

ANALYTICAL REPORT

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Laboratory Job ID: 380-15823-1
Client Project/Site: RED-HILL

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

Attn: Mr. Erwin Kawata



Authorized for release by:

10/21/2022 1:27:23 PM

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Results relate only to the items tested and the sample(s) as received by the laboratory.

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)



Kathleen Robb
Client Program Manager
10/21/2022 1:27:24 PM





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Definitions/Glossary

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

Job ID: 380-15823-1

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

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

Case Narrative

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

Job ID: 380-15823-1

Job ID: 380-15823-1

Laboratory: Eurofins Eaton Monrovia

Narrative

Job Narrative 380-15823-1

Comments

No additional comments.

Receipt

The samples were received on 8/10/2022 10:20 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperatures of the 6 coolers at receipt time were 1.1° C, 3.2° C, 3.3° C, 3.5° C, 4.2° C and 4.7° C.

GC/MS Semi VOA

Method 525.2: The continuing calibration verification (CCV) associated with batch 380-14896 recovered above the upper control limit for Di(2-ethylhexyl)adipate. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported. The associated samples are impacted: Halawa Shaft Static (Viewing Pool) (380-15823-1), (380-15819-N-1-A) and (380-16346-B-1-A).

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

Subcontract non-Sister

See attached subcontract report.

Organic Prep

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

Subcontract Work

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

Detection Summary

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

Job ID: 380-15823-1

Client Sample ID: Halawa Shaft Static (Viewing Pool)

Lab Sample ID: 380-15823-1

No Detections.

Client Sample ID: TB Halawa Shaft Static (Viewing Pool)

Lab Sample ID: 380-15823-2

No Detections.

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17

This Detection Summary does not include radiochemical test results.

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-15823-1

Client Sample ID: Halawa Shaft Static (Viewing Pool)

Lab Sample ID: 380-15823-1

Date Collected: 08/08/22 09:30

Matrix: Water

Date Received: 08/10/22 10:20

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
2,4'-DDE	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
2,4'-DDT	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
2,4-Dinitrotoluene	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
2,6-Dinitrotoluene	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
4,4'-DDD	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
4,4'-DDE	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
4,4'-DDT	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Acenaphthene	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Acenaphthylene	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Acetochlor	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Alachlor	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
alpha-BHC	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
alpha-Chlordane	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Anthracene	ND		0.020	ug/L		08/17/22 11:27	08/25/22 17:34	1
Atrazine	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Benz(a)anthracene	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Benzo[a]pyrene	ND		0.020	ug/L		08/17/22 11:27	08/25/22 17:34	1
Benzo[b]fluoranthene	ND		0.020	ug/L		08/17/22 11:27	08/25/22 17:34	1
Benzo[g,h,i]perylene	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Benzo[k]fluoranthene	ND		0.020	ug/L		08/17/22 11:27	08/25/22 17:34	1
beta-BHC	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Bis(2-ethylhexyl) phthalate	ND		0.59	ug/L		08/17/22 11:27	08/25/22 17:34	1
Bromacil	ND	*+	0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Butachlor	ND	*+	0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Butylbenzylphthalate	ND	^3+	0.49	ug/L		08/17/22 11:27	08/25/22 17:34	1
Caffeine	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Chlorobenzilate	ND	*+	0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Chloroneb	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Chlorothalonil (Draconil, Bravo)	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Chlorpyrifos	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Chrysene	ND		0.020	ug/L		08/17/22 11:27	08/25/22 17:34	1
delta-BHC	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Di(2-ethylhexyl)adipate	ND		0.59	ug/L		08/17/22 11:27	08/25/22 17:34	1
Diazinon (Qualitative)	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Dibenz(a,h)anthracene	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Diclorvos (DDVP)	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Dieldrin	ND		0.20	ug/L		08/17/22 11:27	08/25/22 17:34	1
Diethylphthalate	ND		0.49	ug/L		08/17/22 11:27	08/25/22 17:34	1
Dimethoate	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Dimethylphthalate	ND		0.49	ug/L		08/17/22 11:27	08/25/22 17:34	1
Di-n-butyl phthalate	ND		0.99	ug/L		08/17/22 11:27	08/25/22 17:34	1
Di-n-octyl phthalate	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Endosulfan I (Alpha)	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Endosulfan II (Beta)	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Endosulfan sulfate	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Endrin	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Endrin aldehyde	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
EPTC	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1

Client Sample Results

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

Job ID: 380-15823-1

Client Sample ID: Halawa Shaft Static (Viewing Pool)

Lab Sample ID: 380-15823-1

Date Collected: 08/08/22 09:30

Matrix: Water

Date Received: 08/10/22 10:20

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Fluorene	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
gamma-BHC (Lindane)	ND		0.039	ug/L		08/17/22 11:27	08/25/22 17:34	1
gamma-Chlordane	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Heptachlor	ND		0.039	ug/L		08/17/22 11:27	08/25/22 17:34	1
Heptachlor epoxide (isomer B)	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Hexachlorobenzene	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Hexachlorocyclopentadiene	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Indeno[1,2,3-cd]pyrene	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Isophorone	ND		0.49	ug/L		08/17/22 11:27	08/25/22 17:34	1
Malathion	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Methoxychlor	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Metolachlor	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Metribuzin	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Molinate	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Naphthalene	ND		0.30	ug/L		08/17/22 11:27	08/25/22 17:34	1
Parathion	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Pendimethalin (Penoxaline)	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Phenanthrene	ND		0.039	ug/L		08/17/22 11:27	08/25/22 17:34	1
Propachlor	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Pyrene	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Simazine	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Terbacil	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Terbuthylazine	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
Thiobencarb	ND		0.20	ug/L		08/17/22 11:27	08/25/22 17:34	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		08/17/22 11:27	08/25/22 17:34	1
trans-Nonachlor	ND		0.049	ug/L		08/17/22 11:27	08/25/22 17:34	1
Trifluralin	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
1-Methylnaphthalene	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1
2-Methylnaphthalene	ND		0.099	ug/L		08/17/22 11:27	08/25/22 17:34	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Decane	1.3	T J N	ug/L		2.39	124-18-5	08/17/22 11:27	08/25/22 17:34	1
Cyclopentasiloxane, decamethyl-	0.61	T J N	ug/L		2.68	541-02-6	08/17/22 11:27	08/25/22 17:34	1
Unknown	0.88	T J	ug/L		3.82		08/17/22 11:27	08/25/22 17:34	1
Tetradecanoic acid	0.69	T J N	ug/L		5.80	544-63-8	08/17/22 11:27	08/25/22 17:34	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	89		70 - 130	08/17/22 11:27	08/25/22 17:34	1
Perylene-d12	99		70 - 130	08/17/22 11:27	08/25/22 17:34	1
Triphenylphosphate	117		70 - 130	08/17/22 11:27	08/25/22 17:34	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.026		mg/L			08/22/22 18:31	1
MOTOR OIL	ND	U	0.052		mg/L			08/22/22 18:31	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	71		60 - 130		08/22/22 18:31	1
HEXACOSANE	90		60 - 130		08/22/22 18:31	1

Eurofins Eaton Monrovia

Client Sample Results

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

Job ID: 380-15823-1

Client Sample ID: Halawa Shaft Static (Viewing Pool)

Lab Sample ID: 380-15823-1

Date Collected: 08/08/22 09:30

Matrix: Water

Date Received: 08/10/22 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/12/22 18:38	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	84		60 - 140					08/12/22 18:38	1

Client Sample ID: TB Halawa Shaft Static (Viewing Pool)

Lab Sample ID: 380-15823-2

Date Collected: 08/08/22 09:30

Matrix: Water

Date Received: 08/10/22 10:20

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/12/22 19:14	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	91		60 - 140					08/12/22 19:14	1

Action Limit Summary

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

Job ID: 380-15823-1

Client Sample ID: Halawa Shaft Static (Viewing Pool)

Lab Sample ID: 380-15823-1

Compliance Check

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

Analyte	Result	Qualifier	Unit	EPAMCL	RL	Method	Prep Type
				Limit			
Alachlor	ND		ug/L	2	0.049	525.2	Total/NA
Atrazine	ND		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	ND		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	ND		ug/L	6	0.59	525.2	Total/NA
Di(2-ethylhexyl)adipate	ND		ug/L	400	0.59	525.2	Total/NA
Endrin	ND		ug/L	2	0.099	525.2	Total/NA
gamma-BHC (Lindane)	ND		ug/L	0.2	0.039	525.2	Total/NA
Heptachlor	ND		ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	ND		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	ND		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	ND		ug/L	50	0.049	525.2	Total/NA
Methoxychlor	ND		ug/L	40	0.099	525.2	Total/NA
Simazine	ND		ug/L	4	0.049	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-15823-1

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)		
		2NMX (70-130)	PRY (70-130)	TPP (70-130)
380-15819-O-1-A DU	Duplicate	90	93	116
380-15823-1	Halawa Shaft Static (Viewing Pool)	89	99	117
380-16346-A-1-A MS	Matrix Spike	92	94	112
LCS 380-13642/3-A	Lab Control Sample	93	96	112
LCSD 380-13642/4-A	Lab Control Sample Dup	92	96	109
MB 380-13642/1-A	Method Blank	91	94	113
MRL 380-13642/2-A	Lab Control Sample	92	92	108

