

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

ANALYTICAL REPORT

PREPARED FOR

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

Generated 6/6/2023 6:56:58 PM

JOB DESCRIPTION

RED-HILL

JOB NUMBER

380-45216-1

Eurofins Eaton Analytical Pomona

Job Notes

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

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

Compliance Statement

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

Authorization



Generated
6/6/2023 6:56:58 PM

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



Table of Contents

Cover Page	1
Table of Contents	3
Definitions/Glossary	4
Case Narrative	5
Detection Summary	6
Client Sample Results	7
Action Limit Summary	10
Surrogate Summary	11
QC Sample Results	14
QC Association Summary	27
Lab Chronicle	28
Certification Summary	29
Method Summary	31
Sample Summary	32
Subcontract Data	33
Chain of Custody	68
Receipt Checklists	70

Definitions/Glossary

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

Job ID: 380-45216-1

Qualifiers

GC/MS Semi VOA

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

GC/MS Semi VOA TICs

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

Subcontract

Qualifier	Qualifier Description
U	This analyte was not detected.

Glossary

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

Case Narrative

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

Job ID: 380-45216-1

Job ID: 380-45216-1

Laboratory: Eurofins Eaton Analytical Pomona

Narrative

**Job Narrative
380-45216-1**

Comments

Method 625 data is not available due to lab error, sample was inadvertently sent to Emax instead of Physis.

No additional comments.

Receipt

The samples were received on 4/27/2023 10:00 AM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 2.7° C.

GC/MS Semi VOA

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

Subcontract non-Sister

See attached subcontract report.

Organic Prep

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

Subcontract Work

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

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

Detection Summary

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

Job ID: 380-45216-1

Client Sample ID: AIEA WELLS P2 (260) (331-004-WL103)

Lab Sample ID: 380-45216-1

No Detections.

Client Sample ID: TB: AIEA WELLS P2 (260) (331-004-WL103)

Lab Sample ID: 380-45216-2

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 Analytical Pomona

Client Sample Results

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

Job ID: 380-45216-1

Client Sample ID: AIEA WELLS P2 (260) (331-004-WL103)

Lab Sample ID: 380-45216-1

Date Collected: 04/26/23 12:00

Matrix: Drinking Water

Date Received: 04/27/23 10:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
2,4'-DDD	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
2,4'-DDE	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
2,4'-DDT	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
2,4-Dinitrotoluene	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
2,6-Dinitrotoluene	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
2-Methylnaphthalene	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
4,4'-DDD	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
4,4'-DDE	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
4,4'-DDT	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Acenaphthene	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Acenaphthylene	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Acetochlor	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Alachlor	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
alpha-BHC	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
alpha-Chlordane	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Anthracene	<0.020		0.020	ug/L		04/30/23 13:58	05/01/23 20:01	1
Atrazine	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Benz(a)anthracene	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Benzo[a]pyrene	<0.020		0.020	ug/L		04/30/23 13:58	05/01/23 20:01	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		04/30/23 13:58	05/01/23 20:01	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		04/30/23 13:58	05/01/23 20:01	1
beta-BHC	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		04/30/23 13:58	05/01/23 20:01	1
Bromacil	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Butachlor	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Butylbenzylphthalate	<0.49		0.49	ug/L		04/30/23 13:58	05/01/23 20:01	1
Chlorobenzilate	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Chloroneb	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Chlorothalonil (Draconil, Bravo)	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Chlorpyrifos	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Chrysene	<0.020		0.020	ug/L		04/30/23 13:58	05/01/23 20:01	1
delta-BHC	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		04/30/23 13:58	05/01/23 20:01	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Dieldrin	<0.20		0.20	ug/L		04/30/23 13:58	05/01/23 20:01	1
Diethylphthalate	<0.49		0.49	ug/L		04/30/23 13:58	05/01/23 20:01	1
Dimethylphthalate	<0.49		0.49	ug/L		04/30/23 13:58	05/01/23 20:01	1
Di-n-butyl phthalate	<0.99		0.99	ug/L		04/30/23 13:58	05/01/23 20:01	1
Di-n-octyl phthalate	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Endosulfan I (Alpha)	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Endosulfan II (Beta)	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Endosulfan sulfate	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Endrin	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Endrin aldehyde	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
EPTC	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Fluoranthene	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-45216-1

Client Sample ID: AIEA WELLS P2 (260) (331-004-WL103)

Lab Sample ID: 380-45216-1

Date Collected: 04/26/23 12:00

Matrix: Drinking Water

Date Received: 04/27/23 10:00

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

Analyte	Result	Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluorene	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
gamma-Chlordane	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Heptachlor	<0.039	^3+	0.039	ug/L		04/30/23 13:58	05/01/23 20:01	1
Heptachlor epoxide (isomer B)	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Hexachlorobenzene	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Isophorone	<0.49		0.49	ug/L		04/30/23 13:58	05/01/23 20:01	1
Lindane	<0.039		0.039	ug/L		04/30/23 13:58	05/01/23 20:01	1
Malathion	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Methoxychlor	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Metolachlor	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Metribuzin	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Molinate	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Naphthalene	<0.30		0.30	ug/L		04/30/23 13:58	05/01/23 20:01	1
Parathion	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Pendimethalin (Penoxaline)	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Phenanthrene	<0.039		0.039	ug/L		04/30/23 13:58	05/01/23 20:01	1
Propachlor	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Pyrene	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Simazine	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Terbacil	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Terbuthylazine	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1
Thiobencarb	<0.20		0.20	ug/L		04/30/23 13:58	05/01/23 20:01	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		04/30/23 13:58	05/01/23 20:01	1
trans-Nonachlor	<0.049		0.049	ug/L		04/30/23 13:58	05/01/23 20:01	1
Trifluralin	<0.099		0.099	ug/L		04/30/23 13:58	05/01/23 20:01	1

Tentatively Identified Compound	Est. Result	Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
Unknown	0.51	T J	ug/L		10.57	N/A	04/30/23 13:58	05/01/23 20:01	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
2-Nitro-m-xylene	89		70 - 130	04/30/23 13:58	05/01/23 20:01	1
Perylene-d12	91		70 - 130	04/30/23 13:58	05/01/23 20:01	1
Triphenylphosphate	102		70 - 130	04/30/23 13:58	05/01/23 20:01	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.020		mg/L			05/01/23 16:39	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	103		60 - 140		05/01/23 16:39	1

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.026		mg/L			05/04/23 16:16	1
JP5	ND	U	0.052		mg/L			05/04/23 16:16	1
JP8	ND	U	0.052		mg/L			05/04/23 16:16	1
MOTOR OIL	ND	U	0.052		mg/L			05/04/23 16:16	1

Eurofins Eaton Analytical Pomona

Client Sample Results

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

Job ID: 380-45216-1

Client Sample ID: AIEA WELLS P2 (260) (331-004-WL103)

Lab Sample ID: 380-45216-1

Date Collected: 04/26/23 12:00

Matrix: Drinking Water

Date Received: 04/27/23 10:00

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOBENZENE	77		60 - 130		05/04/23 16:16	1
HEXACOSANE	98		60 - 130		05/04/23 16:16	1

Client Sample ID: TB: AIEA WELLS P2 (260) (331-004-WL103)

Lab Sample ID: 380-45216-2

Date Collected: 04/26/23 12:00

Matrix: Water

Date Received: 04/27/23 10:00

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.020		mg/L			05/01/23 17:17	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE	100		60 - 140		05/01/23 17:17	1

Action Limit Summary

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

Job ID: 380-45216-1

Client Sample ID: AIEA WELLS P2 (260) (331-004-WL103)

Lab Sample ID: 380-45216-1

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	<0.049		ug/L	2	0.049	525.2	Total/NA
Atrazine	<0.049		ug/L	3	0.049	525.2	Total/NA
Benzo[a]pyrene	<0.020		ug/L	0.2	0.020	525.2	Total/NA
Bis(2-ethylhexyl) phthalate	<0.59		ug/L	6	0.59	525.2	Total/NA
Di(2-ethylhexyl)adipate	<0.59		ug/L	400	0.59	525.2	Total/NA
Endrin	<0.099		ug/L	2	0.099	525.2	Total/NA
Heptachlor	<0.039	^3+	ug/L	0.4	0.039	525.2	Total/NA
Heptachlor epoxide (isomer B)	<0.049		ug/L	0.2	0.049	525.2	Total/NA
Hexachlorobenzene	<0.049		ug/L	1	0.049	525.2	Total/NA
Hexachlorocyclopentadiene	<0.049		ug/L	50	0.049	525.2	Total/NA
Lindane	<0.039		ug/L	0.2	0.039	525.2	Total/NA
Methoxychlor	<0.099		ug/L	40	0.099	525.2	Total/NA
Simazine	<0.049		ug/L	4	0.049	525.2	Total/NA

Surrogate Summary

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

Job ID: 380-45216-1

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

Matrix: Drinking 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)
380-45216-1	AIEA WELLS P2 (260) (331-004)	89	91	102

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

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)
380-44857-AJ-1-A MS	Matrix Spike	92	99	109
380-44985-AJ-1-A DU	Duplicate	91	91	106
LCS 380-38507/23-A	Lab Control Sample	91	95	103
LCS 380-38507/24-A	Lab Control Sample Dup	91	95	102
MB 380-38507/21-A	Method Blank	89	84	100
MRL 380-38507/22-A	Lab Control Sample	91	93	100

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

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

Matrix: Drinking Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		BFB (60-140)
380-45216-1	AIEA WELLS P2 (260) (331-004)	103

Surrogate Legend
 BFB = BROMOFLUOROBENZENE

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

Matrix: Water

Prep Type: Total/NA

Lab Sample ID	Client Sample ID	Percent Surrogate Recovery (Acceptance Limits)
		BFB (60-140)
380-45216-2	TB: AIEA WELLS P2 (260) (331-	100

Surrogate Legend
 BFB = BROMOFLUOROBENZENE

Surrogate Summary

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

Job ID: 380-45216-1

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

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

BFB

Lab Sample ID	Client Sample ID
23VGH7E01B	Method Blank

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

BFB

(70-130)

