:57
Sample ID	: 380-27950-2	Date Analyzed:	11/14/22 20:57
Lab Samp ID:	K140-02	Dilution Factor:	1
Lab File ID:	AK14014A	Matrix:	WATER
Ext Btch ID:	22VGH7K07	% Moisture:	NA
Calib. Ref.:	AK14003A	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	0.0407	0.0400	102	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/07/22 10:10
Project	: 380-27950	Date Received:	11/14/22
Batch No.	: 22K140	Date Extracted:	11/14/22 21:33
Sample ID	: 380-27950-3	Date Analyzed:	11/14/22 21:33
Lab Samp ID:	K140-03	Dilution Factor:	1
Lab File ID:	AK14015A	Matrix:	WATER
Ext Btch ID:	22VGH7K07	% Moisture:	NA
Calib. Ref.:	AK14003A	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	0.0386	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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/09/22 09:53
Project	: 380-27950	Date Received:	11/14/22
Batch No.	: 22K140	Date Extracted:	11/14/22 22:10
Sample ID	: 380-27950-4	Date Analyzed:	11/14/22 22:10
Lab Samp ID:	K140-04	Dilution Factor:	1
Lab File ID:	AK14016A	Matrix:	WATER
Ext Btch ID:	22VGH7K07	% Moisture:	NA
Calib. Ref.:	AK14003A	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	0.0392	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

QC SUMMARIES

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/14/22 15:30
Project	: 380-27950	Date Received:	11/14/22
Batch No.	: 22K140	Date Extracted:	11/14/22 15:30
Sample ID	: MBLK1W	Date Analyzed:	11/14/22 15:30
Lab Samp ID:	VGH7K07B	Dilution Factor:	1
Lab File ID:	AK14005A	Matrix:	WATER
Ext Btch ID:	22VGH7K07	% Moisture:	NA
Calib. Ref.:	AK14003A	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	0.0343	0.0400	86	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 : 380-27950
BATCH NO. : 22K140
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VGH7K07B	VGH7K07L	VGH7K07C
LAB FILE ID	: AK14005A	AK14017A	AK14007A
DATE PREPARED	: 11/14/22 15:30	11/14/22 22:46	11/14/22 16:42
DATE ANALYZED	: 11/14/22 15:30	11/14/22 22:46	11/14/22 16:42
PREP BATCH	: 22VGH7K07	22VGH7K07	22VGH7K07
CALIBRATION REF	: AK14003A	AK14003A	AK14003A

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	0.439	88	0.500	0.421	84	4	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0477	119	0.0400	0.0425	106	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 : 380-27950
BATCH NO. : 22K140
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-27950-1	380-27950-1MS	380-27950-1MSD
LAB SAMPLE ID	: K140-01	K140-01M	K140-01S
LAB FILE ID	: AK14011A	AK14012A	AK14013A
DATE PREPARED	: 11/14/22 19:08	11/14/22 19:44	11/14/22 20:21
DATE ANALYZED	: 11/14/22 19:08	11/14/22 19:44	11/14/22 20:21
PREP BATCH	: 22VGH7K07	22VGH7K07	22VGH7K07
CALIBRATION REF	: AK14003A	AK14003A	AK14003A

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	0.440	88	0.500	0.420	84	5	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0474	119	0.0400	0.0478	120	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-27950

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22K140

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-27950

SDG : 22K140

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

A total of two(2) water samples were received on 11/14/22 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. DSK033WB - 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. DSK033WL/DSK033WC 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: 380-27950

SDG : 22K140

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of two(2) water samples were received on 11/14/22 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. DSK033WB - 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. J5K033WL/J5K033WC 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: 380-27950

SDG : 22K140

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

A total of two(2) water samples were received on 11/14/22 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. DSK033WB - 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. J8K033WL/J8K033WC 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 : 380-27950

