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ANALYTICAL REPORT

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Tel: (626)386-1100

Laboratory Job ID: 380-11192-1
Client Project/Site: RED-HILL

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

Attn: Mr. Erwin Kawata

Authorized for release by:
10/9/2022 1:06:21 PM
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Results relate only to the items tested and the sample(s) as received by the laboratory.

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

Kathleen Robb
Client Program Manager
10/9/2022 1:06:21 PM

Table of Contents

Definitions/Glossary

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

Job ID: 380-11192-1

Qualifiers

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: 380-11192-1

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Laboratory: Eurofins Eaton Monrovia

Narrative

Job Narrative
380-11192-1

Comments

Ethanol missed HT

Emax G213-01 (TALS# 11192)

Moanalua Wells sampled 7/18/22 1045

notification 09/20/22

Receipt

The samples were received on 7/20/2022 10:10 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 3.1° C.

Subcontract non-Sister

See attached subcontract report.

Subcontract Work

Methods 8015 Diesel LL (EAL) and Motor Oil, 8015 Ethanol, 8015 Gas (Purgeable) LL (EAL), 8015 Jet Fuel 5 (JP5), 8015 Jet Fuel 8 (JP8): These methods were subcontracted to EMAX Laboratories Inc. The subcontract laboratory certifications are different from that of the facility issuing the final report.

Methods 625 Acid LL (EAL) Physis, 625 Base Neutral LL (EAL) Physis, 625 PAH Physis LL (EAL) + TICs: These methods were subcontracted to Physis Environmental Laboratories. The subcontract laboratory certifications are different from that of the facility issuing the final report.

Detection Summary

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

Job ID: 380-11192-1

Client Sample ID: MOANALUA WELLS (331-223-TP202) — Lab Sample ID: 380-11192-1

No Detections.

Client Sample ID: TB :: MOANALUA WELLS (331-223-TP202) — Lab Sample ID: 380-11192-2

No Detections.

This Detection Summary does not include radiochemical test results.

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

Job ID: 380-11192-1

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Date Collected: 07/18/22 10:45
Date Received: 07/20/22 10:10

Lab Sample ID: 380-11192-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 12:32	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
2-Chlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 12:32	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
2-Methylphenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 12:32	1
2-Nitroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
2-Nitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 12:32	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 12:32	1
3-Nitroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 12:32	1
4-Chloroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
4-Nitroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
4-Nitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 12:32	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
Acenaphthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Acenaphthylene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Aniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
Anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Benzidine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Benzoic Acid	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 12:32	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 12:32	1
Biphenyl	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
Chrysene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Dibenzofuran	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
Dibenzothiophene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1

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

Job ID: 380-11192-1

Client Sample ID: MOANALUA WELLS (331-223-TP202)
Date Collected: 07/18/22 10:45
Date Received: 07/20/22 10:10

Lab Sample ID: 380-11192-1
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
Fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Fluorene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Hexachloroethane	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Naphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Nitrobenzene	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
Pentachlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
Perylene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Phenanthrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1
Phenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 12:32	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 12:32	1
Pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 12:32	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(2,4,6-Tribromophenol)	*91*		*31 - 143*	*07/25/22 00:00*	*08/01/22 12:32*	*1*
(d10-Acenaphthene)	*87*		*45 - 118*	*07/25/22 00:00*	*08/01/22 12:32*	*1*
(d10-Phenanthrene)	*95*		*56 - 123*	*07/25/22 00:00*	*08/01/22 12:32*	*1*
(d12-Chrysene)	*104*		*36 - 142*	*07/25/22 00:00*	*08/01/22 12:32*	*1*
(d12-Perylene)	*78*		*36 - 161*	*07/25/22 00:00*	*08/01/22 12:32*	*1*
(d5-Phenol)	*30*		*0 - 85*	*07/25/22 00:00*	*08/01/22 12:32*	*1*
(d8-Naphthalene)	*85*		*20 - 112*	*07/25/22 00:00*	*08/01/22 12:32*	*1*