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

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)	
		BB (60-130)	XACOSAI (60-130)
380-15823-1	Halawa Shaft Static (Viewing Po	71	90

Surrogate Legend
 BB = BROMOBENZENE
 HEXACOSANE = HEXACOSANE

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

Matrix: WATER

Prep Type: Total/NA

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

Surrogate Legend
 BB = BROMOBENZENE
 HEXACOSANE = HEXACOSANE

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

Matrix: WATER

Prep Type: Total/NA

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

Surrogate Legend
 BB = BROMOBENZENE
 HEXACOSANE = HEXACOSANE

Surrogate Summary

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

Job ID: 380-15823-1

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

Matrix: Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB (60-140)
380-15823-1	Halawa Shaft Static (Viewing Po	84
380-15823-2	TB Halawa Shaft Static (Viewing Pool)	91

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

Lab Sample ID	Client Sample ID	BFB
22VG39H05B	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)

Lab Sample ID	Client Sample ID	BFB (70-130)
22VG39H05C	LCD	109
22VG39H05L	Lab Control Sample	109

Surrogate Legend

BFB = BROMOFLUOROBENZENE

QC Sample Results

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

Job ID: 380-15823-1

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

Lab Sample ID: MB 380-13642/1-A
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 13642

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
2,4'-DDD	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
2,4'-DDE	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
2,4'-DDT	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
2,4-Dinitrotoluene	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
2,6-Dinitrotoluene	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
4,4'-DDD	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
4,4'-DDE	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
4,4'-DDT	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Acenaphthene	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Acenaphthylene	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Acetochlor	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Alachlor	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
alpha-BHC	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
alpha-Chlordane	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Anthracene	ND		0.020	ug/L		08/17/22 11:27	08/25/22 12:26	1
Atrazine	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Benz(a)anthracene	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Benzo[a]pyrene	ND		0.020	ug/L		08/17/22 11:27	08/25/22 12:26	1
Benzo[b]fluoranthene	ND		0.020	ug/L		08/17/22 11:27	08/25/22 12:26	1
Benzo[g,h,i]perylene	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Benzo[k]fluoranthene	ND		0.020	ug/L		08/17/22 11:27	08/25/22 12:26	1
beta-BHC	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Bis(2-ethylhexyl) phthalate	ND		0.60	ug/L		08/17/22 11:27	08/25/22 12:26	1
Bromacil	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Butachlor	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Butylbenzylphthalate	ND		0.50	ug/L		08/17/22 11:27	08/25/22 12:26	1
Caffeine	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Chlorobenzilate	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Chloroneb	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Chlorothalonil (Draconil, Bravo)	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Chlorpyrifos	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Chrysene	ND		0.020	ug/L		08/17/22 11:27	08/25/22 12:26	1
delta-BHC	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Di(2-ethylhexyl)adipate	ND		0.60	ug/L		08/17/22 11:27	08/25/22 12:26	1
Diazinon (Qualitative)	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Dibenz(a,h)anthracene	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Diclorvos (DDVP)	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Dieldrin	ND		0.20	ug/L		08/17/22 11:27	08/25/22 12:26	1
Diethylphthalate	ND		0.50	ug/L		08/17/22 11:27	08/25/22 12:26	1
Dimethoate	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Dimethylphthalate	ND		0.50	ug/L		08/17/22 11:27	08/25/22 12:26	1
Di-n-butyl phthalate	ND		1.0	ug/L		08/17/22 11:27	08/25/22 12:26	1
Di-n-octyl phthalate	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Endosulfan I (Alpha)	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Endosulfan II (Beta)	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Endosulfan sulfate	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Endrin	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Endrin aldehyde	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1

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QC Sample Results

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

Job ID: 380-15823-1

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

Lab Sample ID: MB 380-13642/1-A

Matrix: Water

Analysis Batch: 14896

Client Sample ID: Method Blank

Prep Type: Total/NA

Prep Batch: 13642

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
EPTC	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Fluoranthene	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Fluorene	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
gamma-BHC (Lindane)	ND		0.040	ug/L		08/17/22 11:27	08/25/22 12:26	1
gamma-Chlordane	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Heptachlor	ND		0.040	ug/L		08/17/22 11:27	08/25/22 12:26	1
Heptachlor epoxide (isomer B)	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Hexachlorobenzene	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Hexachlorocyclopentadiene	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Indeno[1,2,3-cd]pyrene	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Isophorone	ND		0.50	ug/L		08/17/22 11:27	08/25/22 12:26	1
Malathion	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Methoxychlor	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Metolachlor	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Metribuzin	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Molinate	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Naphthalene	ND		0.30	ug/L		08/17/22 11:27	08/25/22 12:26	1
Parathion	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Pendimethalin (Penoxaline)	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Phenanthrene	ND		0.040	ug/L		08/17/22 11:27	08/25/22 12:26	1
Propachlor	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Pyrene	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Simazine	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Terbacil	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Terbutylazine	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
Thiobencarb	ND		0.20	ug/L		08/17/22 11:27	08/25/22 12:26	1
Total Permethrin (mixed isomers)	ND		0.20	ug/L		08/17/22 11:27	08/25/22 12:26	1
trans-Nonachlor	ND		0.050	ug/L		08/17/22 11:27	08/25/22 12:26	1
Trifluralin	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
1-Methylnaphthalene	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1
2-Methylnaphthalene	ND		0.10	ug/L		08/17/22 11:27	08/25/22 12:26	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
<i>Tentatively Identified Compound</i>	None		ug/L				08/17/22 11:27	08/25/22 12:26	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	91		70 - 130	08/17/22 11:27	08/25/22 12:26	1
Perylene-d12	94		70 - 130	08/17/22 11:27	08/25/22 12:26	1
Triphenylphosphate	113		70 - 130	08/17/22 11:27	08/25/22 12:26	1

Lab Sample ID: LCS 380-13642/3-A

Matrix: Water

Analysis Batch: 14896

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 13642

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	1.98	2.19		ug/L		110	70 - 130
2,4'-DDE	1.98	2.14		ug/L		108	70 - 130
2,4'-DDT	1.98	2.50		ug/L		126	70 - 130

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QC Sample Results

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

Job ID: 380-15823-1

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

Lab Sample ID: LCS 380-13642/3-A
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2,4-Dinitrotoluene	1.98	2.37		ug/L		120	70 - 130
2,6-Dinitrotoluene	1.98	2.29		ug/L		115	70 - 130
4,4'-DDD	1.98	2.32		ug/L		117	70 - 130
4,4'-DDE	1.98	2.11		ug/L		106	70 - 130
4,4'-DDT	1.98	2.27		ug/L		115	70 - 130
Acenaphthene	1.98	1.98		ug/L		100	70 - 130
Acenaphthylene	1.98	1.98		ug/L		100	70 - 130
Acetochlor	1.98	2.40		ug/L		121	70 - 130
Alachlor	1.98	2.23		ug/L		112	70 - 130
alpha-BHC	1.98	2.11		ug/L		106	70 - 130
alpha-Chlordane	1.98	2.12		ug/L		107	70 - 130
Anthracene	1.98	2.11		ug/L		106	70 - 130
Atrazine	1.98	2.31		ug/L		117	70 - 130
Benz(a)anthracene	1.98	2.27		ug/L		114	70 - 130
Benzo[a]pyrene	1.98	2.18		ug/L		110	70 - 130
Benzo[b]fluoranthene	1.98	2.32		ug/L		117	70 - 130
Benzo[g,h,i]perylene	1.98	2.18		ug/L		110	70 - 130
Benzo[k]fluoranthene	1.98	2.24		ug/L		113	70 - 130
beta-BHC	1.98	2.16		ug/L		109	70 - 130
Bis(2-ethylhexyl) phthalate	1.98	2.07		ug/L		105	70 - 130
Bromacil	1.98	2.79	*+	ug/L		141	70 - 130
Butachlor	1.98	2.59	*+	ug/L		131	70 - 130
Butylbenzylphthalate	1.98	2.47		ug/L		125	70 - 130
Caffeine	1.98	1.70		ug/L		86	45 - 137
Chlorobenzilate	1.98	2.76	*+	ug/L		139	70 - 130
Chloroneb	1.98	2.11		ug/L		106	70 - 130
Chlorothalonil (Draconil, Bravo)	1.98	2.34		ug/L		118	70 - 130
Chlorpyrifos	1.98	2.32		ug/L		117	70 - 130
Chrysene	1.98	2.15		ug/L		109	70 - 130
delta-BHC	1.98	2.20		ug/L		111	70 - 130
Di(2-ethylhexyl)adipate	1.98	2.52		ug/L		127	70 - 130
Diazinon (Qualitative)	1.98	1.91		ug/L		96	15 - 132
Dibenz(a,h)anthracene	1.98	2.21		ug/L		111	70 - 130
Diclorvos (DDVP)	1.98	2.19		ug/L		111	70 - 130
Dieldrin	1.98	2.15		ug/L		108	70 - 130
Diethylphthalate	1.98	2.17		ug/L		109	70 - 130
Dimethoate	1.98	1.70		ug/L		86	35 - 100
Dimethylphthalate	1.98	2.20		ug/L		111	70 - 130
Di-n-butyl phthalate	3.97	4.22		ug/L		106	70 - 130
Di-n-octyl phthalate	1.98	1.74		ug/L		88	70 - 130
Endosulfan I (Alpha)	1.98	2.18		ug/L		110	70 - 130
Endosulfan II (Beta)	1.98	2.20		ug/L		111	70 - 130
Endosulfan sulfate	1.98	2.44		ug/L		123	70 - 130
Endrin	1.98	2.38		ug/L		120	70 - 130
Endrin aldehyde	1.98	2.09		ug/L		106	70 - 130
EPTC	1.98	2.17		ug/L		110	70 - 130
Fluoranthene	1.98	2.24		ug/L		113	70 - 130
Fluorene	1.98	2.15		ug/L		108	70 - 130
gamma-BHC (Lindane)	1.98	2.18		ug/L		110	70 - 130