SDG NO. : 22K140
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	DSK033WB	1	NA	11/22/2214:47	11/21/2215:45	LK22009A	LK22003A	22DSK033W	Method Blank
LCS1W	DSK033WL	1	NA	11/22/2215:05	11/21/2215:45	LK22010A	LK22003A	22DSK033W	Lab Control Sample (LCS)
LCD1W	DSK033WC	1	NA	11/22/2215:24	11/21/2215:45	LK22011A	LK22003A	22DSK033W	LCS Duplicate
380-27950-1	K140-01	1	NA	11/22/2216:56	11/21/2215:45	LK22016A	LK22003A	22DSK033W	Field Sample
380-27950-2	K140-02	1	NA	11/22/2217:15	11/21/2215:45	LK22017A	LK22003A	22DSK033W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-27950

SDG NO. : 22K140
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	DSK033WB	1	NA	11/22/2214:47	11/21/2215:45	LK22009A	LK22004A	22DSK033W	Method Blank
LCS1W	J5K033WL	1	NA	11/22/2215:42	11/21/2215:45	LK22012A	LK22004A	22DSK033W	Lab Control Sample (LCS)
LCD1W	J5K033WC	1	NA	11/22/2216:01	11/21/2215:45	LK22013A	LK22004A	22DSK033W	LCS Duplicate
380-27950-1	K140-01	1	NA	11/22/2216:56	11/21/2215:45	LK22016A	LK22004A	22DSK033W	Field Sample
380-27950-2	K140-02	1	NA	11/22/2217:15	11/21/2215:45	LK22017A	LK22004A	22DSK033W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-27950

SDG NO. : 22K140
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	DSK033WB	1	NA	11/22/2214:47	11/21/2215:45	LK22009A	LK22005A	22DSK033W	Method Blank
LCS1W	J8K033WL	1	NA	11/22/2216:19	11/21/2215:45	LK22014A	LK22005A	22DSK033W	Lab Control Sample (LCS)
LCD1W	J8K033WC	1	NA	11/22/2216:38	11/21/2215:45	LK22015A	LK22005A	22DSK033W	LCS Duplicate
380-27950-1	K140-01	1	NA	11/22/2216:56	11/21/2215:45	LK22016A	LK22005A	22DSK033W	Field Sample
380-27950-2	K140-02	1	NA	11/22/2217:15	11/21/2215:45	LK22017A	LK22005A	22DSK033W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/07/22 10:10
Project	: 380-27950	Date Received:	11/14/22
Batch No.	: 22K140	Date Extracted:	11/21/22 15:45
Sample ID	: 380-27950-1	Date Analyzed:	11/22/22 16:56
Lab Samp ID:	22K140-01	Dilution Factor:	1
Lab File ID:	LK22016A	Matrix:	WATER
Ext Btch ID:	22DSK033W	% Moisture:	NA
Calib. Ref.:	LK22003A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.027	0.014
Motor Oil	ND	0.054	0.027

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.444	0.540	82	60-130
Hexacosane	0.126	0.135	93	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 : 930ml Final Volume : 5ml

Prepared by : POreto Analyzed by : SDecso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/07/22 10:10
Project	: 380-27950	Date Received:	11/14/22
Batch No.	: 22K140	Date Extracted:	11/21/22 15:45
Sample ID	: 380-27950-1	Date Analyzed:	11/22/22 16:56
Lab Samp ID:	22K140-01	Dilution Factor:	1
Lab File ID:	LK22016A	Matrix:	WATER
Ext Btch ID:	22DSK033W	% Moisture:	NA
Calib. Ref.:	LK22004A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.054	0.027

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.444	0.540	82	60-130
Hexacosane	0.126	0.135	93	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 : 930ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/07/22 10:10
Project	: 380-27950	Date Received:	11/14/22
Batch No.	: 22K140	Date Extracted:	11/21/22 15:45
Sample ID	: 380-27950-1	Date Analyzed:	11/22/22 16:56
Lab Samp ID:	22K140-01	Dilution Factor:	1
Lab File ID:	LK22016A	Matrix:	WATER
Ext Btch ID:	22DSK033W	% Moisture:	NA
Calib. Ref.:	LK22005A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.054	0.027