Lab Sample ID	Client Sample ID	(70-130)
23VGH7E01C	LCD	112
23VGH7E01L	Lab Control Sample	117

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Matrix: Drinking Water

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

BB XACOSAI

(60-130) (60-130)

Lab Sample ID	Client Sample ID	(60-130)	(60-130)
380-45216-1	AIEA WELLS P2 (260) (331-004)	77	98

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

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

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

BB XACOSAI

Lab Sample ID	Client Sample ID
23DSE005WB	Method Blank

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

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

Matrix: WATER

Prep Type: Total/NA

Percent Surrogate Recovery (Acceptance Limits)

BB XACOSAI

(60-130) (60-130)

Lab Sample ID	Client Sample ID	(60-130)	(60-130)
23D321-01M	380-45216-1 MS	95	104
23D321-01S	380-45216-1 MSD	107	99
23DSE005WL	Lab Control Sample	88	108
23J5E005WL	Lab Control Sample	89	101
23J8E005WL	Lab Control Sample	101	104

Surrogate Legend

Surrogate Summary

Client: City & County of Honolulu
Project/Site: RED-HILL
BB = BROMOBENZENE
HEXACOSANE = HEXACOSANE

Job ID: 380-45216-1

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

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: MB 380-38507/21-A
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38507

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
2,4'-DDD	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
2,4'-DDE	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
2,4'-DDT	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
2,4-Dinitrotoluene	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
2,6-Dinitrotoluene	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
2-Methylnaphthalene	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
4,4'-DDD	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
4,4'-DDE	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
4,4'-DDT	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Acenaphthene	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Acenaphthylene	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Acetochlor	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Alachlor	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
alpha-BHC	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
alpha-Chlordane	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Anthracene	<0.020		0.020	ug/L		04/30/23 11:30	05/01/23 12:59	1
Atrazine	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Benz(a)anthracene	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Benzo[a]pyrene	<0.020		0.020	ug/L		04/30/23 11:30	05/01/23 12:59	1
Benzo[b]fluoranthene	<0.020		0.020	ug/L		04/30/23 11:30	05/01/23 12:59	1
Benzo[g,h,i]perylene	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Benzo[k]fluoranthene	<0.020		0.020	ug/L		04/30/23 11:30	05/01/23 12:59	1
beta-BHC	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Bis(2-ethylhexyl) phthalate	<0.59		0.59	ug/L		04/30/23 11:30	05/01/23 12:59	1
Bromacil	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Butachlor	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Butylbenzylphthalate	<0.49		0.49	ug/L		04/30/23 11:30	05/01/23 12:59	1
Chlorobenzilate	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Chloroneb	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Chlorothalonil (Draconil, Bravo)	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Chlorpyrifos	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Chrysene	<0.020		0.020	ug/L		04/30/23 11:30	05/01/23 12:59	1
delta-BHC	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Di(2-ethylhexyl)adipate	<0.59		0.59	ug/L		04/30/23 11:30	05/01/23 12:59	1
Dibenz(a,h)anthracene	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Diclorvos (DDVP)	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Dieldrin	<0.20		0.20	ug/L		04/30/23 11:30	05/01/23 12:59	1
Diethylphthalate	<0.49		0.49	ug/L		04/30/23 11:30	05/01/23 12:59	1
Dimethylphthalate	<0.49		0.49	ug/L		04/30/23 11:30	05/01/23 12:59	1
Di-n-butyl phthalate	<0.98		0.98	ug/L		04/30/23 11:30	05/01/23 12:59	1
Di-n-octyl phthalate	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Endosulfan I (Alpha)	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Endosulfan II (Beta)	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Endosulfan sulfate	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Endrin	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Endrin aldehyde	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
EPTC	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: MB 380-38507/21-A
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 38507

Analyte	MB Result	MB Qualifier	RL	Unit	D	Prepared	Analyzed	Dil Fac
Fluoranthene	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Fluorene	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
gamma-Chlordane	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Heptachlor	<0.039		0.039	ug/L		04/30/23 11:30	05/01/23 12:59	1
Heptachlor epoxide (isomer B)	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Hexachlorobenzene	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Hexachlorocyclopentadiene	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Indeno[1,2,3-cd]pyrene	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Isophorone	<0.49		0.49	ug/L		04/30/23 11:30	05/01/23 12:59	1
Lindane	<0.039		0.039	ug/L		04/30/23 11:30	05/01/23 12:59	1
Malathion	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Methoxychlor	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Metolachlor	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Metribuzin	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Molinate	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Naphthalene	<0.29		0.29	ug/L		04/30/23 11:30	05/01/23 12:59	1
Parathion	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Pendimethalin (Penoxaline)	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Phenanthrene	<0.039		0.039	ug/L		04/30/23 11:30	05/01/23 12:59	1
Propachlor	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Pyrene	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Simazine	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Terbacil	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Terbutylazine	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1
Thiobencarb	<0.20		0.20	ug/L		04/30/23 11:30	05/01/23 12:59	1
Total Permethrin (mixed isomers)	<0.20		0.20	ug/L		04/30/23 11:30	05/01/23 12:59	1
trans-Nonachlor	<0.049		0.049	ug/L		04/30/23 11:30	05/01/23 12:59	1
Trifluralin	<0.098		0.098	ug/L		04/30/23 11:30	05/01/23 12:59	1

<i>Tentatively Identified Compound</i>	MB Est. Result	MB Qualifier	Unit	D	RT	CAS No.	Prepared	Analyzed	Dil Fac
<i>Phenol, 4-(1,1-dimethylpropyl)-</i>	0.650	T J N	ug/L		4.00	80-46-6	04/30/23 11:30	05/01/23 12:59	1

<i>Surrogate</i>	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
<i>2-Nitro-m-xylene</i>	89		70 - 130	04/30/23 11:30	05/01/23 12:59	1
<i>Perylene-d12</i>	84		70 - 130	04/30/23 11:30	05/01/23 12:59	1
<i>Triphenylphosphate</i>	100		70 - 130	04/30/23 11:30	05/01/23 12:59	1

Lab Sample ID: LCS 380-38507/23-A
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	1.97	1.93		ug/L		98	70 - 130
2,4'-DDD	1.97	1.86		ug/L		94	70 - 130
2,4'-DDE	1.97	1.86		ug/L		94	70 - 130
2,4'-DDT	1.97	1.96		ug/L		100	70 - 130
2,4-Dinitrotoluene	1.97	2.07		ug/L		105	70 - 130
2,6-Dinitrotoluene	1.97	1.92		ug/L		97	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: LCS 380-38507/23-A
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Methylnaphthalene	1.97	1.90		ug/L		96	70 - 130
4,4'-DDD	1.97	2.01		ug/L		102	70 - 130
4,4'-DDE	1.97	2.07		ug/L		105	70 - 130
4,4'-DDT	1.97	2.02		ug/L		103	70 - 130
Acenaphthene	1.97	1.97		ug/L		100	70 - 130
Acenaphthylene	1.97	1.89		ug/L		96	70 - 130
Acetochlor	1.97	2.07		ug/L		105	70 - 130
Alachlor	1.97	2.14		ug/L		108	70 - 130
alpha-BHC	1.97	1.96		ug/L		100	70 - 130
alpha-Chlordane	1.97	2.15		ug/L		109	70 - 130
Anthracene	1.97	1.88		ug/L		96	70 - 130
Atrazine	1.97	2.11		ug/L		107	70 - 130
Benz(a)anthracene	1.97	1.99		ug/L		101	70 - 130
Benzo[a]pyrene	1.97	2.14		ug/L		108	70 - 130
Benzo[b]fluoranthene	1.97	2.21		ug/L		112	70 - 130
Benzo[g,h,i]perylene	1.97	2.40		ug/L		122	70 - 130
Benzo[k]fluoranthene	1.97	2.23		ug/L		113	70 - 130
beta-BHC	1.97	1.95		ug/L		99	70 - 130
Bis(2-ethylhexyl) phthalate	1.97	2.09		ug/L		106	70 - 130
Bromacil	1.97	2.26		ug/L		115	70 - 130
Butachlor	1.97	2.25		ug/L		114	70 - 130
Butylbenzylphthalate	1.97	2.30		ug/L		117	70 - 130
Chlorobenzilate	1.97	2.05		ug/L		104	70 - 130
Chloroneb	1.97	2.05		ug/L		104	70 - 130
Chlorothalonil (Draconil, Bravo)	1.97	2.09		ug/L		106	70 - 130
Chlorpyrifos	1.97	2.10		ug/L		107	70 - 130
Chrysene	1.97	2.15		ug/L		109	70 - 130
delta-BHC	1.97	1.93		ug/L		98	70 - 130
Di(2-ethylhexyl)adipate	1.97	2.29		ug/L		116	70 - 130
Dibenz(a,h)anthracene	1.97	2.34		ug/L		119	70 - 130
Diclorvos (DDVP)	1.97	2.22		ug/L		113	70 - 130
Dieldrin	1.97	1.89		ug/L		96	70 - 130
Diethylphthalate	1.97	2.06		ug/L		105	70 - 130
Dimethylphthalate	1.97	2.04		ug/L		103	70 - 130
Di-n-butyl phthalate	3.94	4.48		ug/L		114	70 - 130
Di-n-octyl phthalate	1.97	1.95		ug/L		99	70 - 130
Endosulfan I (Alpha)	1.97	1.81		ug/L		92	70 - 130
Endosulfan II (Beta)	1.97	2.08		ug/L		106	70 - 130
Endosulfan sulfate	1.97	1.93		ug/L		98	70 - 130
Endrin	1.97	2.30		ug/L		117	70 - 130
Endrin aldehyde	1.97	1.97		ug/L		100	70 - 130
EPTC	1.97	2.14		ug/L		109	70 - 130
Fluoranthene	1.97	2.07		ug/L		105	70 - 130
Fluorene	1.97	2.11		ug/L		107	70 - 130
gamma-Chlordane	1.97	2.19		ug/L		111	70 - 130
Heptachlor	1.97	2.20		ug/L		112	70 - 130
Heptachlor epoxide (isomer B)	1.97	2.16		ug/L		110	70 - 130
Hexachlorobenzene	1.97	1.98		ug/L		101	70 - 130
Hexachlorocyclopentadiene	1.97	1.89		ug/L		96	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: LCS 380-38507/23-A
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38507