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
DIESEL	ND	U	0.028		mg/L			07/28/22 17:36	1
JP5	ND	U	0.057		mg/L			07/28/22 17:36	1
JP8	ND	U	0.057		mg/L			07/28/22 17:36	1
MOTOR OIL	ND	U	0.057		mg/L			07/28/22 17:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE	*66*		*60 - 130*		*07/28/22 17:36*	*1*
HEXACOSANE	*71*		*60 - 130*		*07/28/22 17:36*	*1*

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ETHANOL	ND	U	2000		ug/L			07/26/22 16:39	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	0.02		mg/L			07/22/22 21:10	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*88*		*60 - 140*		*07/22/22 21:10*	*1*

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

Job ID: 380-11192-1

Client Sample ID: TB :: MOANALUA WELLS (331-223-TP202)
Date Collected: 07/18/22 10:45
Date Received: 07/20/22 10:10

Lab Sample ID: 380-11192-2
Matrix: Water

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			07/22/22 21:46	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE	*82*		*60 - 140*		*07/22/22 21:46*	*1*

Surrogate Summary

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

Job ID: 380-11192-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)						
		ANT	CRY	NPT	PHL	PHN	PRY	TBP
Lab Sample ID	Client Sample ID	(45-118)	(36-142)	(20-112)	(0-85)	(56-123)	(36-161)	(31-143)
380-11192-1	MOANALUA WELLS (331-223-T	87	104	85	30	95	78	91

Surrogate Legend

ANT = (d10-Acenaphthene)
CRY = (d12-Chrysene)
NPT = (d8-Naphthalene)
PHL = (d5-Phenol)
PHN = (d10-Phenanthrene)
PRY = (d12-Perylene)
TBP = (2,4,6-Tribromophenol)

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

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

		Percent Surrogate Recovery (Acceptance Limits)						
		ANT	CRY	NPT	PHL	PHN	PRY	TBP
Lab Sample ID	Client Sample ID	(65-113)	(60-139)	(44-119)	(20-121)	(80-111)	(36-161)	(44-159)
98642-B1	Method Blank	97	71	117	119	82	70	95
98642-BS1	Lab Control Sample	102	120	99	113	92	88	144
98642-BS2	Lab Control Sample Dup	105	136	100	112	106	104	136

Surrogate Legend

ANT = (d10-Acenaphthene)
CRY = (d12-Chrysene)
NPT = (d8-Naphthalene)
PHL = (d5-Phenol)
PHN = (d10-Phenanthrene)
PRY = (d12-Perylene)
TBP = (2,4,6-Tribromophenol)

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

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

		Percent Surrogate Recovery (Acceptance Limits)						
		BB	XACOSA					
Lab Sample ID	Client Sample ID	(60-130)	(60-130)					
380-11192-1	MOANALUA WELLS (331-223-T	66	71					

Surrogate Legend

BB = BROMOBENZENE
HEXACOSANE = HEXACOSANE

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

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

		Percent Surrogate Recovery (Acceptance Limits)						
		BB	XACOSA					
Lab Sample ID	Client Sample ID							
22DSG026WB	Method Blank							

Surrogate Legend

BB = BROMOBENZENE
HEXACOSANE = HEXACOSANE

Surrogate Summary

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

Job ID: 380-11192-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)	
		BB	XACOSA
Lab Sample ID	Client Sample ID	(60-130)	(60-130)
22DSG026WL	Lab Control Sample	83	90
22G213-01M	380-11192-1 MS	67	86
22G213-01M	380-11192-1 MS	79	80
22G213-01M	380-11192-1 MS	96	100
22G213-01S	380-11192-1 MSD	68	89
22G213-01S	380-11192-1 MSD	77	93
22G213-01S	380-11192-1 MSD	81	87
22J5G026WL	Lab Control Sample	85	82
22J8G026WL	Lab Control Sample	108	93