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.444	0.540	82	60-130
Hexacosane	0.126	0.135	93	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 : 930ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/09/22 09:53
Project	: 380-27950	Date Received:	11/14/22
Batch No.	: 22K140	Date Extracted:	11/21/22 15:45
Sample ID	: 380-27950-2	Date Analyzed:	11/22/22 17:15
Lab Samp ID:	22K140-02	Dilution Factor:	1
Lab File ID:	LK22017A	Matrix:	WATER
Ext Btch ID:	22DSK033W	% Moisture:	NA
Calib. Ref.:	LK22003A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.027	0.013
Motor Oil	ND	0.053	0.027

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.482	0.530	91	60-130
Hexacosane	0.137	0.132	103	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	: 940ml	Final Volume	: 5ml
Prepared by	: POreto	Analyzed by	: SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/09/22 09:53
Project	: 380-27950	Date Received:	11/14/22
Batch No.	: 22K140	Date Extracted:	11/21/22 15:45
Sample ID	: 380-27950-2	Date Analyzed:	11/22/22 17:15
Lab Samp ID:	22K140-02	Dilution Factor:	1
Lab File ID:	LK22017A	Matrix:	WATER
Ext Btch ID:	22DSK033W	% Moisture:	NA
Calib. Ref.:	LK22004A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.053	0.027

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.482	0.530	91	60-130
Hexacosane	0.137	0.132	103	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 : 940ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	11/09/22 09:53
Project	: 380-27950	Date Received:	11/14/22
Batch No.	: 22K140	Date Extracted:	11/21/22 15:45
Sample ID	: 380-27950-2	Date Analyzed:	11/22/22 17:15
Lab Samp ID:	22K140-02	Dilution Factor:	1
Lab File ID:	LK22017A	Matrix:	WATER
Ext Btch ID:	22DSK033W	% Moisture:	NA
Calib. Ref.:	LK22005A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.053	0.027

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.482	0.530	91	60-130
Hexacosane	0.137	0.132	103	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 : 940ml 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:	11/21/22 15:45
Project	: 380-27950	Date Received:	11/21/22
Batch No.	: 22K140	Date Extracted:	11/21/22 15:45
Sample ID	: MBLK1W	Date Analyzed:	11/22/22 14:47
Lab Samp ID:	DSK033WB	Dilution Factor:	1
Lab File ID:	LK22009A	Matrix:	WATER
Ext Btch ID:	22DSK033W	% Moisture:	NA
Calib. Ref.:	LK22003A	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	0.499	0.500	100	60-130
Hexacosane	0.135	0.125	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	: 1000ml	Final Volume	: 5ml
Prepared by	: POreto	Analyzed by	: SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-27950
BATCH NO. : 22K140
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSK033WB	DSK033WL	DSK033WC
LAB FILE ID	: LK22009A	LK22010A	LK22011A
DATE PREPARED	: 11/21/22 15:45	11/21/22 15:45	11/21/22 15:45
DATE ANALYZED	: 11/22/22 14:47	11/22/22 15:05	11/22/22 15:24
PREP BATCH	: 22DSK033W	22DSK033W	22DSK033W
CALIBRATION REF	: LK22003A	LK22003A	LK22003A

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	2.84	114	2.50	2.59	104	9	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.522	104	0.500	0.493	99	60-130
Hexacosane	0.125	0.147	118	0.125	0.133	106	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:	11/21/22 15:45
Project	: 380-27950	Date Received:	11/21/22
Batch No.	: 22K140	Date Extracted:	11/21/22 15:45
Sample ID	: MBLK1W	Date Analyzed:	11/22/22 14:47
Lab Samp ID:	DSK033WB	Dilution Factor:	1
Lab File ID:	LK22009A	Matrix:	WATER
Ext Btch ID:	22DSK033W	% Moisture:	NA
Calib. Ref.:	LK22004A	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	0.499	0.500	100	60-130
Hexacosane	0.135	0.125	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 : 1000ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-27950
BATCH NO. : 22K140
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSK033WB	J5K033WL	J5K033WC
LAB FILE ID	: LK22009A	LK22012A	LK22013A
DATE PREPARED	: 11/21/22 15:45	11/21/22 15:45	11/21/22 15:45
DATE ANALYZED	: 11/22/22 14:47	11/22/22 15:42	11/22/22 16:01
PREP BATCH	: 22DSK033W	22DSK033W	22DSK033W
CALIBRATION REF	: LK22004A	LK22004A	LK22004A