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
Indeno[1,2,3-cd]pyrene	1.97	2.43		ug/L		124	70 - 130
Isophorone	1.97	2.22		ug/L		113	70 - 130
Lindane	1.97	2.07		ug/L		105	70 - 130
Malathion	1.97	2.14		ug/L		109	70 - 130
Methoxychlor	1.97	2.40		ug/L		122	70 - 130
Metolachlor	1.97	2.19		ug/L		111	70 - 130
Metribuzin	1.97	2.03		ug/L		103	70 - 130
Molinate	1.97	2.20		ug/L		112	70 - 130
Naphthalene	1.97	1.97		ug/L		100	70 - 130
Parathion	1.97	2.55		ug/L		130	70 - 130
Pendimethalin (Penoxaline)	1.97	2.06		ug/L		105	70 - 130
Phenanthrene	1.97	1.94		ug/L		99	70 - 130
Propachlor	1.97	2.31		ug/L		117	70 - 130
Pyrene	1.97	2.12		ug/L		108	70 - 130
Simazine	1.97	2.16		ug/L		110	70 - 130
Terbacil	1.97	2.46		ug/L		125	70 - 130
Terbutylazine	1.97	2.02		ug/L		102	70 - 130
Thiobencarb	1.97	2.38		ug/L		121	70 - 130
trans-Nonachlor	1.97	2.15		ug/L		109	70 - 130
Trifluralin	1.97	1.98		ug/L		101	70 - 130

Surrogate	LCS %Recovery	LCS Qualifier	Limits
2-Nitro-m-xylene	91		70 - 130
Perylene-d12	95		70 - 130
Triphenylphosphate	103		70 - 130

Lab Sample ID: LCSD 380-38507/24-A
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38507

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene	1.97	1.92		ug/L		98	70 - 130	1	20
2,4'-DDD	1.97	1.88		ug/L		96	70 - 130	1	20
2,4'-DDE	1.97	1.86		ug/L		94	70 - 130	0	20
2,4'-DDT	1.97	1.93		ug/L		98	70 - 130	1	20
2,4-Dinitrotoluene	1.97	2.02		ug/L		103	70 - 130	2	20
2,6-Dinitrotoluene	1.97	1.87		ug/L		95	70 - 130	2	20
2-Methylnaphthalene	1.97	1.89		ug/L		96	70 - 130	0	20
4,4'-DDD	1.97	1.97		ug/L		100	70 - 130	2	20
4,4'-DDE	1.97	2.06		ug/L		105	70 - 130	0	20
4,4'-DDT	1.97	2.01		ug/L		102	70 - 130	0	20
Acenaphthene	1.97	1.96		ug/L		100	70 - 130	0	20
Acenaphthylene	1.97	1.89		ug/L		96	70 - 130	0	20
Acetochlor	1.97	2.03		ug/L		103	70 - 130	2	20
Alachlor	1.97	2.08		ug/L		106	70 - 130	2	20
alpha-BHC	1.97	1.96		ug/L		99	70 - 130	0	20
alpha-Chlordane	1.97	2.20		ug/L		112	70 - 130	2	20
Anthracene	1.97	1.90		ug/L		97	70 - 130	1	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: LCSD 380-38507/24-A
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38507

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec		RPD	RPD Limit
							Limits	RPD		
Atrazine	1.97	2.11		ug/L		107	70 - 130	0	20	
Benz(a)anthracene	1.97	1.94		ug/L		99	70 - 130	3	20	
Benzo[a]pyrene	1.97	2.11		ug/L		107	70 - 130	1	20	
Benzo[b]fluoranthene	1.97	2.16		ug/L		110	70 - 130	2	20	
Benzo[g,h,i]perylene	1.97	2.29		ug/L		116	70 - 130	5	20	
Benzo[k]fluoranthene	1.97	2.16		ug/L		110	70 - 130	3	20	
beta-BHC	1.97	1.99		ug/L		101	70 - 130	2	20	
Bis(2-ethylhexyl) phthalate	1.97	1.97		ug/L		100	70 - 130	6	20	
Bromacil	1.97	2.20		ug/L		112	70 - 130	3	20	
Butachlor	1.97	2.19		ug/L		111	70 - 130	3	20	
Butylbenzylphthalate	1.97	2.26		ug/L		115	70 - 130	2	20	
Chlorobenzilate	1.97	2.01		ug/L		102	70 - 130	2	20	
Chloroneb	1.97	2.07		ug/L		105	70 - 130	1	20	
Chlorothalonil (Draconil, Bravo)	1.97	2.07		ug/L		105	70 - 130	1	20	
Chlorpyrifos	1.97	2.08		ug/L		106	70 - 130	1	20	
Chrysene	1.97	2.07		ug/L		105	70 - 130	4	20	
delta-BHC	1.97	1.91		ug/L		97	70 - 130	1	20	
Di(2-ethylhexyl)adipate	1.97	2.27		ug/L		115	70 - 130	1	20	
Dibenz(a,h)anthracene	1.97	2.22		ug/L		113	70 - 130	6	20	
Diclorvos (DDVP)	1.97	2.26		ug/L		115	70 - 130	2	20	
Dieldrin	1.97	1.85		ug/L		94	70 - 130	2	20	
Diethylphthalate	1.97	2.06		ug/L		105	70 - 130	0	20	
Dimethylphthalate	1.97	2.04		ug/L		104	70 - 130	0	20	
Di-n-butyl phthalate	3.94	4.34		ug/L		110	70 - 130	3	20	
Di-n-octyl phthalate	1.97	1.79		ug/L		91	70 - 130	8	20	
Endosulfan I (Alpha)	1.97	1.83		ug/L		93	70 - 130	1	20	
Endosulfan II (Beta)	1.97	1.98		ug/L		101	70 - 130	5	20	
Endosulfan sulfate	1.97	1.93		ug/L		98	70 - 130	0	20	
Endrin	1.97	2.27		ug/L		115	70 - 130	1	20	
Endrin aldehyde	1.97	1.93		ug/L		98	70 - 130	2	20	
EPTC	1.97	2.13		ug/L		108	70 - 130	1	20	
Fluoranthene	1.97	2.08		ug/L		106	70 - 130	0	20	
Fluorene	1.97	2.10		ug/L		107	70 - 130	1	20	
gamma-Chlordane	1.97	2.22		ug/L		113	70 - 130	1	20	
Heptachlor	1.97	2.23		ug/L		113	70 - 130	1	20	
Heptachlor epoxide (isomer B)	1.97	2.16		ug/L		110	70 - 130	0	20	
Hexachlorobenzene	1.97	1.97		ug/L		100	70 - 130	0	20	
Hexachlorocyclopentadiene	1.97	1.99		ug/L		101	70 - 130	5	20	
Indeno[1,2,3-cd]pyrene	1.97	2.30		ug/L		117	70 - 130	5	20	
Isophorone	1.97	2.17		ug/L		110	70 - 130	2	20	
Lindane	1.97	2.07		ug/L		105	70 - 130	0	20	
Malathion	1.97	2.10		ug/L		107	70 - 130	2	20	
Methoxychlor	1.97	2.32		ug/L		118	70 - 130	4	20	
Metolachlor	1.97	2.14		ug/L		109	70 - 130	2	20	
Metribuzin	1.97	2.02		ug/L		103	70 - 130	0	20	
Molinate	1.97	2.19		ug/L		111	70 - 130	0	20	
Naphthalene	1.97	1.95		ug/L		99	70 - 130	1	20	
Parathion	1.97	2.53		ug/L		129	70 - 130	1	20	
Pendimethalin (Penoxaline)	1.97	2.08		ug/L		106	70 - 130	1	20	

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: LCSD 380-38507/24-A
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 38507

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Phenanthrene	1.97	1.94		ug/L		98	70 - 130	0	20
Propachlor	1.97	2.30		ug/L		117	70 - 130	0	20
Pyrene	1.97	2.13		ug/L		108	70 - 130	0	20
Simazine	1.97	2.19		ug/L		111	70 - 130	1	20
Terbacil	1.97	2.44		ug/L		124	70 - 130	1	20
Terbutylazine	1.97	2.02		ug/L		103	70 - 130	0	20
Thiobencarb	1.97	2.32		ug/L		118	70 - 130	2	20
trans-Nonachlor	1.97	2.14		ug/L		109	70 - 130	1	20
Trifluralin	1.97	2.01		ug/L		102	70 - 130	1	20

Surrogate	LCSD %Recovery	LCSD Qualifier	LCSD Limits
2-Nitro-m-xylene	91		70 - 130
Perylene-d12	95		70 - 130
Triphenylphosphate	102		70 - 130

Lab Sample ID: MRL 380-38507/22-A
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38507