Surrogate Legend

BB = BROMOBENZENE

HEXACOSANE = HEXACOSANE

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

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

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(60-140)
380-11192-1	MOANALUA WELLS (331-223-T	88
380-11192-2	TB :: MOANALUA WELLS (331-223-TP202)	82

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

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

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	
22VGH7G04B	Method Blank	

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

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

		Percent Surrogate Recovery (Acceptance Limits)
		BFB
Lab Sample ID	Client Sample ID	(70-130)
22VGH7G04C	LCD	112
22VGH7G04L	Lab Control Sample	110

Surrogate Legend

BFB = BROMOFLUOROBENZENE

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

Lab Sample ID: 98642-B1
Matrix: water
Analysis Batch: O-38066

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-38066_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
1-Methylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,4,5-Trichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,4,6-Trichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,4-Dichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,4-Dinitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,6-Dichlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,6-Di-tert-butyl-4-methylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2,6-Di-tert-butylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Chloronaphthalene	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Chlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Methyl-4,6-dinitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Methylphenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Nitroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
2-Nitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
3+4-Methylphenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
3-Nitroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
4-Bromophenylphenyl ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
4-Chloro-3-methylphenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
4-Chloroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
4-Chlorophenylphenyl ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
4-Nitroaniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
4-Nitrophenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
6-tert-butyl-2,4-dimethylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Acenaphthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Acenaphthylene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Aniline	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzidine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzoic Acid	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
Benzyl Alcohol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
Biphenyl	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Bis(2-Chloroethoxy) methane	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Bis(2-Chloroethyl) ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Bis(2-Chloroisopropyl) ether	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Chrysene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Dibenzofuran	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1

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

Lab Sample ID: 98642-B1
Matrix: water
Analysis Batch: O-38066

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-38066_P

Analyte	Blank Result	Blank Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Dibenzothiophene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Fluorene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Hexachloroethane	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Naphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Nitrobenzene	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
N-Nitrosodi-n-propylamine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
N-Nitrosodiphenylamine	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Pentachlorophenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Perylene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Phenanthrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1
Phenol	ND		0.2	0.1	µg/L		07/25/22 00:00	08/01/22 05:22	1
p-tert-Butylphenol	ND		0.1	0.05	µg/L		07/25/22 00:00	08/01/22 05:22	1
Pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	08/01/22 05:22	1

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(2,4,6-Tribromophenol)	*95*		*44 - 159*	*07/25/22 00:00*	*08/01/22 05:22*	*1*
(d10-Acenaphthene)	*97*		*65 - 113*	*07/25/22 00:00*	*08/01/22 05:22*	*1*
(d10-Phenanthrene)	*82*		*80 - 111*	*07/25/22 00:00*	*08/01/22 05:22*	*1*
(d12-Chrysene)	*71*		*60 - 139*	*07/25/22 00:00*	*08/01/22 05:22*	*1*
(d12-Perylene)	*70*		*36 - 161*	*07/25/22 00:00*	*08/01/22 05:22*	*1*
(d5-Phenol)	*119*		*20 - 121*	*07/25/22 00:00*	*08/01/22 05:22*	*1*
(d8-Naphthalene)	*117*		*44 - 119*	*07/25/22 00:00*	*08/01/22 05:22*	*1*