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	2.50	100	2.50	2.48	99	1	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.472	94	0.500	0.496	99	60-130
Hexacosane	0.125	0.132	106	0.125	0.136	109	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:	11/21/22 15:45
Project	: 380-27950	Date Received:	11/21/22
Batch No.	: 22K140	Date Extracted:	11/21/22 15:45
Sample ID	: MBLK1W	Date Analyzed:	11/22/22 14:47
Lab Samp ID:	DSK033WB	Dilution Factor:	1
Lab File ID:	LK22009A	Matrix:	WATER
Ext Btch ID:	22DSK033W	% Moisture:	NA
Calib. Ref.:	LK22005A	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	0.499	0.500	100	60-130
Hexacosane	0.135	0.125	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 : 1000ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-27950
BATCH NO. : 22K140
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: DSK033WB	J8K033WL	J8K033WC
LAB FILE ID	: LK22009A	LK22014A	LK22015A
DATE PREPARED	: 11/21/22 15:45	11/21/22 15:45	11/21/22 15:45
DATE ANALYZED	: 11/22/22 14:47	11/22/22 16:19	11/22/22 16:38
PREP BATCH	: 22DSK033W	22DSK033W	22DSK033W
CALIBRATION REF	: LK22005A	LK22005A	LK22005A

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	2.85	114	2.50	2.59	104	10	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.487	97	0.500	0.500	100	60-130
Hexacosane	0.125	0.131	105	0.125	0.131	105	60-130

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

December 09, 2022

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

Project Name: RED-HILL Porject # 38001111 Job # 380-27950-1
Physis Project ID: 1407003-337

Dear Rosalynn,

Enclosed are the analytical results for samples submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 11/11/2022. A total of 2 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: 1407003-337

RED-HILL Porject # 38001111 Job # 380-27950-1

Total Samples: 2

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
101858	HALAWA SHAFT	331-241-TP401 (380-27950-1)	11/7/2022	10:10	Samplewater	Not Specified
101859	MOANALUA WELLS	331-223-TP202 (380-27950-2)	11/9/2022	9:53	Samplewater	Not Specified

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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: 1407003-337
Client: Eurofins Eaton Analytical
Project: RED-HILL Porject # 38001111 Job # 380-27950-1

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 101858-R1	**HALAWA SHAFT 331-241-TP401 (38**	**Matrix: Samplewater**						**Sampled: 07-Nov-22 10:10**		**Received: 11-Nov-22**	
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40024	14-Nov-22	24-Nov-22
Sample ID: 101859-R1	**MOANALUA WELLS 331-223-TP202**	**Matrix: Samplewater**						**Sampled: 09-Nov-22 9:53**		**Received: 11-Nov-22**	
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-40024	14-Nov-22	24-Nov-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 101858-R1	**HALAWA SHAFT 331-241-TP401 (38**	**Matrix: Samplewater**					**Sampled: 07-Nov-22 10:10**			**Received: 11-Nov-22**	
(d10-Acenaphthene)	EPA 625.1	% Recovery	78	1			Total		O-40024	14-Nov-22	24-Nov-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	73	1			Total		O-40024	14-Nov-22	24-Nov-22
(d12-Chrysene)	EPA 625.1	% Recovery	59	1			Total		O-40024	14-Nov-22	24-Nov-22
(d12-Perylene)	EPA 625.1	% Recovery	52	1			Total		O-40024	14-Nov-22	24-Nov-22
(d8-Naphthalene)	EPA 625.1	% Recovery	102	1			Total		O-40024	14-Nov-22	24-Nov-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22

PHYSIS Project ID: 1407003-337
Client: Eurofins Eaton Analytical
Project: RED-HILL Porject # 38001111 Job # 380-27950-1