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.0984	0.107		ug/L		109	50 - 150
2,4'-DDD	0.0984	0.147		ug/L		150	50 - 150
2,4'-DDE	0.0984	0.0939	J	ug/L		95	50 - 150
2,4'-DDT	0.0984	0.0919	J	ug/L		93	50 - 150
2,4-Dinitrotoluene	0.0984	0.0720	J	ug/L		73	50 - 150
2,6-Dinitrotoluene	0.0984	0.0800	J	ug/L		81	50 - 150
2-Methylnaphthalene	0.0984	0.0996		ug/L		101	50 - 150
4,4'-DDD	0.0984	0.0982		ug/L		100	50 - 150
4,4'-DDE	0.0984	0.0892	J	ug/L		91	50 - 150
4,4'-DDT	0.0984	0.0986		ug/L		100	50 - 150
Acenaphthene	0.0984	0.0998		ug/L		101	50 - 150
Acenaphthylene	0.0984	0.0909	J	ug/L		92	50 - 150
Acetochlor	0.0492	0.0443	J	ug/L		90	50 - 150
Alachlor	0.0492	0.0602		ug/L		122	50 - 150
alpha-BHC	0.0984	0.0954	J	ug/L		97	50 - 150
alpha-Chlordane	0.0246	<0.029		ug/L		111	50 - 150
Anthracene	0.0197	<0.019		ug/L		96	50 - 150
Atrazine	0.0492	0.0519		ug/L		105	50 - 150
Benz(a)anthracene	0.0492	0.0469	J	ug/L		95	50 - 150
Benzo[a]pyrene	0.0197	0.0178	J	ug/L		90	50 - 150
Benzo[b]fluoranthene	0.0197	0.0198	J	ug/L		101	50 - 150
Benzo[g,h,i]perylene	0.0492	0.0475	J	ug/L		97	50 - 150
Benzo[k]fluoranthene	0.0197	0.0188	J	ug/L		95	50 - 150
beta-BHC	0.0984	0.0968	J	ug/L		98	50 - 150
Bis(2-ethylhexyl) phthalate	0.591	0.705		ug/L		119	50 - 150
Bromacil	0.0984	0.102		ug/L		104	50 - 150
Butachlor	0.0492	0.0617		ug/L		125	50 - 150
Butylbenzylphthalate	0.148	0.180	J	ug/L		122	50 - 150

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: MRL 380-38507/22-A

Matrix: Water

Analysis Batch: 38627

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

Prep Batch: 38507

Analyte	Spike Added	MRL Result	MRL Qualifier	Unit	D	%Rec	%Rec Limits
Chlorobenzilate	0.0984	0.0930	J	ug/L		95	50 - 150
Chloroneb	0.0984	0.106		ug/L		108	50 - 150
Chlorothalonil (Draconil, Bravo)	0.0984	0.0827	J	ug/L		84	50 - 150
Chlorpyrifos	0.0492	0.0583		ug/L		119	50 - 150
Chrysene	0.0197	0.0199	J	ug/L		101	50 - 150
delta-BHC	0.0984	0.109		ug/L		110	50 - 150
Di(2-ethylhexyl)adipate	0.295	0.383	J	ug/L		130	50 - 150
Dibenz(a,h)anthracene	0.0492	0.0428	J	ug/L		87	50 - 150
Diclorvos (DDVP)	0.0492	0.0532		ug/L		108	50 - 150
Dieldrin	0.0984	0.0947	J	ug/L		96	50 - 150
Diethylphthalate	0.148	0.172	J	ug/L		117	50 - 150
Dimethylphthalate	0.295	0.300	J	ug/L		101	50 - 150
Di-n-butyl phthalate	0.295	0.351	J	ug/L		119	49 - 243
Di-n-octyl phthalate	0.0984	0.0939	J	ug/L		95	50 - 150
Endosulfan I (Alpha)	0.0984	0.0941	J	ug/L		96	50 - 150
Endosulfan II (Beta)	0.0984	0.122		ug/L		124	50 - 150
Endosulfan sulfate	0.0984	0.0904	J	ug/L		92	50 - 150
Endrin	0.0984	0.130		ug/L		132	50 - 150
Endrin aldehyde	0.0984	0.0831	J	ug/L		84	50 - 150
EPTC	0.0984	0.111		ug/L		113	50 - 150
Fluoranthene	0.0492	0.0526	J	ug/L		107	50 - 150
Fluorene	0.0492	0.0505		ug/L		103	50 - 150
gamma-Chlordane	0.0246	0.0270	J	ug/L		110	50 - 150
Heptachlor	0.0394	0.0626	^3+	ug/L		159	50 - 150
Heptachlor epoxide (isomer B)	0.0492	0.0515		ug/L		105	50 - 150
Hexachlorobenzene	0.0492	0.0450	J	ug/L		92	50 - 150
Hexachlorocyclopentadiene	0.0492	0.0429	J	ug/L		87	50 - 150
Indeno[1,2,3-cd]pyrene	0.0492	0.0495		ug/L		101	50 - 150
Isophorone	0.0984	0.113	J	ug/L		115	50 - 150
Lindane	0.0394	0.0412		ug/L		105	50 - 150
Malathion	0.0984	0.0926	J	ug/L		94	50 - 150
Methoxychlor	0.0984	0.104		ug/L		106	50 - 150
Metolachlor	0.0492	0.0561		ug/L		114	50 - 150
Metribuzin	0.0492	0.0393	J	ug/L		80	50 - 150
Molinate	0.0984	0.112		ug/L		113	50 - 150
Naphthalene	0.0984	0.111	J	ug/L		113	50 - 150
Parathion	0.0984	0.102		ug/L		104	50 - 150
Pendimethalin (Penoxaline)	0.0984	0.0674	J	ug/L		68	50 - 150
Phenanthrene	0.0197	0.0227	J	ug/L		115	50 - 150
Propachlor	0.0492	0.0536		ug/L		109	50 - 150
Pyrene	0.0492	0.0514		ug/L		105	50 - 150
Simazine	0.0492	0.0503		ug/L		102	50 - 150
Terbacil	0.0984	0.129		ug/L		131	50 - 150
Terbutylazine	0.0984	0.0965	J	ug/L		98	50 - 150
Thiobencarb	0.0984	0.124	J	ug/L		126	50 - 150
trans-Nonachlor	0.0246	<0.026		ug/L		105	50 - 150
Trifluralin	0.0984	0.0727	J	ug/L		74	50 - 150

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: MRL 380-38507/22-A
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 38507

Surrogate	MRL %Recovery	MRL Qualifier	Limits
2-Nitro-m-xylene	91		70 - 130
Perylene-d12	93		70 - 130
Triphenylphosphate	100		70 - 130

Lab Sample ID: 380-44857-AJ-1-A MS
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 38507

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	<0.098		1.95	1.90		ug/L		97	70 - 130
2,4'-DDD	<0.098		1.95	1.87		ug/L		96	70 - 130
2,4'-DDE	<0.098		1.95	1.85		ug/L		95	70 - 130
2,4'-DDT	<0.098		1.95	1.94		ug/L		100	70 - 130
2,4-Dinitrotoluene	<0.098		1.95	2.18		ug/L		112	70 - 130
2,6-Dinitrotoluene	<0.098		1.95	2.00		ug/L		102	70 - 130
2-Methylnaphthalene	<0.098		1.95	1.93		ug/L		99	70 - 130
4,4'-DDD	<0.098		1.95	2.03		ug/L		104	70 - 130
4,4'-DDE	<0.098		1.95	2.07		ug/L		106	70 - 130
4,4'-DDT	<0.098		1.95	2.01		ug/L		103	70 - 130
Acenaphthene	<0.098		1.95	1.96		ug/L		100	70 - 130
Acenaphthylene	<0.098		1.95	1.96		ug/L		100	70 - 130
Acetochlor	<0.098		1.95	2.09		ug/L		107	70 - 130
Alachlor	<0.049		1.95	2.16		ug/L		111	70 - 130
alpha-BHC	<0.098		1.95	1.92		ug/L		98	70 - 130
alpha-Chlordane	<0.049		1.95	2.19		ug/L		112	70 - 130
Anthracene	<0.020		1.95	1.80		ug/L		92	70 - 130
Atrazine	<0.049		1.95	2.15		ug/L		110	70 - 130
Benz(a)anthracene	<0.049		1.95	2.00		ug/L		102	70 - 130
Benzo[a]pyrene	<0.020		1.95	2.28		ug/L		117	70 - 130
Benzo[b]fluoranthene	<0.020		1.95	2.42		ug/L		124	70 - 130
Benzo[g,h,i]perylene	<0.049		1.95	2.35		ug/L		120	70 - 130
Benzo[k]fluoranthene	<0.020		1.95	2.36		ug/L		121	70 - 130
beta-BHC	<0.098		1.95	1.93		ug/L		99	70 - 130
Bis(2-ethylhexyl) phthalate	<0.59		1.95	2.33		ug/L		120	70 - 130
Bromacil	<0.098		1.95	2.46		ug/L		126	70 - 130
Butachlor	<0.049		1.95	2.31		ug/L		118	70 - 130
Butylbenzylphthalate	<0.49		1.95	2.39		ug/L		123	70 - 130
Chlorobenzilate	<0.098		1.95	2.12		ug/L		109	70 - 130
Chloroneb	<0.098		1.95	2.21		ug/L		113	70 - 130
Chlorothalonil (Draconil, Bravo)	<0.098		1.95	2.10		ug/L		107	70 - 130
Chlorpyrifos	<0.049		1.95	2.11		ug/L		108	70 - 130
Chrysene	<0.020		1.95	2.21		ug/L		113	70 - 130
delta-BHC	<0.098		1.95	1.89		ug/L		97	70 - 130
Di(2-ethylhexyl)adipate	<0.59		1.95	2.28		ug/L		117	70 - 130
Dibenz(a,h)anthracene	<0.049		1.95	2.39		ug/L		122	70 - 130
Diclorvos (DDVP)	<0.049		1.95	2.26		ug/L		116	70 - 130
Dieldrin	<0.20		1.95	1.85		ug/L		95	70 - 130
Diethylphthalate	<0.49		1.95	2.11		ug/L		104	70 - 130

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: 380-44857-AJ-1-A MS
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Matrix Spike
Prep Type: Total/NA
Prep Batch: 38507