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QC Sample Results

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

Job ID: 380-15823-1

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

Lab Sample ID: LCS 380-13642/3-A
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
gamma-Chlordane	1.98	2.13		ug/L		107	70 - 130
Heptachlor	1.98	2.23		ug/L		112	70 - 130
Heptachlor epoxide (isomer B)	1.98	2.20		ug/L		111	70 - 130
Hexachlorobenzene	1.98	1.97		ug/L		99	70 - 130
Hexachlorocyclopentadiene	1.98	2.14		ug/L		108	70 - 130
Indeno[1,2,3-cd]pyrene	1.98	2.19		ug/L		110	70 - 130
Isophorone	1.98	1.89		ug/L		95	70 - 130
Malathion	1.98	2.58		ug/L		130	70 - 130
Methoxychlor	1.98	2.50		ug/L		126	70 - 130
Metolachlor	1.98	2.38		ug/L		120	70 - 130
Metribuzin	1.98	2.39		ug/L		120	70 - 130
Molinate	1.98	2.14		ug/L		108	70 - 130
Naphthalene	1.98	1.76		ug/L		88	70 - 130
Parathion	1.98	2.33		ug/L		117	70 - 130
Pendimethalin (Penoxaline)	1.98	2.38		ug/L		120	70 - 130
Phenanthrene	1.98	2.07		ug/L		105	70 - 130
Propachlor	1.98	2.25		ug/L		113	70 - 130
Pyrene	1.98	2.26		ug/L		114	70 - 130
Simazine	1.98	2.32		ug/L		117	70 - 130
Terbacil	1.98	2.39		ug/L		121	70 - 130
Terbutylazine	1.98	2.29		ug/L		115	70 - 130
Thiobencarb	1.98	2.06		ug/L		104	70 - 130
trans-Nonachlor	1.98	2.19		ug/L		111	70 - 130
Trifluralin	1.98	2.38		ug/L		120	70 - 130
1-Methylnaphthalene	1.98	1.91		ug/L		96	70 - 130
2-Methylnaphthalene	1.98	2.02		ug/L		102	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	93		70 - 130
Perylene-d12	96		70 - 130
Triphenylphosphate	112		70 - 130

Lab Sample ID: LCSD 380-13642/4-A
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
2,4'-DDD	1.99	2.18		ug/L		110	70 - 130	0	20
2,4'-DDE	1.99	2.13		ug/L		107	70 - 130	0	20
2,4'-DDT	1.99	2.45		ug/L		123	70 - 130	2	20
2,4-Dinitrotoluene	1.99	2.32		ug/L		116	70 - 130	2	20
2,6-Dinitrotoluene	1.99	2.27		ug/L		114	70 - 130	1	20
4,4'-DDD	1.99	2.27		ug/L		114	70 - 130	2	20
4,4'-DDE	1.99	2.14		ug/L		107	70 - 130	1	20
4,4'-DDT	1.99	2.24		ug/L		112	70 - 130	2	20
Acenaphthene	1.99	2.00		ug/L		100	70 - 130	1	20
Acenaphthylene	1.99	2.03		ug/L		102	70 - 130	2	20
Acetochlor	1.99	2.36		ug/L		119	70 - 130	2	20

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QC Sample Results

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

Job ID: 380-15823-1

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

Lab Sample ID: LCSD 380-13642/4-A
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
Alachlor	1.99	2.24		ug/L		112	70 - 130	0	20	
alpha-BHC	1.99	2.09		ug/L		105	70 - 130	1	20	
alpha-Chlordane	1.99	2.13		ug/L		107	70 - 130	0	20	
Anthracene	1.99	2.13		ug/L		107	70 - 130	1	20	
Atrazine	1.99	2.23		ug/L		112	70 - 130	4	20	
Benz(a)anthracene	1.99	2.22		ug/L		112	70 - 130	2	20	
Benzo[a]pyrene	1.99	2.15		ug/L		108	70 - 130	1	20	
Benzo[b]fluoranthene	1.99	2.24		ug/L		113	70 - 130	3	20	
Benzo[g,h,i]perylene	1.99	2.15		ug/L		108	70 - 130	1	20	
Benzo[k]fluoranthene	1.99	2.25		ug/L		113	70 - 130	1	20	
beta-BHC	1.99	2.12		ug/L		106	70 - 130	2	20	
Bis(2-ethylhexyl) phthalate	1.99	1.98		ug/L		99	70 - 130	5	20	
Bromacil	1.99	2.70	*+	ug/L		136	70 - 130	3	20	
Butachlor	1.99	2.50		ug/L		126	70 - 130	3	20	
Butylbenzylphthalate	1.99	2.43		ug/L		122	70 - 130	2	20	
Caffeine	1.99	1.74		ug/L		87	45 - 137	2	20	
Chlorobenzilate	1.99	2.64	*+	ug/L		132	70 - 130	4	20	
Chloroneb	1.99	2.08		ug/L		105	70 - 130	1	20	
Chlorothalonil (Draconil, Bravo)	1.99	2.29		ug/L		115	70 - 130	2	20	
Chlorpyrifos	1.99	2.31		ug/L		116	70 - 130	0	20	
Chrysene	1.99	2.19		ug/L		110	70 - 130	2	20	
delta-BHC	1.99	2.10		ug/L		105	70 - 130	4	20	
Di(2-ethylhexyl)adipate	1.99	2.39		ug/L		120	70 - 130	5	20	
Diazinon (Qualitative)	1.99	1.85		ug/L		93	15 - 132	3	20	
Dibenz(a,h)anthracene	1.99	2.20		ug/L		110	70 - 130	0	20	
Diclorvos (DDVP)	1.99	2.13		ug/L		107	70 - 130	3	20	
Dieldrin	1.99	2.19		ug/L		110	70 - 130	2	20	
Diethylphthalate	1.99	2.09		ug/L		105	70 - 130	4	20	
Dimethoate	1.99	1.73		ug/L		87	35 - 100	1	20	
Dimethylphthalate	1.99	2.16		ug/L		109	70 - 130	2	20	
Di-n-butyl phthalate	3.99	4.22		ug/L		106	70 - 130	0	20	
Di-n-octyl phthalate	1.99	1.69		ug/L		85	70 - 130	3	20	
Endosulfan I (Alpha)	1.99	2.15		ug/L		108	70 - 130	2	20	
Endosulfan II (Beta)	1.99	2.22		ug/L		111	70 - 130	1	20	
Endosulfan sulfate	1.99	2.43		ug/L		122	70 - 130	1	20	
Endrin	1.99	2.49		ug/L		125	70 - 130	5	20	
Endrin aldehyde	1.99	2.13		ug/L		107	70 - 130	2	20	
EPTC	1.99	2.12		ug/L		106	70 - 130	3	20	
Fluoranthene	1.99	2.22		ug/L		111	70 - 130	1	20	
Fluorene	1.99	2.12		ug/L		106	70 - 130	1	20	
gamma-BHC (Lindane)	1.99	2.11		ug/L		106	70 - 130	3	20	
gamma-Chlordane	1.99	2.09		ug/L		105	70 - 130	2	20	
Heptachlor	1.99	2.25		ug/L		113	70 - 130	1	20	
Heptachlor epoxide (isomer B)	1.99	2.20		ug/L		110	70 - 130	0	20	
Hexachlorobenzene	1.99	1.97		ug/L		99	70 - 130	0	20	
Hexachlorocyclopentadiene	1.99	2.19		ug/L		110	70 - 130	2	20	
Indeno[1,2,3-cd]pyrene	1.99	2.17		ug/L		109	70 - 130	1	20	
Isophorone	1.99	1.86		ug/L		93	70 - 130	1	20	
Malathion	1.99	2.53		ug/L		127	70 - 130	2	20	

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QC Sample Results

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

Job ID: 380-15823-1

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

Lab Sample ID: LCSD 380-13642/4-A
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Methoxychlor	1.99	2.42		ug/L		121	70 - 130	3	20
Metolachlor	1.99	2.33		ug/L		117	70 - 130	2	20
Metribuzin	1.99	2.39		ug/L		120	70 - 130	0	20
Molinate	1.99	2.09		ug/L		105	70 - 130	2	20
Naphthalene	1.99	1.80		ug/L		90	70 - 130	2	20
Parathion	1.99	2.28		ug/L		115	70 - 130	2	20
Pendimethalin (Penoxaline)	1.99	2.37		ug/L		119	70 - 130	0	20
Phenanthrene	1.99	2.07		ug/L		104	70 - 130	0	20
Propachlor	1.99	2.17		ug/L		109	70 - 130	3	20
Pyrene	1.99	2.23		ug/L		112	70 - 130	1	20
Simazine	1.99	2.24		ug/L		112	70 - 130	4	20
Terbacil	1.99	2.44		ug/L		123	70 - 130	2	20
Terbutylazine	1.99	2.20		ug/L		110	70 - 130	4	20
Thiobencarb	1.99	2.04		ug/L		102	70 - 130	1	20
trans-Nonachlor	1.99	2.18		ug/L		110	70 - 130	0	20
Trifluralin	1.99	2.33		ug/L		117	70 - 130	2	20
1-Methylnaphthalene	1.99	1.92		ug/L		96	70 - 130	1	20
2-Methylnaphthalene	1.99	2.02		ug/L		101	70 - 130	0	20