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-40024	14-Nov-22	24-Nov-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 101859-R1	**MOANALUA WELLS 331-223-TP202**	**Matrix: Samplewater**					**Sampled: 09-Nov-22 9:53**			**Received: 11-Nov-22**	
(d10-Acenaphthene)	EPA 625.1	% Recovery	84	1			Total		O-40024	14-Nov-22	24-Nov-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	71	1			Total		O-40024	14-Nov-22	24-Nov-22
(d12-Chrysene)	EPA 625.1	% Recovery	59	1			Total		O-40024	14-Nov-22	24-Nov-22
(d12-Perylene)	EPA 625.1	% Recovery	48	1			Total		O-40024	14-Nov-22	24-Nov-22
(d8-Naphthalene)	EPA 625.1	% Recovery	100	1			Total		O-40024	14-Nov-22	24-Nov-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22

PHYSIS Project ID: 1407003-337
Client: Eurofins Eaton Analytical
Project: RED-HILL Porject # 38001111 Job # 380-27950-1

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-40024	14-Nov-22	24-Nov-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-40024	14-Nov-22	24-Nov-22

QUALITY CONTROL REPORT

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: 101857-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**		
		Method: EPA 625.1				Batch ID: O-40024		Prepared: 14-Nov-22					Analyzed: 24-Nov-22		
Disalicylidenepropanediamin	Total	ND	1	0.05	0.1	µg/L									
Sample ID: 101857-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**		
		Method: EPA 625.1				Batch ID: O-40024		Prepared: 14-Nov-22					Analyzed: 24-Nov-22		
Disalicylidenepropanediamin	Total	27.7	1	0.05	0.1	µg/L	50	0	55	50 - 150%	PASS				
Sample ID: 101857-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**		
		Method: EPA 625.1				Batch ID: O-40024		Prepared: 14-Nov-22					Analyzed: 24-Nov-22		
Disalicylidenepropanediamin	Total	32.1	1	0.05	0.1	µg/L	50	0	64	50 - 150%	PASS	15	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: 101857-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
	Method: EPA 625.1					Batch ID: O-40024		Prepared: 14-Nov-22				Analyzed: 24-Nov-22	
(d10-Acenaphthene)	Total	81	1			% Recovery	100	81	27 - 133%	PASS			
(d10-Phenanthrene)	Total	85	1			% Recovery	100	85	43 - 129%	PASS			
(d12-Chrysene)	Total	75	1			% Recovery	100	75	52 - 144%	PASS			
(d12-Perylene)	Total	55	1			% Recovery	100	55	36 - 161%	PASS			
(d8-Naphthalene)	Total	108	1			% Recovery	100	108	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: 1407003-337
Client: Eurofins Eaton Analytical
Project: RED-HILL Porject # 38001111 Job # 380-27950-1