Analyte	Sample	Sample	Spike	MS	MS	Unit	D	%Rec	%Rec Limits
	Result	Qualifier	Added	Result	Qualifier				
Dimethylphthalate	<0.49		1.95	2.08		ug/L		107	70 - 130
Di-n-butyl phthalate	<0.98		3.91	4.50		ug/L		115	70 - 130
Di-n-octyl phthalate	<0.098		1.95	2.37		ug/L		121	70 - 130
Endosulfan I (Alpha)	<0.098		1.95	1.84		ug/L		94	70 - 130
Endosulfan II (Beta)	<0.098		1.95	2.09		ug/L		107	70 - 130
Endosulfan sulfate	<0.098		1.95	1.98		ug/L		101	70 - 130
Endrin	<0.098		1.95	2.19		ug/L		112	70 - 130
Endrin aldehyde	<0.098		1.95	1.98		ug/L		101	70 - 130
EPTC	<0.098		1.95	2.15		ug/L		110	70 - 130
Fluoranthene	<0.098		1.95	2.06		ug/L		106	70 - 130
Fluorene	<0.049		1.95	2.06		ug/L		106	70 - 130
gamma-Chlordane	<0.049		1.95	2.25		ug/L		115	70 - 130
Heptachlor	<0.039	^3+	1.95	2.22		ug/L		113	70 - 130
Heptachlor epoxide (isomer B)	<0.049		1.95	2.23		ug/L		114	70 - 130
Hexachlorobenzene	<0.049		1.95	1.99		ug/L		102	70 - 130
Hexachlorocyclopentadiene	<0.049		1.95	1.90		ug/L		97	70 - 130
Indeno[1,2,3-cd]pyrene	<0.049		1.95	2.44		ug/L		125	70 - 130
Isophorone	<0.49		1.95	2.26		ug/L		116	70 - 130
Lindane	<0.039		1.95	2.02		ug/L		103	70 - 130
Malathion	<0.098		1.95	2.17		ug/L		111	70 - 130
Methoxychlor	<0.098	F1	1.95	2.74	F1	ug/L		141	70 - 130
Metolachlor	<0.049		1.95	2.22		ug/L		114	70 - 130
Metribuzin	<0.049		1.95	2.18		ug/L		111	70 - 130
Molinate	<0.098		1.95	2.27		ug/L		116	70 - 130
Naphthalene	<0.30		1.95	1.95		ug/L		99	70 - 130
Parathion	<0.098	F1	1.95	2.75	F1	ug/L		141	70 - 130
Pendimethalin (Penoxaline)	<0.098		1.95	2.19		ug/L		112	70 - 130
Phenanthrene	<0.039		1.95	1.92		ug/L		99	70 - 130
Propachlor	<0.049		1.95	2.28		ug/L		117	70 - 130
Pyrene	<0.049		1.95	2.13		ug/L		109	70 - 130
Simazine	<0.049		1.95	2.24		ug/L		115	70 - 130
Terbacil	<0.098		1.95	2.48		ug/L		127	70 - 130
Terbutylazine	<0.098		1.95	2.06		ug/L		106	70 - 130
Thiobencarb	<0.20		1.95	2.36		ug/L		121	70 - 130
trans-Nonachlor	<0.049		1.95	2.15		ug/L		110	70 - 130
Trifluralin	<0.098		1.95	2.05		ug/L		105	70 - 130

Surrogate	MS	MS	Limits
	%Recovery	Qualifier	
2-Nitro-m-xylene	92		70 - 130
Perylene-d12	99		70 - 130
Triphenylphosphate	109		70 - 130

Lab Sample ID: 380-44985-AJ-1-A DU
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 38507

Analyte	Sample	Sample	DU	DU	Unit	D	RPD	RPD	Limit
	Result	Qualifier	Result	Qualifier					
1-Methylnaphthalene	<0.097		<0.098		ug/L		NC		20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: 380-44985-AJ-1-A DU
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 38507

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
2,4'-DDD	<0.097		<0.098		ug/L		NC	20
2,4'-DDE	<0.097		<0.098		ug/L		NC	20
2,4'-DDT	<0.097		<0.098		ug/L		NC	20
2,4-Dinitrotoluene	<0.097		<0.098		ug/L		NC	20
2,6-Dinitrotoluene	<0.097		<0.098		ug/L		NC	20
2-Methylnaphthalene	<0.097		<0.098		ug/L		NC	20
4,4'-DDD	<0.097		<0.098		ug/L		NC	20
4,4'-DDE	<0.097		<0.098		ug/L		NC	20
4,4'-DDT	<0.097		<0.098		ug/L		NC	20
Acenaphthene	<0.097		<0.098		ug/L		NC	20
Acenaphthylene	<0.097		<0.098		ug/L		NC	20
Acetochlor	<0.097		<0.098		ug/L		NC	20
Alachlor	<0.049		<0.049		ug/L		NC	20
alpha-BHC	<0.097		<0.098		ug/L		NC	20
alpha-Chlordane	<0.049		<0.049		ug/L		NC	20
Anthracene	<0.019		<0.020		ug/L		NC	20
Atrazine	<0.049		<0.049		ug/L		NC	20
Benz(a)anthracene	<0.049		<0.049		ug/L		NC	20
Benzo[a]pyrene	<0.019		<0.020		ug/L		NC	20
Benzo[b]fluoranthene	<0.019		<0.020		ug/L		NC	20
Benzo[g,h,i]perylene	<0.049		<0.049		ug/L		NC	20
Benzo[k]fluoranthene	<0.019		<0.020		ug/L		NC	20
beta-BHC	<0.097		<0.098		ug/L		NC	20
Bis(2-ethylhexyl) phthalate	<0.58		<0.59		ug/L		NC	20
Bromacil	<0.097		<0.098		ug/L		NC	20
Butachlor	<0.049		<0.049		ug/L		NC	20
Butylbenzylphthalate	<0.49		<0.49		ug/L		NC	20
Chlorobenzilate	<0.097		<0.098		ug/L		NC	20
Chloroneb	<0.097		<0.098		ug/L		NC	20
Chlorothalonil (Draconil, Bravo)	<0.097		<0.098		ug/L		NC	20
Chlorpyrifos	<0.049		<0.049		ug/L		NC	20
Chrysene	<0.019		<0.020		ug/L		NC	20
delta-BHC	<0.097		<0.098		ug/L		NC	20
Di(2-ethylhexyl)adipate	<0.58		<0.59		ug/L		NC	20
Dibenz(a,h)anthracene	<0.049		<0.049		ug/L		NC	20
Diclorvos (DDVP)	<0.049		<0.049		ug/L		NC	20
Dieldrin	<0.19		<0.20		ug/L		NC	20
Diethylphthalate	<0.49		<0.49		ug/L		NC	20
Dimethylphthalate	<0.49		<0.49		ug/L		NC	20
Di-n-butyl phthalate	<0.97		<0.98		ug/L		NC	20
Di-n-octyl phthalate	<0.097		<0.098		ug/L		NC	20
Endosulfan I (Alpha)	<0.097		<0.098		ug/L		NC	20
Endosulfan II (Beta)	<0.097		<0.098		ug/L		NC	20
Endosulfan sulfate	<0.097		<0.098		ug/L		NC	20
Endrin	<0.097		<0.098		ug/L		NC	20
Endrin aldehyde	<0.097		<0.098		ug/L		NC	20
EPTC	<0.097		<0.098		ug/L		NC	20
Fluoranthene	<0.097		<0.098		ug/L		NC	20
Fluorene	<0.049		<0.049		ug/L		NC	20

Eurofins Eaton Analytical Pomona

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: 380-44985-AJ-1-A DU
Matrix: Water
Analysis Batch: 38627

Client Sample ID: Duplicate
Prep Type: Total/NA
Prep Batch: 38507

Analyte	Sample Result	Sample Qualifier	DU Result	DU Qualifier	Unit	D	RPD	RPD Limit
gamma-Chlordane	<0.049		<0.049		ug/L		NC	20
Heptachlor	<0.039	^3+	<0.039		ug/L		NC	20
Heptachlor epoxide (isomer B)	<0.049		<0.049		ug/L		NC	20
Hexachlorobenzene	<0.049		<0.049		ug/L		NC	20
Hexachlorocyclopentadiene	<0.049		<0.049		ug/L		NC	20
Indeno[1,2,3-cd]pyrene	<0.049		<0.049		ug/L		NC	20
Isophorone	<0.49		<0.49		ug/L		NC	20
Lindane	<0.039		<0.039		ug/L		NC	20
Malathion	<0.097		<0.098		ug/L		NC	20
Methoxychlor	<0.097		<0.098		ug/L		NC	20
Metolachlor	<0.049		<0.049		ug/L		NC	20
Metribuzin	<0.049		<0.049		ug/L		NC	20
Molinate	<0.097		<0.098		ug/L		NC	20
Naphthalene	<0.29		<0.29		ug/L		NC	20
Parathion	<0.097		<0.098		ug/L		NC	20
Pendimethalin (Penoxaline)	<0.097		<0.098		ug/L		NC	20
Phenanthrene	<0.039		<0.039		ug/L		NC	20
Propachlor	<0.049		<0.049		ug/L		NC	20
Pyrene	<0.049		<0.049		ug/L		NC	20
Simazine	<0.049		<0.049		ug/L		NC	20
Terbacil	<0.097		<0.098		ug/L		NC	20
Terbutylazine	<0.097		<0.098		ug/L		NC	20
Thiobencarb	<0.19		<0.20		ug/L		NC	20
Total Permethrin (mixed isomers)	<0.19		<0.20		ug/L		NC	20
trans-Nonachlor	<0.049		<0.049		ug/L		NC	20
Trifluralin	<0.097		<0.098		ug/L		NC	20

Surrogate	DU %Recovery	DU Qualifier	DU Limits
2-Nitro-m-xylene	91		70 - 130
Perylene-d12	91		70 - 130
Triphenylphosphate	106		70 - 130

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

Lab Sample ID: 23VGH7E01B
Matrix: WATER
Analysis Batch: 23VGH7E01

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.020		mg/L			05/01/23 12:56	1

Surrogate	MB %Recovery	MB Qualifier	Limits	Prepared	Analyzed	Dil Fac
BROMOFLUOROBENZENE					05/01/23 12:56	1

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: 23VGH7E01L
Matrix: WATER
Analysis Batch: 23VGH7E01

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
GASOLINE	0.500	0.480		mg/L		96	60 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
BROMOFLUOROBENZENE	117		70 - 130				

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

Lab Sample ID: 23DSE005WB
Matrix: WATER
Analysis Batch: 23DSE005W

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			05/04/23 13:29	1
JP5	ND	U	0.050		mg/L			05/04/23 13:29	1
JP8	ND	U	0.050		mg/L			05/04/23 13:29	1
MOTOR OIL	ND	U	0.050		mg/L			05/04/23 13:29	1
Surrogate	%Recovery	MB Qualifier	Limits				Prepared	Analyzed	Dil Fac
BROMOBENZENE								05/04/23 13:29	1
HEXACOSANE								05/04/23 13:29	1