Surrogate	LCSD		Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	92		70 - 130
Perylene-d12	96		70 - 130
Triphenylphosphate	109		70 - 130

Lab Sample ID: MRL 380-13642/2-A
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	0.0999	0.141		ug/L		141	50 - 150
2,4'-DDE	0.0999	0.110		ug/L		110	50 - 150
2,4'-DDT	0.0999	0.0995	J	ug/L		100	50 - 150
2,4-Dinitrotoluene	0.0999	0.135		ug/L		135	50 - 150
2,6-Dinitrotoluene	0.0999	0.0968	J	ug/L		97	50 - 150
4,4'-DDD	0.0999	0.107		ug/L		108	50 - 150
4,4'-DDE	0.0999	0.104		ug/L		104	50 - 150
4,4'-DDT	0.0999	0.136		ug/L		136	50 - 150
Acenaphthene	0.0999	0.0979	J	ug/L		98	50 - 150
Acenaphthylene	0.0999	0.0742	J	ug/L		74	50 - 150
Acetochlor	0.0500	0.0550	J	ug/L		110	50 - 150
Alachlor	0.0500	0.0625		ug/L		125	50 - 150
alpha-BHC	0.0999	0.102		ug/L		102	50 - 150
alpha-Chlordane	0.0500	0.0557		ug/L		112	50 - 150
Anthracene	0.0200	0.0199	J	ug/L		99	50 - 150
Atrazine	0.0500	0.0664		ug/L		133	50 - 150
Benz(a)anthracene	0.0500	0.0539		ug/L		108	50 - 150
Benzo[a]pyrene	0.0200	0.0204		ug/L		102	50 - 150
Benzo[b]fluoranthene	0.0200	0.0221		ug/L		111	50 - 150

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QC Sample Results

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

Job ID: 380-15823-1

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

Lab Sample ID: MRL 380-13642/2-A
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Benzo[g,h,i]perylene	0.0500	0.0491	J	ug/L		98	50 - 150
Benzo[k]fluoranthene	0.0200	0.0217		ug/L		109	50 - 150
beta-BHC	0.0999	0.103		ug/L		103	50 - 150
Bis(2-ethylhexyl) phthalate	0.599	0.734		ug/L		122	50 - 150
Bromacil	0.0999	0.118		ug/L		118	50 - 150
Butachlor	0.0500	0.0621		ug/L		124	50 - 150
Butylbenzylphthalate	0.150	0.327	J ^3+	ug/L		218	50 - 150
Caffeine	0.0500	0.0286	J	ug/L		57	50 - 150
Chlorobenzilate	0.0999	0.127		ug/L		128	50 - 150
Chloroneb	0.0999	0.101		ug/L		101	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0999	0.0986	J	ug/L		99	50 - 150
Chlorpyrifos	0.0500	0.0490	J	ug/L		98	50 - 150
Chrysene	0.0200	0.0226		ug/L		113	50 - 150
delta-BHC	0.0999	0.120		ug/L		120	50 - 150
Di(2-ethylhexyl)adipate	0.300	0.377	J	ug/L		126	50 - 150
Diazinon (Qualitative)	0.0999	0.0822	J	ug/L		82	15 - 132
Dibenz(a,h)anthracene	0.0500	0.0531		ug/L		106	50 - 150
Diclorvos (DDVP)	0.0500	0.0455	J	ug/L		91	50 - 150
Dieldrin	0.0999	0.113	J	ug/L		113	50 - 150
Diethylphthalate	0.150	0.170	J	ug/L		114	50 - 150
Dimethoate	0.0999	0.0546	J	ug/L		55	35 - 100
Dimethylphthalate	0.300	0.311	J	ug/L		104	50 - 150
Di-n-butyl phthalate	0.300	0.347	J	ug/L		116	49 - 243
Di-n-octyl phthalate	0.0999	0.121		ug/L		121	50 - 150
Endosulfan I (Alpha)	0.0999	0.103		ug/L		103	50 - 150
Endosulfan II (Beta)	0.0999	0.115		ug/L		115	50 - 150
Endosulfan sulfate	0.0999	0.104		ug/L		104	50 - 150
Endrin	0.0999	0.136		ug/L		136	50 - 150
Endrin aldehyde	0.0999	0.0916	J	ug/L		92	50 - 150
EPTC	0.0999	0.0978	J	ug/L		98	50 - 150
Fluoranthene	0.0500	0.0517	J	ug/L		103	50 - 150
Fluorene	0.0500	0.0522		ug/L		104	50 - 150
gamma-BHC (Lindane)	0.0500	0.0469		ug/L		94	50 - 150
gamma-Chlordane	0.0500	0.0510		ug/L		102	50 - 150
Heptachlor	0.0400	0.0531		ug/L		133	50 - 150
Heptachlor epoxide (isomer B)	0.0500	0.0524		ug/L		105	50 - 150
Hexachlorobenzene	0.0500	0.0622		ug/L		125	50 - 150
Hexachlorocyclopentadiene	0.0500	0.0480	J	ug/L		96	50 - 150
Indeno[1,2,3-cd]pyrene	0.0500	0.0448	J	ug/L		90	50 - 150
Isophorone	0.0999	0.0849	J	ug/L		85	50 - 150
Malathion	0.0999	0.106		ug/L		106	50 - 150
Methoxychlor	0.0999	0.146		ug/L		146	50 - 150
Metolachlor	0.0500	0.0624		ug/L		125	50 - 150
Metribuzin	0.0500	0.0414	J	ug/L		83	50 - 150
Molinate	0.0999	0.103		ug/L		103	50 - 150
Naphthalene	0.0999	0.0901	J	ug/L		90	50 - 150
Parathion	0.0999	0.144		ug/L		144	50 - 150
Pendimethalin (Penoxaline)	0.0999	0.133		ug/L		133	50 - 150
Phenanthrene	0.0200	0.0231	J	ug/L		116	50 - 150

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QC Sample Results

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

Job ID: 380-15823-1

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

Lab Sample ID: MRL 380-13642/2-A
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Propachlor	0.0500	0.0533		ug/L		107	50 - 150
Pyrene	0.0500	0.0540		ug/L		108	50 - 150
Simazine	0.0500	0.0483	J	ug/L		97	50 - 150
Terbacil	0.0999	0.118		ug/L		118	50 - 150
Terbutylazine	0.0999	0.0985	J	ug/L		99	50 - 150
Thiobencarb	0.0999	0.113	J	ug/L		113	50 - 150
trans-Nonachlor	0.0500	0.0529		ug/L		106	50 - 150
Trifluralin	0.0999	0.0984	J	ug/L		98	50 - 150
1-Methylnaphthalene	0.0999	0.104		ug/L		104	50 - 150
2-Methylnaphthalene	0.0999	0.0988	J	ug/L		99	50 - 150

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	92		70 - 130
Perylene-d12	92		70 - 130
Triphenylphosphate	108		70 - 130

Lab Sample ID: 380-16346-A-1-A MS
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
2,4'-DDD	ND		1.99	2.21		ug/L		111	70 - 130
2,4'-DDE	ND		1.99	2.13		ug/L		107	70 - 130
2,4'-DDT	ND		1.99	2.49		ug/L		125	70 - 130
2,4-Dinitrotoluene	ND		1.99	2.43		ug/L		122	70 - 130
2,6-Dinitrotoluene	ND		1.99	2.37		ug/L		119	70 - 130
4,4'-DDD	ND		1.99	2.28		ug/L		115	70 - 130
4,4'-DDE	ND		1.99	2.13		ug/L		107	70 - 130
4,4'-DDT	ND		1.99	2.28		ug/L		114	70 - 130
Acenaphthene	ND		1.99	1.97		ug/L		99	70 - 130
Acenaphthylene	ND		1.99	2.05		ug/L		103	70 - 130
Acetochlor	ND		1.99	2.38		ug/L		120	70 - 130
Alachlor	ND		1.99	2.24		ug/L		112	70 - 130
alpha-BHC	ND		1.99	2.10		ug/L		106	70 - 130
alpha-Chlordane	ND		1.99	2.16		ug/L		108	70 - 130
Anthracene	ND	F1	1.99	1.03	F1	ug/L		51	70 - 130
Atrazine	ND		1.99	2.28		ug/L		114	70 - 130
Benz(a)anthracene	ND		1.99	1.95		ug/L		98	70 - 130
Benzo[a]pyrene	ND		1.99	1.54		ug/L		78	70 - 130
Benzo[b]fluoranthene	ND		1.99	2.27		ug/L		114	70 - 130
Benzo[g,h,i]perylene	ND		1.99	2.18		ug/L		110	70 - 130
Benzo[k]fluoranthene	ND		1.99	2.28		ug/L		115	70 - 130
beta-BHC	ND		1.99	2.17		ug/L		109	70 - 130
Bis(2-ethylhexyl) phthalate	ND		1.99	2.11		ug/L		106	70 - 130
Bromacil	ND	*+ F1	1.99	2.73	F1	ug/L		137	70 - 130
Butachlor	ND	*+	1.99	2.50		ug/L		126	70 - 130
Butylbenzylphthalate	ND	^3+	1.99	2.54		ug/L		128	70 - 130
Caffeine	ND		1.99	1.88		ug/L		94	46 - 144