Lab Sample ID: 98642-BS1
Matrix: water
Analysis Batch: O-38066

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-38066_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.434		µg/L		87	49 - 117
1-Methylphenanthrene	0.5	0.356		µg/L		71	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.39		µg/L		78	57 - 120
2,4,5-Trichlorophenol	1	0.736		µg/L		74	57 - 116
2,4,6-Trichlorophenol	1	0.667		µg/L		67	56 - 118
2,4-Dichlorophenol	1	0.798		µg/L		80	51 - 117
2,4-Dinitrophenol	0.5	0.522		µg/L		104	0 - 152
2,6-Dichlorophenol	1	0.842		µg/L		84	30 - 130
2,6-Dimethylnaphthalene	0.5	0.451		µg/L		90	54 - 117
2,6-Di-tert-butyl-4-methylphenol	0.5	0.356		µg/L		71	50 - 150
2,6-Di-tert-butylphenol	1	0.501		µg/L		50	50 - 150
2-Chloronaphthalene	1	1.06		µg/L		106	53 - 130
2-Chlorophenol	1	0.896		µg/L		90	41 - 120
2-Methyl-4,6-dinitrophenol	0.5	0.517		µg/L		103	0 - 141
2-Methylnaphthalene	1.5	1.63		µg/L		109	47 - 130
2-Methylphenol	1	0.742		µg/L		74	40 - 117
2-Nitroaniline	1	0.8		µg/L		80	69 - 114

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

Lab Sample ID: 98642-BS1
Matrix: water
Analysis Batch: O-38066

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-38066_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
2-Nitrophenol	1	0.569		µg/L		57	40 - 117
3+4-Methylphenol	1	0.922		µg/L		92	0 - 130
3-Nitroaniline	0.5	0.511		µg/L		102	23 - 137
4-Bromophenylphenyl ether	1	0.82		µg/L		82	61 - 132
4-Chloro-3-methylphenol	1	0.683		µg/L		68	51 - 128
4-Chloroaniline	0.5	0.573		µg/L		115	50 - 150
4-Chlorophenylphenyl ether	1	0.99		µg/L		99	63 - 130
4-Nitroaniline	1	0.707		µg/L		71	10 - 159
4-Nitrophenol	1	0.513		µg/L		51	10 - 164
6-tert-butyl-2,4-dimethylphenol	1	0.501		µg/L		50	50 - 150
Acenaphthene	1.5	1.56		µg/L		104	53 - 131
Acenaphthylene	1.5	1.58		µg/L		105	43 - 140
Aniline	0.100000001490116	0.106		µg/L		106	50 - 150
Anthracene	1.5	1.6		µg/L		107	58 - 135
Benz[a]anthracene	1.5	1.44		µg/L		96	55 - 145
Benzidine	0.100000001490116	0.0243		µg/L		24	0 - 125
Benzo[a]pyrene	1.5	1.85		µg/L		123	51 - 143
Benzo[b]fluoranthene	1.5	1.62		µg/L		108	46 - 165
Benzo[e]pyrene	0.5	0.443		µg/L		89	42 - 152
Benzo[g,h,i]perylene	1.5	1.77		µg/L		118	63 - 133
Benzo[k]fluoranthene	1.5	1.54		µg/L		103	56 - 145
Benzoic Acid	0.5	0.457		µg/L		91	2 - 145
Benzyl Alcohol	1	1.02		µg/L		102	43 - 148
Biphenyl	0.5	0.532		µg/L		106	56 - 119
Bis(2-Chloroethoxy) methane	1	0.91		µg/L		91	66 - 122
Bis(2-Chloroethyl) ether	1	0.898		µg/L		90	43 - 127
Bis(2-Chloroisopropyl) ether	2	1.58		µg/L		79	49 - 128
Chrysene	1.5	1.96		µg/L		131	56 - 141
Dibenz[a,h]anthracene	1.5	1.33		µg/L		89	55 - 150
Dibenzo[a,l]pyrene	0.5	0.372		µg/L		74	50 - 150
Dibenzofuran	1	1.04		µg/L		104	50 - 150
Dibenzothiophene	0.5	0.411		µg/L		82	75 - 113
Disalicylidenepropanediamine	10	9.89		µg/L		99	50 - 150
Fluoranthene	1.5	1.55		µg/L		103	60 - 146
Fluorene	1.5	1.65		µg/L		110	58 - 131
Hexachloroethane	1	1.03		µg/L		103	27 - 130
Indeno[1,2,3-cd]pyrene	1.5	1.3		µg/L		87	50 - 151
Naphthalene	1.5	1.59		µg/L		106	41 - 126
Nitrobenzene	1	0.994		µg/L		99	54 - 111
N-Nitrosodi-n-propylamine	1	0.728		µg/L		73	61 - 152
N-Nitrosodiphenylamine	1	0.869		µg/L		87	49 - 142
Pentachlorophenol	1	0.482		µg/L		48	36 - 111
Perylene	0.5	0.417		µg/L		83	48 - 141
Phenanthrene	1.5	1.62		µg/L		108	67 - 127
Phenol	1	0.904		µg/L		90	29 - 114
p-tert-Butylphenol	1	0.5		µg/L		50	50 - 150
Pyrene	1.5	1.52		µg/L		101	54 - 156