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: 101857-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
		Method: EPA 625.1				Batch ID: O-40024		Prepared: 14-Nov-22				Analyzed: 24-Nov-22	
(d10-Acenaphthene)	Total	81	1			% Recovery	100	0	81	27 - 133%	PASS		
(d10-Phenanthrene)	Total	79	1			% Recovery	100	0	79	43 - 129%	PASS		
(d12-Chrysene)	Total	67	1			% Recovery	100	0	67	52 - 144%	PASS		
(d12-Perylene)	Total	65	1			% Recovery	100	0	65	36 - 161%	PASS		
(d8-Naphthalene)	Total	96	1			% Recovery	100	0	96	25 - 125%	PASS		
1-Methylnaphthalene	Total	0.584	1	0.001	0.005	µg/L	0.5	0	117	31 - 128%	PASS		
1-Methylphenanthrene	Total	0.212	1	0.001	0.005	µg/L	0.25	0	85	66 - 127%	PASS		
2,3,5-Trimethylnaphthalene	Total	0.32	1	0.001	0.005	µg/L	0.5	0	64	55 - 122%	PASS		
2,6-Dimethylnaphthalene	Total	0.408	1	0.001	0.005	µg/L	0.5	0	82	48 - 120%	PASS		
2-Methylnaphthalene	Total	0.616	1	0.001	0.005	µg/L	0.5	0	123	47 - 130%	PASS		
Acenaphthene	Total	0.397	1	0.001	0.005	µg/L	0.5	0	79	53 - 131%	PASS		
Acenaphthylene	Total	0.346	1	0.001	0.005	µg/L	0.5	0	69	43 - 140%	PASS		
Anthracene	Total	0.397	1	0.001	0.005	µg/L	0.5	0	79	58 - 135%	PASS		
Benz[a]anthracene	Total	0.15	1	0.001	0.005	µg/L	0.25	0	60	55 - 145%	PASS		
Benzo[a]pyrene	Total	0.458	1	0.001	0.005	µg/L	0.5	0	92	51 - 143%	PASS		
Benzo[b]fluoranthene	Total	0.253	1	0.001	0.005	µg/L	0.5	0	51	46 - 165%	PASS		
Benzo[e]pyrene	Total	0.272	1	0.001	0.005	µg/L	0.5	0	54	42 - 152%	PASS		
Benzo[g,h,i]perylene	Total	0.403	1	0.001	0.005	µg/L	0.5	0	81	63 - 133%	PASS		
Benzo[k]fluoranthene	Total	0.286	1	0.001	0.005	µg/L	0.5	0	57	56 - 145%	PASS		
Biphenyl	Total	0.521	1	0.001	0.005	µg/L	0.5	0	104	56 - 119%	PASS		
Chrysene	Total	0.278	1	0.001	0.005	µg/L	0.25	0	111	56 - 141%	PASS		
Dibenz[a,h]anthracene	Total	0.252	1	0.001	0.005	µg/L	0.25	0	101	55 - 150%	PASS		
Dibenzo[a,l]pyrene	Total	0.316	1	0.001	0.005	µg/L	0.5	0	63	50 - 150%	PASS		
Dibenzothiophene	Total	0.489	1	0.001	0.005	µg/L	0.5	0	98	75 - 113%	PASS		

PHYSIS Project ID: 1407003-337
Client: Eurofins Eaton Analytical
Project: RED-HILL Porject # 38001111 Job # 380-27950-1