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QC Sample Results

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

Job ID: 380-15823-1

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

Lab Sample ID: 380-16346-A-1-A MS
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec
	Result	Qualifier	Added	Result	Qualifier				Limits
Chlorobenzilate	ND	*+ F1	1.99	2.68	F1	ug/L		135	70 - 130
Chloroneb	ND		1.99	2.12		ug/L		106	70 - 130
Chlorothalonil (Draconil, Bravo)	ND		1.99	2.34		ug/L		118	70 - 130
Chlorpyrifos	ND		1.99	2.32		ug/L		117	70 - 130
Chrysene	ND		1.99	2.16		ug/L		109	70 - 130
delta-BHC	ND		1.99	2.14		ug/L		107	70 - 130
Di(2-ethylhexyl)adipate	ND		1.99	2.48		ug/L		124	70 - 130
Diazinon (Qualitative)	ND		1.99	1.89		ug/L		95	15 - 132
Dibenz(a,h)anthracene	ND		1.99	2.30		ug/L		115	70 - 130
Diclorvos (DDVP)	ND		1.99	2.14		ug/L		108	70 - 130
Dieldrin	ND		1.99	2.16		ug/L		108	70 - 130
Diethylphthalate	ND		1.99	2.15		ug/L		108	70 - 130
Dimethoate	ND		1.99	1.88		ug/L		94	34 - 111
Dimethylphthalate	ND		1.99	2.19		ug/L		110	70 - 130
Di-n-butyl phthalate	ND		3.98	4.21		ug/L		106	70 - 130
Di-n-octyl phthalate	ND		1.99	1.98		ug/L		100	70 - 130
Endosulfan I (Alpha)	ND		1.99	2.19		ug/L		110	70 - 130
Endosulfan II (Beta)	ND		1.99	2.18		ug/L		109	70 - 130
Endosulfan sulfate	ND		1.99	2.46		ug/L		123	70 - 130
Endrin	ND		1.99	2.55		ug/L		128	70 - 130
Endrin aldehyde	ND		1.99	2.09		ug/L		105	70 - 130
EPTC	ND		1.99	2.12		ug/L		107	70 - 130
Fluoranthene	ND		1.99	2.19		ug/L		110	70 - 130
Fluorene	ND		1.99	2.14		ug/L		107	70 - 130
gamma-BHC (Lindane)	ND		1.99	2.16		ug/L		108	70 - 130
gamma-Chlordane	ND		1.99	2.11		ug/L		106	70 - 130
Heptachlor	ND		1.99	2.20		ug/L		111	70 - 130
Heptachlor epoxide (isomer B)	ND		1.99	2.16		ug/L		109	70 - 130
Hexachlorobenzene	ND		1.99	1.96		ug/L		98	70 - 130
Hexachlorocyclopentadiene	ND		1.99	2.15		ug/L		108	70 - 130
Indeno[1,2,3-cd]pyrene	ND		1.99	2.25		ug/L		113	70 - 130
Isophorone	ND		1.99	1.92		ug/L		96	70 - 130
Malathion	ND		1.99	2.57		ug/L		129	70 - 130
Methoxychlor	ND		1.99	2.47		ug/L		124	70 - 130
Metolachlor	ND		1.99	2.38		ug/L		119	70 - 130
Metribuzin	ND		1.99	2.14		ug/L		107	70 - 130
Molinate	ND		1.99	2.12		ug/L		107	70 - 130
Naphthalene	ND		1.99	1.79		ug/L		90	70 - 130
Parathion	ND		1.99	2.31		ug/L		116	70 - 130
Pendimethalin (Penoxaline)	ND		1.99	2.38		ug/L		120	70 - 130
Phenanthrene	ND		1.99	2.06		ug/L		104	70 - 130
Propachlor	ND		1.99	2.21		ug/L		111	70 - 130
Pyrene	ND		1.99	2.19		ug/L		110	70 - 130
Simazine	ND		1.99	2.29		ug/L		115	70 - 130
Terbacil	ND		1.99	2.43		ug/L		122	70 - 130
Terbutylazine	ND		1.99	2.23		ug/L		112	70 - 130
Thiobencarb	ND		1.99	2.02		ug/L		101	70 - 130
trans-Nonachlor	ND		1.99	2.19		ug/L		110	70 - 130
Trifluralin	ND		1.99	2.35		ug/L		118	70 - 130

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QC Sample Results

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

Job ID: 380-15823-1

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

Lab Sample ID: 380-16346-A-1-A MS
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	ND		1.99	1.89		ug/L		95	70 - 130
2-Methylnaphthalene	ND		1.99	1.99		ug/L		100	70 - 130
MS MS									
Surrogate	%Recovery	MS Qualifier	MS Limits						
2-Nitro-m-xylene	92		70 - 130						
Perylene-d12	94		70 - 130						
Triphenylphosphate	112		70 - 130						

Lab Sample ID: 380-15819-O-1-A DU
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	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
Bis(2-ethylhexyl) phthalate	ND		ND		ug/L		NC	20
Bromacil	ND	*+	ND	*+	ug/L		NC	20
Butachlor	ND	*+	ND	*+	ug/L		NC	20
Butylbenzylphthalate	ND	^3+	ND		ug/L		NC	20
Caffeine	ND		ND		ug/L		NC	20
Chlorobenzilate	ND	*+	ND	*+	ug/L		NC	20
Chloroneb	ND		ND		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	ND		ND		ug/L		NC	20
Chlorpyrifos	ND		ND		ug/L		NC	20
Chrysene	ND		ND		ug/L		NC	20
delta-BHC	ND		ND		ug/L		NC	20
Di(2-ethylhexyl)adipate	ND		ND		ug/L		NC	20
Diazinon (Qualitative)	ND		ND		ug/L		NC	20

QC Sample Results

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

Job ID: 380-15823-1

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

Lab Sample ID: 380-15819-O-1-A DU
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 13642

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	Limit
Dibenz(a,h)anthracene	ND		ND		ug/L		NC	20
Diclorvos (DDVP)	ND		ND		ug/L		NC	20
Dieldrin	ND		ND		ug/L		NC	20
Diethylphthalate	ND		ND		ug/L		NC	20
Dimethoate	ND		ND		ug/L		NC	20
Dimethylphthalate	ND		ND		ug/L		NC	20
Di-n-butyl phthalate	ND		ND		ug/L		NC	20
Di-n-octyl phthalate	ND		ND		ug/L		NC	20
Endosulfan I (Alpha)	ND		ND		ug/L		NC	20
Endosulfan II (Beta)	ND		ND		ug/L		NC	20
Endosulfan sulfate	ND		ND		ug/L		NC	20
Endrin	ND		ND		ug/L		NC	20
Endrin aldehyde	ND		ND		ug/L		NC	20
EPTC	ND		ND		ug/L		NC	20
Fluoranthene	ND		ND		ug/L		NC	20
Fluorene	ND		ND		ug/L		NC	20
gamma-BHC (Lindane)	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
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
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
Terbutylazine	ND		ND		ug/L		NC	20
Thiobencarb	ND		ND		ug/L		NC	20
Total Permethrin (mixed isomers)	ND		ND		ug/L		NC	20
trans-Nonachlor	ND		ND		ug/L		NC	20
Trifluralin	ND		ND		ug/L		NC	20
1-Methylnaphthalene	ND		ND		ug/L		NC	20
2-Methylnaphthalene	ND		ND		ug/L		NC	20

Surrogate	DU %Recovery	DU Qualifier	Limits
2-Nitro-m-xylene	90		70 - 130
Perylene-d12	93		70 - 130

Eurofins Eaton Monrovia

QC Sample Results

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

Job ID: 380-15823-1

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

Lab Sample ID: 380-15819-O-1-A DU
Matrix: Water
Analysis Batch: 14896

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 13642

Surrogate	DU DU		Limits
	%Recovery	Qualifier	
Triphenylphosphate	116		70 - 130

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

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

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

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

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

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

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

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

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

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

Lab Sample ID: 22VG39H05B
Matrix: WATER
Analysis Batch: 22VG39H05

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			08/12/22 12:35	1

Surrogate	MB MB		Limits	Prepared	Analyzed	Dil Fac
	%Recovery	Qualifier				
BROMOFLUOROBENZENE					08/12/22 12:35	1

Lab Sample ID: 22VG39H05L
Matrix: WATER
Analysis Batch: 22VG39H05

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	0.5	0.421		mg/L		84	60 - 130