Lab Sample ID: 23DSE005WL
Matrix: WATER
Analysis Batch: 23DSE005W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
DIESEL	2.50	2.63		mg/L		105	50 - 130
Surrogate	%Recovery	LCS Qualifier	Limits				
BROMOBENZENE	88		60 - 130				
HEXACOSANE	108		60 - 130				

Lab Sample ID: 23J5E005WL
Matrix: WATER
Analysis Batch: 23DSE005W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
JP5	2.50	2.41		mg/L		96	30 - 160
Surrogate	%Recovery	LCS Qualifier	Limits				
BROMOBENZENE	89		60 - 130				
HEXACOSANE	101		60 - 130				

QC Sample Results

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

Job ID: 380-45216-1

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

Lab Sample ID: 23J8E005WL
Matrix: WATER
Analysis Batch: 23DSE005W

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
JP8	2.50	2.76		mg/L		110	30 - 160
LCS LCS							
Surrogate	%Recovery	Qualifier	Limits				
BROMOBENZENE	101		60 - 130				
HEXACOSANE	104		60 - 130				

Lab Sample ID: 23D321-01M
Matrix: WATER
Analysis Batch: 23DSE005W

Client Sample ID: 380-45216-1 MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits
JP8	ND		2.60	3.04		mg/L		117	30 - 160
MS MS									
Surrogate	%Recovery	Qualifier	Limits						
BROMOBENZENE	95		60 - 130						
HEXACOSANE	104		60 - 130						

Lab Sample ID: 23D321-01S
Matrix: WATER
Analysis Batch: 23DSE005W

Client Sample ID: 380-45216-1 MSD
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
JP8	ND		2.62	3.05		mg/L		116	30 - 160	0	30
MSD MSD											
Surrogate	%Recovery	Qualifier	Limits								
BROMOBENZENE	107		60 - 130								
HEXACOSANE	99		60 - 130								

QC Association Summary

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

Job ID: 380-45216-1

GC/MS Semi VOA

Prep Batch: 38507

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-45216-1	AIEA WELLS P2 (260) (331-004-WL103)	Total/NA	Drinking Water	525.2	
MB 380-38507/21-A	Method Blank	Total/NA	Water	525.2	
LCS 380-38507/23-A	Lab Control Sample	Total/NA	Water	525.2	
LCSD 380-38507/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	
MRL 380-38507/22-A	Lab Control Sample	Total/NA	Water	525.2	
380-44857-AJ-1-A MS	Matrix Spike	Total/NA	Water	525.2	
380-44985-AJ-1-A DU	Duplicate	Total/NA	Water	525.2	

Analysis Batch: 38627

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-45216-1	AIEA WELLS P2 (260) (331-004-WL103)	Total/NA	Drinking Water	525.2	38507
MB 380-38507/21-A	Method Blank	Total/NA	Water	525.2	38507
LCS 380-38507/23-A	Lab Control Sample	Total/NA	Water	525.2	38507
LCSD 380-38507/24-A	Lab Control Sample Dup	Total/NA	Water	525.2	38507
MRL 380-38507/22-A	Lab Control Sample	Total/NA	Water	525.2	38507
380-44857-AJ-1-A MS	Matrix Spike	Total/NA	Water	525.2	38507
380-44985-AJ-1-A DU	Duplicate	Total/NA	Water	525.2	38507

Subcontract

Analysis Batch: 23DSE005W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-45216-1	AIEA WELLS P2 (260) (331-004-WL103)	Total/NA	Drinking Water	8015 LL DRO/MRO	
23DSE005WB	Method Blank	Total/NA	WATER	8015 LL DRO/MRO	
23DSE005WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO	
23J5E005WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO	
23J8E005WL	Lab Control Sample	Total/NA	WATER	8015 LL DRO/MRO	
23D321-01M	380-45216-1 MS	Total/NA	WATER	8015 LL DRO/MRO	
23D321-01S	380-45216-1 MSD	Total/NA	WATER	8015 LL DRO/MRO	

Analysis Batch: 23VGH7E01

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-45216-1	AIEA WELLS P2 (260) (331-004-WL103)	Total/NA	Drinking Water	8015 Gas (Purgeable) LL (EAL)	
380-45216-2	TB: AIEA WELLS P2 (260) (331-004-WL103)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
23VGH7E01B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
23VGH7E01L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Lab Chronicle

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

Job ID: 380-45216-1

Client Sample ID: AIEA WELLS P2 (260) (331-004-WL103)

Lab Sample ID: 380-45216-1

Date Collected: 04/26/23 12:00

Matrix: Drinking Water

Date Received: 04/27/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	525.2			38507	N8NE	EA POM	04/30/23 13:58
Total/NA	Analysis	525.2		1	38627	Q8LA	EA POM	05/01/23 20:01
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VGH7E01	SCerva		05/01/23 16:39
Total/NA	Analysis	8015 LL DRO/MRO		1	23DSE005W	SDees		05/04/23 16:16

Client Sample ID: TB: AIEA WELLS P2 (260) (331-004-WL103)

Lab Sample ID: 380-45216-2

Date Collected: 04/26/23 12:00

Matrix: Water

Date Received: 04/27/23 10:00

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	23VGH7E01	SCerva		05/01/23 17:17

Laboratory References:

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

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

Accreditation/Certification Summary

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

Job ID: 380-45216-1

Laboratory: Eurofins Eaton Analytical Pomona

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

Authority	Program	Identification Number	Expiration Date
Hawaii	State	CA00006	02-29-24

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

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

Accreditation/Certification Summary

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

Job ID: 380-45216-1

Laboratory: Eurofins Eaton Analytical Pomona (Continued)

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

Authority	Program	Identification Number	Expiration Date
-----------	---------	-----------------------	-----------------

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

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

Method Summary

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

Job ID: 380-45216-1

Method	Method Description	Protocol	Laboratory
525.2	Semivolatile Organic Compounds (GC/MS)	EPA	EA POM
8015	8015 - TPH DRO/ORO	EPA	
8015B	SW846 8015B Gasoline Range Organics	SW846	
525.2	Extraction of Semivolatile Compounds	EPA	EA POM

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

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

Sample Summary

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

Job ID: 380-45216-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-45216-1	AIEA WELLS P2 (260) (331-004-WL103)	Drinking Water	04/26/23 12:00	04/27/23 10:00
380-45216-2	TB: AIEA WELLS P2 (260) (331-004-WL103)	Water	04/26/23 12:00	04/27/23 10:00

- 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: 05-25-2023
 EMAX Batch No.: 23D321

Attn: Jackie Contreras

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

Subject: Laboratory Report
 Project: 380-45216

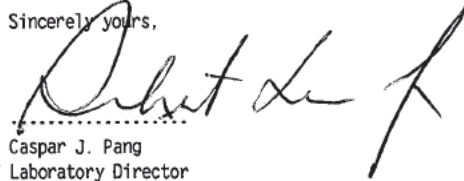
Enclosed is the Laboratory report for samples received on 04/28/23.
 The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-45216-1	D321-01	04/26/23	WATER	TPH GASOLINE TPH
380-45216-2	D321-02	04/26/23	WATER	TPH GASOLINE
380-45216-1MS	D321-01M	04/26/23	WATER	TPH JP-8
380-45216-1MSD	D321-01S	04/26/23	WATER	TPH JP-8

The results are summarized on the following pages.

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

Sincerely yours,



Caspar J. Pang
 Laboratory Director

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 CA002912022-24
 ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
 California ELAP Accredited Certificate Number 2672

Chain of Custody Record



23D321
 eurofins

Environment Testing

Client Information (Sub Contract Lab)		Lab PM: Arada, Rachelle	Carrier Tracking No(s): 380-50195-1
Client Contact: Shipping/Receiving		E-Mail: Rachelle.Arada@eatonanalytical.com	Page: Page 1 of 1
Company: EMAX Laboratories Inc		Accreditations Required (See note): State - Hawaii	Job #: 380-45216-1
Address: 3051 Fujita Street, Torrance, CA, 90505		Due Date Requested: 5/11/2023	Preservation Codes: M - Hexane N - None O - AsNaO2 P - Na2O4S Q - Na2SO3 R - Na2S2O3 S - H2SO4 T - TSP Dodecahydrate U - Acetone V - MCAA W - pH 4-5 X - EDTA Y - Trizma Z - other (specify) Other:
City: Torrance		TAT Requested (days):	
State, Zip: CA, 90505		PO #:	Analysis Requested
Phone:		WO #:	
Email:		Project #: 38001111	Total Number of Containers
Site: Honolulu BWS Sites		SSOW#:	
Sample Identification - Client ID (Lab ID)		Sample Date	Sample Time
AIEA WELLS P2 (260) (331-004-WL103) (380-45216-1)		4/26/23	12:00 Hawaiian
TB: AIEA WELLS P2 (260) (331-004-WL103) (380-45216-2)		4/26/23	12:00 Hawaiian
Matrix (Weigh, Swab, or Wash)		Sample Type (C=Comp, G=grab)	Preservation Code:
Water		Water	Water
Water		Water	Water
Field Filtered Sample (Yes or No)		Perform MS/MSD (Yes or No)	SUB (8015 Gas (Purgeable) LL (EAL)) 8015 Gas
X		X	SUB (8015 LL DROMRO) 8015 LL DROMRO
SUB (8015 Gas (Purgeable) LL (EAL)) 8015 Gas		X	
SUB (8015 LL DROMRO) 8015 LL DROMRO		X	
Special Instructions/Note:		See Attached Instructions	
See Attached Instructions		See Attached Instructions	

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

Possible Hazard Identification
 Unconfirmed

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

Empty Kit Relinquished by: [Signature] Date: 4/28/23 10:16 Company: [Signature] Company: [Signature]

Relinquished by: [Signature] Date/Time: 4/28/23 10:16 Company: [Signature] Company: [Signature]

Relinquished by: [Signature] Date/Time: [Signature] Company: [Signature]