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	0.203	1	0.001	0.005	µg/L	0.25	0	81	60 - 146%	PASS			
Fluorene	Total	0.338	1	0.001	0.005	µg/L	0.5	0	68	58 - 131%	PASS			
Indeno[1,2,3-cd]pyrene	Total	0.236	1	0.001	0.005	µg/L	0.25	0	94	50 - 151%	PASS			
Naphthalene	Total	0.615	1	0.001	0.005	µg/L	1	0	62	41 - 126%	PASS			
Perylene	Total	0.344	1	0.001	0.005	µg/L	0.5	0	69	48 - 141%	PASS			
Phenanthrene	Total	0.397	1	0.001	0.005	µg/L	0.5	0	79	67 - 127%	PASS			
Pyrene	Total	0.183	1	0.001	0.005	µg/L	0.25	0	73	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: 101857-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**		
		Method: EPA 625.1				Batch ID: O-40024		Prepared: 14-Nov-22					Analyzed: 24-Nov-22		
(d10-Acenaphthene)	Total	91	1			% Recovery	100	0	91	27 - 133%	PASS	12	30	PASS	
(d10-Phenanthrene)	Total	82	1			% Recovery	100	0	82	43 - 129%	PASS	4	30	PASS	
(d12-Chrysene)	Total	65	1			% Recovery	100	0	65	52 - 144%	PASS	3	30	PASS	
(d12-Perylene)	Total	65	1			% Recovery	100	0	65	36 - 161%	PASS	0	30	PASS	
(d8-Naphthalene)	Total	106	1			% Recovery	100	0	106	25 - 125%	PASS	10	30	PASS	
1-Methylnaphthalene	Total	0.619	1	0.001	0.005	µg/L	0.5	0	124	31 - 128%	PASS	6	30	PASS	
1-Methylphenanthrene	Total	0.21	1	0.001	0.005	µg/L	0.25	0	84	66 - 127%	PASS	1	30	PASS	
2,3,5-Trimethylnaphthalene	Total	0.317	1	0.001	0.005	µg/L	0.5	0	63	55 - 122%	PASS	2	30	PASS	
2,6-Dimethylnaphthalene	Total	0.434	1	0.001	0.005	µg/L	0.5	0	87	48 - 120%	PASS	6	30	PASS	
2-Methylnaphthalene	Total	0.626	1	0.001	0.005	µg/L	0.5	0	125	47 - 130%	PASS	2	30	PASS	
Acenaphthene	Total	0.457	1	0.001	0.005	µg/L	0.5	0	91	53 - 131%	PASS	14	30	PASS	
Acenaphthylene	Total	0.411	1	0.001	0.005	µg/L	0.5	0	82	43 - 140%	PASS	17	30	PASS	
Anthracene	Total	0.41	1	0.001	0.005	µg/L	0.5	0	82	58 - 135%	PASS	4	30	PASS	
Benz[a]anthracene	Total	0.138	1	0.001	0.005	µg/L	0.25	0	55	55 - 145%	PASS	9	30	PASS	
Benzo[a]pyrene	Total	0.453	1	0.001	0.005	µg/L	0.5	0	91	51 - 143%	PASS	1	30	PASS	
Benzo[b]fluoranthene	Total	0.249	1	0.001	0.005	µg/L	0.5	0	50	46 - 165%	PASS	2	30	PASS	
Benzo[e]pyrene	Total	0.269	1	0.001	0.005	µg/L	0.5	0	54	42 - 152%	PASS	0	30	PASS	
Benzo[g,h,i]perylene	Total	0.423	1	0.001	0.005	µg/L	0.5	0	85	63 - 133%	PASS	5	30	PASS	
Benzo[k]fluoranthene	Total	0.29	1	0.001	0.005	µg/L	0.5	0	58	56 - 145%	PASS	2	30	PASS	
Biphenyl	Total	0.541	1	0.001	0.005	µg/L	0.5	0	108	56 - 119%	PASS	4	30	PASS	
Chrysene	Total	0.271	1	0.001	0.005	µg/L	0.25	0	108	56 - 141%	PASS	3	30	PASS	
Dibenz[a,h]anthracene	Total	0.251	1	0.001	0.005	µg/L	0.25	0	100	55 - 150%	PASS	1	30	PASS	
Dibenzo[a,l]pyrene	Total	0.312	1	0.001	0.005	µg/L	0.5	0	62	50 - 150%	PASS	2	30	PASS	
Dibenzothiophene	Total	0.408	1	0.001	0.005	µg/L	0.5	0	82	75 - 113%	PASS	18	30	PASS	

PHYSIS Project ID: 1407003-337
Client: Eurofins Eaton Analytical
Project: RED-HILL Porject # 38001111 Job # 380-27950-1

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	0.201	1	0.001	0.005	µg/L	0.25	0	80	60 - 146%	PASS	1	30	PASS	
Fluorene	Total	0.321	1	0.001	0.005	µg/L	0.5	0	64	58 - 131%	PASS	6	30	PASS	
Indeno[1,2,3-cd]pyrene	Total	0.247	1	0.001	0.005	µg/L	0.25	0	99	50 - 151%	PASS	5	30	PASS	
Naphthalene	Total	0.686	1	0.001	0.005	µg/L	1	0	69	41 - 126%	PASS	11	30	PASS	
Perylene	Total	0.363	1	0.001	0.005	µg/L	0.5	0	73	48 - 141%	PASS	6	30	PASS	
Phenanthrene	Total	0.407	1	0.001	0.005	µg/L	0.5	0	81	67 - 127%	PASS	2	30	PASS	
Pyrene	Total	0.179	1	0.001	0.005	µg/L	0.25	0	72	54 - 156%	PASS	1	30	PASS	

TENTATIVELY IDENTIFIED COMPOUNDS

Sample ID: 101858

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.2308	6.8631	1111	Anthracene-D10	1517-22-2	97
29.2312	2.7187	440	Benzoic acid, 2-ethylhexyl ester	5444-75-7	97

Concentration estimated using the response for Anthracene-d10

Sample ID: 101859

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.2343	4.7867	1111	Anthracene-D10-	1719-06-8	96
29.2312	3.2119	746	Benzoic acid, 2-ethylhexyl ester	5444-75-7	96