Surrogate	LCS LCS		Limits
	%Recovery	Qualifier	
BROMOFLUOROBENZENE	109		70 - 130

Eurofins Eaton Monrovia

QC Association Summary

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

Job ID: 380-15823-1

GC/MS Semi VOA

Prep Batch: 13642

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-15823-1	Halawa Shaft Static (Viewing Pool)	Total/NA	Water	525.2	
MB 380-13642/1-A	Method Blank	Total/NA	Water	525.2	
LCS 380-13642/3-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-13642/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-13642/2-A	Lab Control Sample	Total/NA	Water	525.2	
380-16346-A-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-15819-O-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 14896

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-15823-1	Halawa Shaft Static (Viewing Pool)	Total/NA	Water	525.2	13642
MB 380-13642/1-A	Method Blank	Total/NA	Water	525.2	13642
LCS 380-13642/3-A	Lab Control Sample	Total/NA	Water	525.2	13642
LCSD 380-13642/4-A	Lab Control Sample Dup	Total/NA	Water	525.2	13642
MRL 380-13642/2-A	Lab Control Sample	Total/NA	Water	525.2	13642
380-16346-A-1-A MS	Matrix Spike	Total/NA	Water	525.2	13642
380-15819-O-1-A DU	Duplicate	Total/NA	Water	525.2	13642

Subcontract

Analysis Batch: 22DSH034W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-15823-1	Halawa Shaft Static (Viewing Pool)	Total/NA	Water	8015 Diesel LL (EAL) and Motor Oil	
22DSH034WB	Method Blank	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22DSH034WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

Analysis Batch: 22VG39H05

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-15823-1	Halawa Shaft Static (Viewing Pool)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-15823-2	TB Halawa Shaft Static (Viewing Pool)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
22VG39H05B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22VG39H05L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Lab Chronicle

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

Job ID: 380-15823-1

Client Sample ID: Halawa Shaft Static (Viewing Pool)

Lab Sample ID: 380-15823-1

Date Collected: 08/08/22 09:30

Matrix: Water

Date Received: 08/10/22 10:20

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			13642	N8NE	EA MON	08/17/22 11:27
Total/NA	Analysis	525.2		1	14896	UJC9	EA MON	08/25/22 17:34
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSH034W	SDees		08/22/22 18:31
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VG39H05	SCerva		08/12/22 18:38

Client Sample ID: TB Halawa Shaft Static (Viewing Pool)

Lab Sample ID: 380-15823-2

Date Collected: 08/08/22 09:30

Matrix: Water

Date Received: 08/10/22 10:20

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	22VG39H05	SCerva		08/12/22 19:14

Laboratory References:

= EMAX Laboratories Inc, 3051 Fujita Street, Torrance, CA 90505

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

Accreditation/Certification Summary

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

Job ID: 380-15823-1

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

Accreditation/Certification Summary

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

Job ID: 380-15823-1

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

Analysis Method	Prep Method	Matrix	Analyte
525.2	525.2	Water	gamma-Chlordane
525.2	525.2	Water	Indeno[1,2,3-cd]pyrene
525.2	525.2	Water	Isophorone
525.2	525.2	Water	Malathion
525.2	525.2	Water	Molinate
525.2	525.2	Water	Naphthalene
525.2	525.2	Water	Parathion
525.2	525.2	Water	Pendimethalin (Penoxaline)
525.2	525.2	Water	Phenanthrene
525.2	525.2	Water	Pyrene
525.2	525.2	Water	Terbacil
525.2	525.2	Water	Terbutylazine
525.2	525.2	Water	Thiobencarb
525.2	525.2	Water	Total Permethrin (mixed isomers)
525.2	525.2	Water	trans-Nonachlor
525.2	525.2	Water	Trifluralin

Method Summary

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

Job ID: 380-15823-1

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA MON
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:

= EMAX Laboratories Inc, 3051 Fujita Street, Torrance, CA 90505

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



Sample Summary

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

Job ID: 380-15823-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-15823-1	Halawa Shaft Static (Viewing Pool)	Water	08/08/22 09:30	08/10/22 10:20
380-15823-2	TB Halawa Shaft Static (Viewing Pool)	Water	08/08/22 09:30	08/10/22 10:20

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17



3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 09-02-2022
EMAX Batch No.: 22H145

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-15823

Enclosed is the Laboratory report for samples received on 08/11/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-15823-1	H145-01	08/08/22	WATER	TPH GASOLINE
380-15823-2	H145-02	08/08/22	WATER	TPH DIESEL & MOTOR OIL 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
Caspar J. Pang
Laboratory Director

This report is confidential and intended solely for the use of the individual or entity to whom it is addressed. This report shall not be reproduced except in full or without the written approval of EMAX.

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

Chain of Custody Record

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



Environment Testing
 AMERICA

Client Information (Sub Contract Lab)

Client Contact: **EMAX Laboratories Inc** Sampler: **Frank, Debbie L**

Shipping/Receiving: **EMAX Laboratories Inc** Phone: **380-17099-1**

Address: **3051 Fujita Street, Torrance, CA, 90505** E-Mail: **Debbie.Frank@eurofins.com**

City: **Torrance** State of Origin: **Hawaii**

State Zip: **CA, 90505** Accreditations Required (See note): **State - Hawaii**

Phone: **380-17099-1** Job #: **380-15923-1**

Project Name: **RED-HILL** Project #: **38001111**

Site: **Honolulu BWS Sites** SSSCW#:

Due Date Requested: **8/7/9/2022** TAT Requested (days):

Analysis Requested:

Carrier Tracking No(s): **22H145**

Page: **1 of 1**

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 - Na2O1S, Q - Na2SO3, R - Na2S2O8, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - pH 4.5, Y - Trizma, Z - other (specify)**

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	MATRIX (W=Water, S=solid, O=overseal, BT=BT, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	Total Number of containers	Special Instructions/Note:
Halawa Shaft static (Viewing Pool) (380-15923-1)	8/8/22	09:30	Water	Water		SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)	10	See Attached Instructions
Halawa Shaft static (Viewing Pool) TB (380-15923-2)	8/8/22	09:30	Water	Water		SUB (8015 Diesel LL (EAL) and Motor Oil)/ 8015 Diesel LL (EAL) and Motor Oil	2	See Attached Instructions
						SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL) (Hold)		

Possible Hazard Identification

Deliverable Requested: I, II, III, IV, Other (specify) **Primary Deliverable Rank: 2**

Empty Kit Relinquished by: Date:

Relinquished by: **ALB** Date/Time: **8/11/22 18:02** Company: **LEEA**

Relinquished by: Date/Time: Company:

Custody Seals Intact: **REPERMID: 22H145** Custody Seal No.:

Special Instructions/OC Requirements: **Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)**

Method of Shipment: **NOBELTAN** Date/Time: **8/11/22 18:02** Company:

Received by: Date/Time: Company:

Received by: Date/Time: Company:

Cook Temperature(s) °C and Other Remarks: **01.2 @ 01.0**



Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others	Airbill / Tracking Number	ECN <u>22H145</u>
<input type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery		Recipient <u>Noel Tah</u>
		Date <u>08/11/22</u> Time <u>18:02</u>

COC INSPECTION

<input checked="" type="checkbox"/> Client Name	<input checked="" type="checkbox"/> Client PM/FC	<input type="checkbox"/> Sampler Name	<input checked="" type="checkbox"/> Sampling Date/Time	<input checked="" type="checkbox"/> Sample ID	<input type="checkbox"/> Matrix
<input checked="" type="checkbox"/> Address	<input checked="" type="checkbox"/> Tel # / Fax #	<input type="checkbox"/> Courier Signature	<input checked="" type="checkbox"/> Analysis Required	<input type="checkbox"/> Preservative (if any)	<input type="checkbox"/> TAT
Safety Issues (if any) Note:	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

PACKAGING INSPECTION

Container	<input type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input checked="" type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 <u>1.2</u> °C	<input checked="" type="checkbox"/> Cooler 2 <u>2.0</u> °C	<input type="checkbox"/> Cooler 3 _____ °C
Thermometer:	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
	A - S/N _____	B - S/N <u>210760237</u>	C - S/N _____
			<input checked="" type="checkbox"/> D - S/N <u>210760272</u>

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

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1	J-0	D2	analysis reads for "PAH"	NS
2	11,22	D7	two dates - 6/3/22 & 8/5/22	NI

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time. NS 8/16/22

NOTES/OBSERVATIONS:
SAMPLE MATRIX IS DRINKING WATER? YES NO

- LEGEND:** Continue to next page.
- | | | |
|---|---|---|
| Code Description-Sample Management | Code Description-Sample Management | Code Description-Sample Management |
| D1 Analysis is not indicated in _____ | D13 Out of Holding Time | R1 Proceed as indicated in <input checked="" type="checkbox"/> COC <input type="checkbox"/> Label |
| <input checked="" type="checkbox"/> D2 Analysis mismatch COC vs label | D14 Bubble is >6mm | R2 Refer to attached instruction |
| D3 Sample ID mismatch COC vs label | D15 No trip blank in cooler | R3 Cancel the analysis |
| D4 Sample ID is not indicated in _____ | D16 Preservation not indicated in _____ | R4 Use vial with smallest bubble first |
| D5 Container -[improper] [leaking] [broken] | D17 Preservation mismatch COC vs label | R5 Log-in with latest sampling date and time+ 1 min |
| D6 Date/Time is not indicated in _____ | D18 Insufficient chemical preservative | R6 Adjust pH as necessary |
| D7 Date/Time mismatch COC vs label | D19 Insufficient Sample | R7 Filter and preserved as necessary |
| D8 Sample listed in COC is not received | D20 No filtration info for dissolved analysis | R8 <u>Informed client</u> |
| D9 Sample received is not listed in COC | D21 No sample for moisture determination | R9 _____ |
| D10 No initial/date on corrections in COC/label | D22 _____ | R10 _____ |
| D11 Container count mismatch COC vs received | D23 _____ | R11 _____ |
| D12 Container size mismatch COC vs received | D24 _____ | R12 _____ |