Custody Seals Intact: Yes No Custody Seal No.: CF-012

Cooler Temperature (°C) and Other Remarks: 2.5, 5.3 CF-012

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

Special Instructions/QC Requirements:

Method of Shipment: [Signature] Date/Time: 4/28/23 10:16 Company: [Signature] Company: [Signature]

Received by: [Signature] Date/Time: [Signature] Company: [Signature]

Received by: [Signature] Date/Time: [Signature] Company: [Signature]

Received by: [Signature] Date/Time: [Signature] Company: [Signature]

Ver: 06/08/2021





Type of Delivery	Airbill / Tracking Number	ECN <u>23D321</u>
<input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input checked="" type="checkbox"/> GSO <input type="checkbox"/> Others		Recipient <u>Cecilia Chavez</u>
<input type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery		Date <u>04/28/23</u> Time <u>10:16</u>

COI 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 type="checkbox"/> Sample ID	<input checked="" type="checkbox"/> Matrix
<input checked="" type="checkbox"/> Address	<input type="checkbox"/> Tel # / Fax #	<input type="checkbox"/> Courier Signature	<input checked="" type="checkbox"/> Analysis Required	<input type="checkbox"/> Preservative (if any)	<input checked="" type="checkbox"/> TAT
Safety Issues (if any)	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

Note: _____

PACKAGING INSPECTION

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition <u>correction</u>	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging <u>factor: -0.2</u>	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures	<input checked="" type="checkbox"/> Cooler 1 <u>5.5/5.3</u> °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
(Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Thermometer:	<u>A - S/N 221052768</u>	<u>B - S/N 210760237</u>	<u>C - S/N _____</u>
			<u>D - S/N _____</u>

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

Note: _____

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1	7,8	D2	analysis on label reads: 625 PAH	Ret
2	9,10	D7	second date on label: 4/16/23 second time on label: 1430	↓
<i>[Large handwritten scribble]</i>				

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

NOTES/OBSERVATIONS: Project name is Red-Hill - Sample #2 has two labels
 SAMPLE MATRIX IS DRINKING WATER? YES NO one indicates pres. w/ this only and second
this filter

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

REVIEWS:

Sample Labeling <u>Nahdeon Nacana</u>	SRF <u>[Signature]</u>	PM <u>[Signature]</u>
Date <u>04/28/23</u>	Date <u>04/28/23</u>	Date <u>4/28/23</u>

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

380-45216

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

SDG#: 23D321



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-45216

SDG : 23D321

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

A total of two(2) water samples were received on 04/28/23 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. VGH7E01B - 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. VGH7E01L/VGH7E01C 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 D320-01M/D320-01S. 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.

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

SAMPLE RESULTS

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

Client : EUROFINS EATON ANALYTICAL	Date Collected: 04/26/23 12:00
Project : 380-45216	Date Received: 04/28/23
Batch No. : 23D321	Date Extracted: 05/01/23 17:17
Sample ID : 380-45216-2	Date Analyzed: 05/01/23 17:17
Lab Samp ID: D321-02	Dilution Factor: 1
Lab File ID: AE01012A	Matrix: WATER
Ext Btch ID: 23VGH7E01	% Moisture: NA
Calib. Ref.: AE01004A	Instrument ID: H7

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0401	0.0400	100	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

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

QC SUMMARIES

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	05/01/23 12:56
Project	: 380-45216	Date Received:	05/01/23
Batch No.	: 23D321	Date Extracted:	05/01/23 12:56
Sample ID	: MBLK1W	Date Analyzed:	05/01/23 12:56
Lab Samp ID:	VGH7E01B	Dilution Factor:	1
Lab File ID:	AE01005A	Matrix:	WATER
Ext Btch ID:	23VGH7E01	% Moisture:	NA
Calib. Ref.:	AE01004A	Instrument ID:	H7

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0451	0.0400	113	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 : 380-45216
BATCH NO. : 23D321
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VGH7E01B	VGH7E01L	VGH7E01C
LAB FILE ID	: AE01005A	AE01006A	AE01007A
DATE PREPARED	: 05/01/23 12:56	05/01/23 13:33	05/01/23 14:10
DATE ANALYZED	: 05/01/23 12:56	05/01/23 13:33	05/01/23 14:10
PREP BATCH	: 23VGH7E01	23VGH7E01	23VGH7E01
CALIBRATION REF:	AE01004A	AE01004A	AE01004A

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	0.480	96	0.500	0.469	94	2	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0466	117	0.0400	0.0446	112	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 : 380-45203
BATCH NO. : 23D320
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1		1
SAMPLE ID	: 380-45203-1	380-45203-1MS	380-45203-1MSD
LAB SAMPLE ID	: D320-01	D320-01M	D320-01S
LAB FILE ID	: AE01008A	AE01009A	AE01010A
DATE PREPARED	: 05/01/23 14:48	05/01/23 15:25	05/01/23 16:02
DATE ANALYZED	: 05/01/23 14:48	05/01/23 15:25	05/01/23 16:02
PREP BATCH	: 23VGH7E01	23VGH7E01	23VGH7E01
CALIBRATION REF:	AE01004A	AE01004A	AE01004A

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	0.498	100	0.500	0.546	109	9	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0472	118	0.0400	0.0470	118	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-45216

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 23D321



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-45216

SDG : 23D321

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 04/28/23 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. DSE005WB - 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 DSE005WL. 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 23D320-01M/23D320-01S. 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.

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-45216

SDG : 23D321

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 04/28/23 to be analyzed for 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. DSE005WB - 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 JP5 was within LCS QC limits in J5E005WL. 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. JP5 was within MS QC limits in 23D320-01M/23D320-01S. 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.

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-45216

SDG : 23D321

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 04/28/23 to be analyzed for 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. DSE005WB - 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 JP8 was within LCS QC limits in J8E005WL. 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. JP8 was within MS QC limits in 23D321-01M/23D321-01S. 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.

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

SAMPLE RESULTS

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL	Date Collected: 04/26/23 12:00
Project : 380-45216	Date Received: 04/28/23
Batch No. : 23D321	Date Extracted: 05/03/23 12:30
Sample ID : 380-45216-1	Date Analyzed: 05/04/23 16:16
Lab Samp ID: 23D321-01	Dilution Factor: 1
Lab File ID: LE04018A	Matrix: WATER
Ext Btch ID: 23DSE005W	% Moisture: NA
Calib. Ref.: LE04004A	Instrument ID: D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.052	0.026	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.395	0.515	77	60-130
Hexacosane	0.126	0.129	98	60-130

Notes:

RL : Reporting Limit
 Parameter H-C Range
 JP5 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 970ml Final Volume : 5ml
 Prepared by : P0reto Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL	Date Collected: 04/26/23 12:00
Project : 380-45216	Date Received: 04/28/23
Batch No. : 23D321	Date Extracted: 05/03/23 12:30
Sample ID : 380-45216-1	Date Analyzed: 05/04/23 16:16
Lab Samp ID: 23D321-01	Dilution Factor: 1
Lab File ID: LE04018A	Matrix: WATER
Ext Btch ID: 23DSE005W	% Moisture: NA
Calib. Ref.: LE04005A	Instrument ID: D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP8	ND	0.052	0.026	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.395	0.515	77	60-130
Hexacosane	0.126	0.129	98	60-130

Notes:

RL : Reporting Limit

Parameter H-C Range

JP8 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 970ml

Final Volume : 5ml

Prepared by : P0reto

Analyzed by : SDeeso

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

QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL	Date Collected: 05/03/23 12:30
Project : 380-45216	Date Received: 05/03/23
Batch No. : 23D321	Date Extracted: 05/03/23 12:30
Sample ID : MBLK1W	Date Analyzed: 05/04/23 13:29
Lab Samp ID: DSE005WB	Dilution Factor: 1
Lab File ID: LE04009A	Matrix: WATER
Ext Btch ID: 23DSE005W	% Moisture: NA
Calib. Ref.: LE04003A	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	0.404	0.500	81	60-130	
Hexacosane	0.126	0.125	101	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 : P0reto	Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-45216
BATCH NO. : 23D321
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSE005WB DSE005WL
LAB FILE ID : LE04009A LE04010A
DATE PREPARED : 05/03/23 12:30 05/03/23 12:30
DATE ANALYZED : 05/04/23 13:29 05/04/23 13:48
PREP BATCH : 23DSE005W 23DSE005W
CALIBRATION REF: LE04003A LE04003A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.63	105	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.440	88	60-130
Hexacosane	0.125	0.135	108	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-45203
BATCH NO. : 23D320
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-45203-1	380-45203-1MS	380-45203-1MSD
LAB SAMPLE ID	: 23D320-01	23D320-01M	23D320-01S
LAB FILE ID	: LE04013A	LE04014A	LE04015A
DATE PREPARED	: 05/03/23 12:30	05/03/23 12:30	05/03/23 12:30
DATE ANALYZED	: 05/04/23 14:43	05/04/23 15:02	05/04/23 15:20
PREP BATCH	: 23DSE005W	23DSE005W	23DSE005W
CALIBRATION REF:	LE04003A	LE04003A	LE04003A

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	2.77	101	2.80	2.96	106	7	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.550	0.458	83	0.560	0.500	89	60-130
Hexacosane	0.138	0.141	103	0.140	0.152	109	60-130

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

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	05/03/23 12:30
Project	: 380-45216	Date Received:	05/03/23
Batch No.	: 23D321	Date Extracted:	05/03/23 12:30
Sample ID	: MBLK1W	Date Analyzed:	05/04/23 13:29
Lab Samp ID:	DSE005WB	Dilution Factor:	1
Lab File ID:	LE04009A	Matrix:	WATER
Ext Btch ID:	23DSE005W	% Moisture:	NA
Calib. Ref.:	LE04004A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.050	0.025	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.404	0.500	81	60-130
Hexacosane	0.126	0.125	101	60-130

Notes:

RL : Reporting Limit

Parameter H-C Range

JP5 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml

Final Volume : 5ml

Prepared by : P0reto

Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-45216
BATCH NO. : 23D321
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSE005WB J5E005WL
LAB FILE ID : LE04009A LE04011A
DATE PREPARED : 05/03/23 12:30 05/03/23 12:30
DATE ANALYZED : 05/04/23 13:29 05/04/23 14:06
PREP BATCH : 23DSE005W 23DSE005W
CALIBRATION REF: LE04004A LE04004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP5	ND	2.50	2.41	96	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.447	89	60-130
Hexacosane	0.125	0.126	101	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-45203
BATCH NO. : 23D320
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-45203-1	380-45203-1MS	380-45203-1MSD
LAB SAMPLE ID	: 23D320-01	23D320-01M	23D320-01S
LAB FILE ID	: LE04013A	LE04016A	LE04017A
DATE PREPARED	: 05/03/23 12:30	05/03/23 12:30	05/03/23 12:30
DATE ANALYZED	: 05/04/23 14:43	05/04/23 15:39	05/04/23 15:58
PREP BATCH	: 23DSE005W	23DSE005W	23DSE005W
CALIBRATION REF:	LE04004A	LE04004A	LE04004A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.65	2.54	96	2.72	2.67	98	5	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.530	0.467	88	0.545	0.466	86	60-130
Hexacosane	0.132	0.133	100	0.136	0.133	98	60-130

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

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL	Date Collected: 05/03/23 12:30
Project : 380-45216	Date Received: 05/03/23
Batch No. : 23D321	Date Extracted: 05/03/23 12:30
Sample ID : MBLK1W	Date Analyzed: 05/04/23 13:29
Lab Samp ID: DSE005WB	Dilution Factor: 1
Lab File ID: LE04009A	Matrix: WATER
Ext Btch ID: 23DSE005W	% Moisture: NA
Calib. Ref.: LE04005A	Instrument ID: D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)		
JP8	ND	0.050	0.025		
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT	
Bromobenzene	0.404	0.500	81	60-130	
Hexacosane	0.126	0.125	101	60-130	

Notes:

RL : Reporting Limit

Parameter H-C Range

JP8 C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 1000ml

Final Volume : 5ml

Prepared by : P0reto

Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-45216
BATCH NO. : 23D321
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSE005WB J8E005WL
LAB FILE ID : LE04009A LE04012A
DATE PREPARED : 05/03/23 12:30 05/03/23 12:30
DATE ANALYZED : 05/04/23 13:29 05/04/23 14:25
PREP BATCH : 23DSE005W 23DSE005W
CALIBRATION REF: LE04005A LE04005A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP8	ND	2.50	2.76	110	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.503	101	60-130
Hexacosane	0.125	0.130	104	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-45216
BATCH NO. : 23D321
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-45216-1	380-45216-1MS	380-45216-1MSD
LAB SAMPLE ID	: 23D321-01	23D321-01M	23D321-01S
LAB FILE ID	: LE04018A	LE04019A	LE04020A
DATE PREPARED	: 05/03/23 12:30	05/03/23 12:30	05/03/23 12:30
DATE ANALYZED	: 05/04/23 16:16	05/04/23 16:35	05/04/23 16:53
PREP BATCH	: 23DSE005W	23DSE005W	23DSE005W
CALIBRATION REF:	LE04005A	LE04005A	LE04005A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.60	3.04	117	2.62	3.05	116	0	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.520	0.493	95	0.525	0.564	107	60-130
Hexacosane	0.130	0.135	104	0.131	0.130	99	60-130

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

Monrovia, CA (Suite 100)

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

Chain of Custody Record



Client Information		Sampler: Ryan Greer	Lab PM: Arada, Rachele	Carrier Tracking No(s):	COC No: 380-27941-2757.2									
Client Contact: Dr. Ron Fenstermacher		Phone: 808-748-5840	E-Mail: Rachele.Arada@et.euronisus.com	State of Origin: Hawaii	Page: Page 1 of 2									
Company: City & County of Honolulu		PWSID:			Job #:									
Address: 630 South Beretania Street; Chemistry Lab		Due Date Requested:			Analysis Requested Preservation Codes: A - HCL M - Hexane B - NaOH N - None C - Zn Acetate O - AsNaO2 D - Nitric Acid P - Na2O4S E - NaHSO4 Q - Na2SO3 F - MeOH R - Na2S2O3 G - Amchlor S - H2SO4 H - Ascorbic Acid T - TSP Dodecahydrate I - Ice U - Acetone J - DI Water V - MCAA K - EDTA W - pH 4-5 L - EDA Y - Trizma Z - other (specify) Other:									
City: Honolulu		TAT Requested (days):												
State, Zip: HI, 96843		Compliance Project: Δ No												
Phone: 808-748-5091 (tel)		PO #: C20525101 exp 05312023												
Email: rfenstermacher@hbws.org		WO #:												
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill		Project #: 38001111			Total Number of containers Special Instructions/Note: (752A) 2.9/2.8 FedEx 771970202435 (752A) 5.7/5.6 FedEx 771970202468 (752A) 4.6/4.5 FedEx: 771973565573 (752A) 4.9/4.8 FedEx 771973564533 (752A) 2.8/2.7 FedEx: 771973565150									
Site:		SSOW#:												
Sample Identification	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, PAir)		Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil	525.2_PRC - (MOD) 525plus PLUS TICs	SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	537.1_DW_PRC - 537.1 Full List	533 - All Analytes
Preservation Code:						X	X	R	R	RA	RA	Y	N	
AIEA WELLS PUMP 2 (260)	4/26/23	1200	G	Water				2		2	2	4		
TB AIEA WELLS PUMPS 1&2 (260)	4/26/23	1200	G	Water								2		
Possible Hazard Identification						Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)								
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological						<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months								
Deliverable Requested: I, II, III, IV, Other (specify)					Special Instructions/QC Requirements:									
Empty Kit Relinquished by:		Date:		Time:		Method of Shipment: FedEx: 771970202354								
Relinquished by:	Date/Time: 4/26/23 1300	Company: HBWS	Received by: [Signature]	Date/Time: 4/27/23 1000	Company: [Signature]									
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:									
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:									
Custody Seals Intact:		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: (751A) 3.6/3.4 gel-frozen										
Δ Yes Δ No														

Monrovia, CA (Suite 100)

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

Chain of Custody Record



Client Information		Sampler: Ryan Greer		Lab PM: Arada, Rachele		Carrier Tracking No(s):		COC No: 380-27941-2757.2																																					
Client Contact: Dr. Ron Fenstermacher		Phone: 808-748-5840		E-Mail: Rachele.Arada@et.euronisus.com		State of Origin: Hawaii		Page: Page 2 of 2																																					
Company: City & County of Honolulu		PWSID:		Analysis Requested						Job #:																																			
Address: 630 South Beretania Street; Chemistry Lab		Due Date Requested:		Field Filtered Sample (Yes or No) Permeable MS/MSD (Yes or No)		SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs		SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)		SUBCONTRACT - 8915 Diesel LL (EAL) and Motor Oil		525.2_PRC - (MOD) 525plus PLUS TICs		SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)		537.1_DWL_PRC - 537.1 Full List		533 - All Analytes		Total Number of containers		Preservation Codes:																							
City: Honolulu		TAT Requested (days):																				A - HCL		M - Hexane		N - None		O - AsNaO2		P - Na2O4S		Q - Na2SO3		R - Na2S2O3		S - H2SO4		T - TSP Dodecahydrate							
State, Zip: HI, 96843		Compliance Project: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No																				PO #: C20525101 exp 05312023		G - Amchlor		H - Ascorbic Acid		I - Ice		J - DI Water		K - EDTA		L - EDA		U - Acetone		V - MCAA		W - pH 4-5		Y - Trizma		Z - other (specify)	
Project Name: RED-HILL/HBWS sites Event Desc: RUSH Weekly Red Hill		Project #: 38001111																				WO #:		Other:																					
Site:		SSOW#:																																											
Sample Identification			Sample Date		Sample Time		Sample Type (C=comp, G=grab)		Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)		Field Filtered Sample (Yes or No)		Permeable MS/MSD (Yes or No)		PRES		PREC		DLW		ALL		Special Instructions/Note:																						
AIEA WELLS PUMPS 2 (260)			4/26/23		1200		G		Water														(752A) 2.9/2.8																						
FB AIEA WELLS PUMPS 1&2 (260)			4/26/23		1200		G		Water														FEDC: 771770202435																						
																							(752A) 5.7/5.6																						
																							FEDC: 771770202468																						
																							(752A) 4.6/4.5																						
																							FEDC: 771773565573																						
																							(752A) 4.9/4.8																						
																							FEDC: 771773564533																						
																							(752A) 2.8/2.7																						
																							FEDC: 771773565150																						
Possible Hazard Identification										Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)																																			
<input type="checkbox"/> Non-Hazard <input type="checkbox"/> Flammable <input type="checkbox"/> Skin Irritant <input type="checkbox"/> Poison B <input type="checkbox"/> Unknown <input type="checkbox"/> Radiological										<input type="checkbox"/> Return To Client <input type="checkbox"/> Disposal By Lab <input type="checkbox"/> Archive For _____ Months																																			
Deliverable Requested: I, II, III, IV, Other (specify)										Special Instructions/QC Requirements:																																			
Empty Kit Relinquished by:			Date:			Time:			Method of Shipment:			FEDC: 771770202354																																	
Relinquished by: <i>MAN</i>			Date/Time: 4/26/23 1300			Company: HBWS			Received by: <i>Mark Urciole</i>			Date/Time: 4/27/23 1800			Company: EEA																														
Relinquished by:			Date/Time:			Company:			Received by:			Date/Time:			Company:																														
Relinquished by:			Date/Time:			Company:			Received by:			Date/Time:			Company:																														
Custody Seals Intact: <input type="checkbox"/> Yes <input type="checkbox"/> No		Custody Seal No.:		Cooler Temperature(s) °C and Other Remarks: (451A) 3.6/3.4 gel-frozen																																									

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-45216-1

Login Number: 45216
List Number: 1
Creator: Ngo, Theodore

List Source: Eurofins Eaton Analytical Pomona

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	