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

Lab Sample ID: 98642-BS1
Matrix: water
Analysis Batch: O-38066

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-38066_P

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
(2,4,6-Tribromophenol)	*144*		*44 - 159*
(d10-Acenaphthene)	*102*		*65 - 113*
(d10-Phenanthrene)	*92*		*80 - 111*
(d12-Chrysene)	*120*		*60 - 139*
(d12-Perylene)	*88*		*36 - 161*
(d5-Phenol)	*113*		*20 - 121*
(d8-Naphthalene)	*99*		*44 - 119*

Lab Sample ID: 98642-BS2
Matrix: water
Analysis Batch: O-38066

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-38066_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
1-Methylnaphthalene			0.5	0.48		µg/L		96	49 - 117	10	30
1-Methylphenanthrene			0.5	0.45		µg/L		90	66 - 127	24	30
2,3,5-Trimethylnaphthalene			0.5	0.473		µg/L		95	57 - 120	20	30
2,4,5-Trichlorophenol			1	0.837		µg/L		84	57 - 116	13	30
2,4,6-Trichlorophenol			1	0.868		µg/L		87	56 - 118	26	30
2,4-Dichlorophenol			1	0.899		µg/L		90	51 - 117	12	30
2,4-Dinitrophenol			0.5	0.655		µg/L		131	0 - 152	23	30
2,6-Dichlorophenol			1	0.962		µg/L		96	30 - 130	13	30
2,6-Dimethylnaphthalene			0.5	0.486		µg/L		97	54 - 117	7	30
2,6-Di-tert-butyl-4-methylphenol			0.5	0.437		µg/L		87	50 - 150	20	30
2,6-Di-tert-butylphenol			1	0.5		µg/L		50	50 - 150	0	30
2-Chloronaphthalene			1	1.05		µg/L		105	53 - 130	1	30
2-Chlorophenol			1	0.937		µg/L		94	41 - 120	4	30
2-Methyl-4,6-dinitrophenol			0.5	0.69		µg/L		138	0 - 141	29	30
2-Methylnaphthalene			1.5	1.68		µg/L		112	47 - 130	3	30
2-Methylphenol			1	0.935		µg/L		94	40 - 117	24	30
2-Nitroaniline			1	0.809		µg/L		81	69 - 114	1	30
2-Nitrophenol			1	0.741		µg/L		74	40 - 117	26	30
3+4-Methylphenol			1	0.975		µg/L		98	0 - 130	6	30
3-Nitroaniline			0.5	0.685		µg/L		137	23 - 137	29	30
4-Bromophenylphenyl ether			1	0.934		µg/L		93	61 - 132	13	30
4-Chloro-3-methylphenol			1	0.832		µg/L		83	51 - 128	20	30
4-Chloroaniline			0.5	0.689		µg/L		138	50 - 150	18	30
4-Chlorophenylphenyl ether			1	1.03		µg/L		103	63 - 130	4	30
4-Nitroaniline			1	0.872		µg/L		87	10 - 159	20	30
4-Nitrophenol			1	0.653		µg/L		65	10 - 164	24	30
6-tert-butyl-2,4-dimethylphenol			1	0.501		µg/L		50	50 - 150	0	30
Acenaphthene			1.5	1.62		µg/L		108	53 - 131	4	30
Acenaphthylene			1.5	1.64		µg/L		109	43 - 140	4	30
Aniline			0.100000001490116	0.0968		µg/L		97	50 - 150	9	30
Anthracene			1.5	1.7		µg/L		113	58 - 135	5	30
Benz[a]anthracene			1.5	1.68		µg/L		112	55 - 145	15	30
Benzidine			0.100000001490116	0.0217		µg/L		22	0 - 125	9	30
Benzo[a]pyrene			1.5	1.95		µg/L		130	51 - 143	6	30