REVIEWS: Sample Labeling Jocelyn Solis / Resita SRF Resita
Date 08/17/22 / 8/12/22 Date 8/14/22

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

380-15823

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

SDG#: 22H145



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-15823

SDG : 22H145

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

A total of two(2) water samples were received on 08/11/22 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. VG39H05B - 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. VG39H05L/VG39H05C 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 H144-01M/H144-01S. 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 : 380-15823
 SDG NO. : 22H145
 Instrument ID : GCT039

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
									WATER
MBLK1W	VG39H05B	1	NA	08/12/2212:35	08/12/2212:35	EH12005A	EH12004A	22VG39H05	Method Blank
LCS1W	VG39H05L	1	NA	08/12/2213:11	08/12/2213:11	EH12006A	EH12004A	22VG39H05	Lab Control Sample (LCS)
LCD1W	VG39H05C	1	NA	08/12/2213:47	08/12/2213:47	EH12007A	EH12004A	22VG39H05	LCS Duplicate
380-15823-1	H145-01	1	NA	08/12/2218:38	08/12/2218:38	EH12015A	EH12013A	22VG39H05	Field Sample
380-15823-2	H145-02	1	NA	08/12/2219:14	08/12/2219:14	EH12016A	EH12013A	22VG39H05	Field Sample

FN - Filename
 % Moist - Percent Moisture



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SAMPLE RESULTS

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/08/22 09:30
Project     : 380-15823                   Date Received: 08/11/22
Batch No.   : 22H145                       Date Extracted: 08/12/22 18:38
Sample ID   : 380-15823-1                 Date Analyzed: 08/12/22 18:38
Lab Samp ID: H145-01                       Dilution Factor: 1
Lab File ID: EH12015A                       Matrix: WATER
Ext Btch ID: 22VG39H05                       % Moisture: NA
Calib. Ref.: EH12013A                       Instrument ID: 39
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0338	0.0400	84	60-140

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

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

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/08/22 09:30
Project     : 380-15823                   Date Received: 08/11/22
Batch No.   : 22H145                       Date Extracted: 08/12/22 19:14
Sample ID   : 380-15823-2                 Date Analyzed: 08/12/22 19:14
Lab Samp ID: H145-02                       Dilution Factor: 1
Lab File ID: EH12016A                       Matrix: WATER
Ext Btch ID: 22VG39H05                       % Moisture: NA
Calib. Ref.: EH12013A                       Instrument ID: 39
=====

```

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0365	0.0400	91	60-140

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

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

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QC SUMMARIES

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/12/22 12:35
Project     : 380-15823                   Date Received: 08/12/22
Batch No.   : 22H145                       Date Extracted: 08/12/22 12:35
Sample ID   : MBLK1W                       Date Analyzed: 08/12/22 12:35
Lab Samp ID: VG39H05B                     Dilution Factor: 1
Lab File ID: EH12005A                     Matrix: WATER
Ext Btch ID: 22VG39H05                   % Moisture: NA
Calib. Ref.: EH12004A                   Instrument ID: 39
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0336	0.0400	84	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 : 380-15823
BATCH NO. : 22H145
METHOD : 5030B/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID : VG39H05B	VG39H05L	VG39H05C
LAB FILE ID : EH12005A	EH12006A	EH12007A
DATE PREPARED : 08/12/22 12:35	08/12/22 13:11	08/12/22 13:47
DATE ANALYZED : 08/12/22 12:35	08/12/22 13:11	08/12/22 13:47
PREP BATCH : 22VG39H05	22VG39H05	22VG39H05
CALIBRATION REF: EH12004A	EH12004A	EH12004A

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	0.421	84	0.500	0.422	84	0	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0435	109	0.0400	0.0434	109	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 : 380-15847
BATCH NO. : 22H144
METHOD : 5030B/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : 380-15847-1                       380-15847-1MS
LAB SAMPLE ID : H144-01                         H144-01M
LAB FILE ID  : EH12008A                        EH12009A
DATE PREPARED : 08/12/22 14:24                 08/12/22 15:01
DATE ANALYZED : 08/12/22 14:24                 08/12/22 15:37
PREP BATCH   : 22VG39H05                       22VG39H05
CALIBRATION REF: EH12004A                      EH12004A
    
```

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	0.445	89	0.500	0.438	88	2	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0450	113	0.0400	0.0451	113	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-15823

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22H145



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-15823

SDG : 22H145

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 08/11/22 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time

The sample was analyzed within the prescribed holding time.

Calibration

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

Method Blank

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

Lab Control Sample

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

Matrix QC Sample

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

Surrogate

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

Sample Analysis

The sample was 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 : 380-15823
 SDG NO. : 22H145
 Instrument ID : D5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis Date/Time	Extraction Date/Time	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
LCS1W	DSH034WL	1	NA	08/22/2217:16	08/20/2215:00	LH22010A	LH22004A	22DSH034W	Lab Control Sample (LCS)
MBLK1W	DSH034WB	1	NA	08/22/2217:35	08/20/2215:00	LH22011A	LH22004A	22DSH034W	Method Blank
380-15823-1	H145-01	1	NA	08/22/2218:31	08/20/2215:00	LH22014A	LH22004A	22DSH034W	Field Sample

FN - Filename
 % Moist - Percent Moisture



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SAMPLE RESULTS

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QC SUMMARIES

METHOD 3520C/8015B
 TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

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=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 08/20/22 15:00
Project     : 380-15823                  Date Received: 08/20/22
Batch No.   : 22H145                     Date Extracted: 08/20/22 15:00
Sample ID   : MBLK1W                     Date Analyzed: 08/22/22 17:35
Lab Samp ID: DSH034WB                    Dilution Factor: 1
Lab File ID: LH22011A                    Matrix: WATER
Ext Btch ID: 22DSH034W                   % Moisture: NA
Calib. Ref.: LH22004A                    Instrument ID: D5
=====
    
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.025	0.012	
Motor Oil	ND	0.050	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.380	0.500	76	60-130
Hexacosane	0.113	0.125	90	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-15823
BATCH NO. : 22H145
METHOD : 3520C/8015B

=====

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

ACCESSION:

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

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

=====

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

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

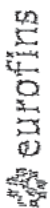
MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-16110-1	380-16110-1MS	380-16110-1MSD
LAB SAMPLE ID	: 22H180-01	22H180-01M	22H180-01S
LAB FILE ID	: LH22015A	LH22016A	LH22017A
DATE PREPARED	: 08/20/22 15:00	08/20/22 15:00	08/20/22 15:00
DATE ANALYZED	: 08/22/22 18:49	08/22/22 19:08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

ACCESSION:

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

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

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



INTERNAL CHAIN OF CUSTODY RECORD

Radon Analytical

EEA Folder Number: Radon Analytical

IR Gun ID = 630A (Observation = 3.5 °C) (Corr. Factor 0.2 °C) (Final = 3.3 °C)
TYPE OF ICE: Real Synthetic No Ice CONDITION OF ICE: Frozen Partially Frozen Thawed N/A

METHOD OF SHIPMENT: Pick-Up / Walk-in / FedEx / UPS / DHL / Area Fast / Top Line / Other: FEDEX

Compliance Acceptance Criteria: 7776 1799 6210

- 1) Chemistry: >0, ≤8°C, not frozen (NELAP) (if received after 24 hrs of sample collection)
- 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥10°C if received on ice the same day as sample collection, within 8 hours)
- 3) Microbiology, Surface Water: < 10°C (if received after 2 hours of sample collection)

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

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

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

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

6) Chlorine check, Manufacturer: Sanease, Lot No.: _____ Expiration Date: _____ Results: _____

7) Headspace: No Samples with Headspace; Samples with Headspace (see below): _____

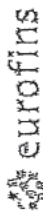
Headspace Documentation (use additional VGC and Radon Internal COFC for additional bottles)
Example from headspace consensus: Methods 814-4, HAA(8251,862), 808, 87ME, @CH, 892LCHMS, 888, 888, Anatoxin, LCMS methods using 40 ml vials, International client

Bump ID	Bottle #	mm	Test	mm	Test	Bump ID	Bottle #	mm	Test

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

RECEIVED BY: MARIA SIGNATURE: Mark Urcutio PRINT NAME: Mark Urcutio COMPANY/TITLE: Eurofins Eilon Analytical DATE: 8/10/22 TIME: 10:20

SAMPLES CHECKED AGAINST DOG BY: [Signature] SIGNATURE: G. PEPPER PRINT NAME: G. PEPPER COMPANY/TITLE: Eurofins Eilon Analytical DATE: 08/10/2022 TIME: 16:45



INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: Factory Analytical

SAMPLE TEMP RECEIVED: 35 °C (Corr. Factor 1.3) (Final = 37 °C)