Concentration estimated using the response for Anthracene-d10

Sample ID: Lab Blank Batch O-40024

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.2349	4.5985	1111	Anthracene-D10-	1719-06-8	97
29.2346	2.0848	504	Benzoic acid, 2-ethylhexyl ester	5444-75-7	97

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

eurofins | Environment Testing

12/28/2022

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-28218.1
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 #: 380-27950-1
Address: 1904 Wright Circle,	Due Date Requested: 11/25/2022			
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:						
HALAWA SHAFT (331-241-TP401) (380-27950-1)	11/7/22	10:10 Hawaiian		Water			X	2	See Attached Instructions
MOANALUA WELLS (331-223-TP202) (380-27950-2)	11/9/22	09:53 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 compliance 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
	[signature]	11/11/22 1215	EEA	[signature]	11/11/22 1215	PHYSIS
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

Ver: 06/08/2021

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

PHYSIS

Project Iteration ID: 1407003-337
Client Name: Eurofins Eaton Analytical
Project Name: RED-HILL Porject # 38001111 Job # 380-27950-1
COC Page Number: 2 of 2
Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: MN
2. Date Received: 11/11/22
3. Time Received: 1215
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): 0.2 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: RGH

Sample Integrity Upon Receipt:

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

Notes:

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

Chain of Custody Record

eurofins | Environment Testing

Client Information	Sampler: EJ	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-9762-2757.1
Client Contact: Dr. Ron Fenstemacher	Phone:	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				Water									
AIEA GULCH WELLS PUMP 2				Water									
AIEA WELLS PUMPS 1&2 (260)				Water									
HALAWA SHAFT	11/7/22	1010	G	Water			X	X	X	X			
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				Water									

380-27950 COC

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

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

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

Special Instructions/QC Requirements: #1 - 7704 5072 8985

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: FEDEX - #2 - 7704 5072 8150

Relinquished by: [redacted]	Date/Time: 11/9/22 1200	Company	Received by: G.REITMER	Date/Time: 11/10/2022 10:00	Company 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: #1 (630A) 3.0° - 2.9° GEL - FROZEN #2 (630A) 2.0° - 1.9°

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:	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-9762-2757.3
Client Contact: Dr. Ron Fenstemacher	Phone:	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									
MOANALUA WELLS				Water									
TB AIEA GULCH WELLS PUMP1				Water									
TB AIEA GULCH WELLS PUMP2				Water									
TB AIEA WELLS PUMPS 1&2 (260)				Water									
TB HALAWA SHAFT	11/7/22	1010	G	Water							X		
TB HALAWA WELLS UNITS 1&2				Water									
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:

#1 - 7704 5072 8985

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment: FED Ex #2 - 7704 5072 8150

Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	11/9/22 1200		G RETTNER	11/10/2022 10:00	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: #1 (630A) 3.0° - 2.9° GEL - FROZEN #2 (630A) 2.0° - 1.9°

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

Chain of Custody Record

eurofins | Environment Testing America

Client Information	Sampler: EJ	Lab PM: Arada, Rachelle	Carrier Tracking No(s):	COC No: 380-9759-2757.3
Client Contact: Dr. Ron Fenstemacher	Phone:	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									
MOANALUA WELLS	11/9/22	0953	G	Water			X	X	X	X			
TB AIEA GULCH WELLS PUMP1				Water									
TB AIEA GULCH WELLS PUMP2				Water									
TB AIEA WELLS PUMPS 1&2 (260)				Water									
TB HALAWA SHAFT				Water									
TB HALAWA WELLS UNITS 1&2				Water									
TB MOANALUA WELLS	11/9/22	0953	G	Water							X		

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

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

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

Special Instructions/QC Requirements: 1 - 7704 5072 8985

Empty Kit Relinquished by: | Date: | Time: | Method of Shipment: FED EX 2 - 7704 5072 8150

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[redacted]	11/9/22 1200		GREITNER	11/10/2022 10:00	EEA
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: #1 - 630A 3.0°-2.9° GEL-FROZEN #2 - 630A 2.0°-1.9°

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-27950-1

Login Number: 27950
List Number: 1
Creator: Ngo, Theodore

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	