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

SAMPLES REC'D DAY OF COLLECTION? Yes / No

CONDITION OF ICE: Frozen 2 Partially Frozen _____ Thawed _____ N/A _____

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

Compliance Acceptance Criteria:

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

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

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

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

4) Dioxin (1813 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)

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

6) Chlorine check, Manufacturer: Sansafe. Lot No.: _____ Expiration Date: _____ Results: _____

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

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

Exempt from headspace concerns: Methods 815-4, HAA(8201,862), 505, SPME, @CH, 822LOMS, 868, 836, Anestoxin, LOMS methods using 40 ml vials, International allents;

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

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

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

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

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

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

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

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

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

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

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

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

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

RECEIVED BY: F. Fel Chava PRINT NAME: F. Fel Chava COMPANY/TITLE: Eurofins Eilon Analytical DATE: 8/10/2022 TIME: 10:20

SAMPLES CHECKED AGAINST COG BY: G. Reitner SIGNATURE: G. REITNER PRINT NAME: G. REITNER COMPANY/TITLE: Eurofins Eilon Analytical DATE: 08/10/2022 TIME: 16:45



INTERNAL CHAIN OF CUSTODY RECORD

euorofins | Eurofins Analytical

IR Gun ID = 631A (Observation = 3.7 °C) (Corr. Factor = 0.2 °C) (Final = 3.5 °C)

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

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: 7776 1799 6996

Compliance Acceptance Criteria:
 1) Chemistry: >0, ≤ 8°C, not frozen (NELAP) (if received after 24 hrs of sample collection)
 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥ 10°C if received on ice the same day as sample collection, within 8 hours)
 3) Microbiology, Surface Water: < 10°C (if received after 2 hours of sample collection)

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

4) Dioxin (1e13 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)

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

6) Chlorine check. Manufacturer: Sansafe. Lot No.: _____ Expiration Date: _____ Results: _____

7) Headspace: No Samples with Headspace; Samples with Headspace (see below);
 Headspace Documentation (use additional VOG and Radon Internal COFC for additional bottles)
 Methods 615.4, HAA(6251,662), 604, 67ME, 604H, 632LOMS, 659, 638, Anatoxin, LCMS methods using 40 ml vials, International identifier

Sample ID	Bottle #	mm	Test
None/<8	>8mm	>8mm	Test
None/<8	>8mm	>8mm	Test
None/<8	>8mm	>8mm	Test
None/<8	>8mm	>8mm	Test
None/<8	>8mm	>8mm	Test
None/<8	>8mm	>8mm	Test
None/<8	>8mm	>8mm	Test
None/<8	>8mm	>8mm	Test
None/<8	>8mm	>8mm	Test

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

RECEIVED BY: [Signature] SIGNATURE: Jeremy Hansen PRINT NAME: Jeremy Hansen DATE: 8.10.22 TIME: 10:20
 SAMPLES CHECKED AGAINST COC BY: [Signature] SIGNATURE: GREINER PRINT NAME: GREINER DATE: 08/10/2022 TIME: 16:45

INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: _____
SAMPLE TEMP RECEIVED: _____
Note: If sampler is out of temperature range, let the ASMs know. ASMs will determine what to process with analysis or not.
SAMPLES REC'D DAY OF COLLECTION? Yes / No _____

IR Gun ID # 618A (Observation # 4.3 °C) (Corr. Factor 0.1 °C) (Final # 4.2 °C)
 TYPE OF ICE: Real _____ Synthetic No Ice _____
 CONDITION OF ICE: Frozen Partially Frozen _____ Thawed N/A _____

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEX / UPS / DHL / Area Fast / Top Line / Other: _____
7776 1799 5441
 Compliance Acceptance Criteria:
 1) Chemistry: >0, ≤ 6°C, not frozen (NELAP) (if received after 24 hrs of sample collection)
 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥ 10°C if received on ice the same day as sample collection, within 8 hours)
 3) Microbiology, Surface Water: < 10°C (if received after 2 hours of sample collection)

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

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

4) Dioxin (1613 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)
 5) pH Check, Manufacturer: _____ Lot Number: _____ pH strip type: 0 - 14 or _____ Expiration Date: _____ Results: _____
 6) Chlorine check, Manufacturer: Sansafe, Lot No.: _____ Expiration Date: _____ Results: _____

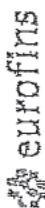
7) Headspace: _____
 No Samples with Headspace (see below): _____
 Headspace Documentation (use additional VOA and Radon Internal COCs for additional bottles)
Example: from headspace concerns: Methods 816-4, HAA(824,822), SO₂, SPME, @CH, 822LCHMS, 828, 838, Anotoxin, LCMs methods using 40 ml vials, international orienter

Sample ID	Bottle #	None/48	> 8mm	Test

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

SIGNATURE _____ **PRINT NAME** Eurolina Analytical **DATE** 8/10/22 **TIME** 10:20
 RECEIVED BY: _____
SIGNATURE _____ **PRINT NAME** Eurolina Analytical **DATE** 08/10/2022 **TIME** 16:45
 SAMPLE CHECKED AGAINST COC BY: _____





Euron Analytical

INTERNAL CHAIN OF CUSTODY RECORD

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

IR Gun ID = 630A (Observation = 4.9 °C) (Corr. Factor 0.2 °C) (Final = 4.7 °C)
 TYPE OF ICE: Real Synthetic No Ice
 CONDITION OF ICE: Frozen Partially Frozen Thawed N/A

METHOD OF SHIPMENT: Pick-Up / Walk-In / FedEx / UPS / DHL / Area Fast / Top Line / Other: 7776 1799 5360

Compliance Acceptance Criteria:
 1) Chemistry: >0, ≤6°C, not frozen (NIELAP) (if received after 24 hrs of sample collection)
 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥10°C if received on ice the same day as sample collection, within 8 hours)
 3) Microbiology, Surface Water: < 10°C (if received after 2 hours of sample collection)

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

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

4 Dioxin (1813 or 2,3,7,8 TCDD): must be between 0-4 °C, not frozen (if received after 24 hrs of sample collection)
 5) pH Check, Manufacturer: _____ Lot Number: _____ pH strip type: 0 - 14 of _____ Expiration Date: _____ Results: _____
 6) Chlorine check, Manufacturer: Sensafe, Lot No.: _____ Expiration Date: _____ Results: _____

VOA and Radon: No Samples with Headspace: Samples with Headspace (see below):
 7) Headspace: Headspace Documentation (Use additional VOA and Radon Internal COFC for additional bottles)

Exempt from headspace concerns: Methods 816.4, HAA(9251,832), 806, SPME, @OH, 832LONG, 866, 856, Anatoxin, LOMS methods using 40 ml vials, International orientar

Samp ID	Bottle #	None/<8	>8mm	Test	Samp ID	Bottle #	None/<8	>8mm	Test

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

RECEIVED BY: Mark Urcutio SIGNATURE: Mark Urcutio PRINT NAME: Mark Urcutio COMPANY/TITLE: Euron Analytical DATE: 8/10/22 TIME: 1020

SAMPLES CHECKED AGAINST COG BY: G. REITNER SIGNATURE: G. REITNER PRINT NAME: G. REITNER COMPANY/TITLE: Euron Analytical DATE: 08/10/2022 TIME: 16:45



INTERNAL CHAIN OF CUSTODY RECORD

SAMPLE TEMP RECEIVED:
 Note: If samples are out of temperature ranges, list the ASMs know. ASMs will determine what their to process with analysts or not.
SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 401 (Observation = 1.2 °C) (Corr. Factor 0.1 °C) (Final = 1.1 °C) Thawed N/A

TYPE OF ICE: Real X Synthetic X No Ice X
 CONDITION OF ICE: Frozen Partially Frozen X Thawed

METHOD OF SHIPMENT: Pick-Up / Walk-in / FedEx / UPS / DHL / Area Fast / Top Line / Other:

Compliance Acceptance Criteria: 776 1799 0231

- 1) Chemistry: >0, ≤8°C, not frozen (NELAP) (if received after 24 hrs of sample collection)
- 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥10°C if received on ice the same day as sample collection, within 8 hours)
- 3) Microbiology, Surface Water: < 10°C (if received after 2 hours of sample collection)

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

1 - (Observations) °C	(Corr. Factor) °C	(Final) °C	2 - (Observations) °C	(Corr. Factor) °C	(Final) °C
3 - (Observations) °C	(Corr. Factor) °C	(Final) °C	4 - (Observations) °C	(Corr. Factor) °C	(Final) °C

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

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

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

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

Sample ID	Bottle #	None/<8 mm	>8mm	Test	Sample ID	Bottle #	None/<8 mm	>8mm	Test

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

RECEIVED BY: <u>[Signature]</u>	SIGNATURE: <u>R. Bodo</u>	COMPANY/TITLE: <u>Eurofins Eaton Analytical</u>	DATE: <u>8/10/22</u>	TIME: <u>10:20</u>
SAMPLES CHECKED AGAINST DOG TAG: <u>[Signature]</u>	PRINT NAME: <u>G. REITNER</u>	COMPANY/TITLE: <u>Eurofins Eaton Analytical</u>	DATE: <u>08/10/2022</u>	TIME: <u>16:45</u>



Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-15823-1

Login Number: 15823
List Number: 1
Creator: Segura, Ryan

List Source: Eurofins Eaton Monrovia

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