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

Lab Sample ID: 98642-BS2
Matrix: water
Analysis Batch: O-38066

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-38066_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Benzo[b]fluoranthene			1.5	1.75		µg/L		117	46 - 165	8	30
Benzo[e]pyrene			0.5	0.537		µg/L		107	42 - 152	18	30
Benzo[g,h,i]perylene			1.5	1.95		µg/L		130	63 - 133	10	30
Benzo[k]fluoranthene			1.5	1.61		µg/L		107	56 - 145	4	30
Benzoic Acid			0.5	0.601		µg/L		120	2 - 145	27	30
Benzyl Alcohol			1	0.978		µg/L		98	43 - 148	4	30
Biphenyl			0.5	0.521		µg/L		104	56 - 119	2	30
Bis(2-Chloroethoxy) methane			1	0.97		µg/L		97	66 - 122	6	30
Bis(2-Chloroethyl) ether			1	0.894		µg/L		89	43 - 127	1	30
Bis(2-Chloroisopropyl) ether			2	1.5		µg/L		75	49 - 128	5	30
Chrysene			1.5	2.12		µg/L		141	56 - 141	7	30
Dibenz[a,h]anthracene			1.5	1.56		µg/L		104	55 - 150	16	30
Dibenzo[a,l]pyrene			0.5	0.324		µg/L		65	50 - 150	13	30
Dibenzofuran			1	1.06		µg/L		106	50 - 150	2	30
Dibenzothiophene			0.5	0.5		µg/L		100	75 - 113	20	30
Disalicylidenepropanediamine			10	10.2		µg/L		102	50 - 150	3	30
Fluoranthene			1.5	1.74		µg/L		116	60 - 146	12	30
Fluorene			1.5	1.76		µg/L		117	58 - 131	6	30
Hexachloroethane			1	0.938		µg/L		94	27 - 130	9	30
Indeno[1,2,3-cd]pyrene			1.5	1.55		µg/L		103	50 - 151	17	30
Naphthalene			1.5	1.58		µg/L		105	41 - 126	1	30
Nitrobenzene			1	0.965		µg/L		96	54 - 111	3	30
N-Nitrosodi-n-propylamine			1	0.939		µg/L		94	61 - 152	25	30
N-Nitrosodiphenylamine			1	1.03		µg/L		103	49 - 142	17	30
Pentachlorophenol			1	0.638		µg/L		64	36 - 111	29	30
Perylene			0.5	0.482		µg/L		96	48 - 141	15	30
Phenanthrene			1.5	1.75		µg/L		117	67 - 127	8	30
Phenol			1	0.91		µg/L		91	29 - 114	1	30
p-tert-Butylphenol			1	0.567		µg/L		57	50 - 150	13	30
Pyrene			1.5	1.76		µg/L		117	54 - 156	15	30

Surrogate	*LCS DUP %Recovery*	*LCS DUP Qualifier*	*Limits*
(2,4,6-Tribromophenol)	*136*		*44 - 159*
(d10-Acenaphthene)	*105*		*65 - 113*
(d10-Phenanthrene)	*106*		*80 - 111*
(d12-Chrysene)	*136*		*60 - 139*
(d12-Perylene)	*104*		*36 - 161*
(d5-Phenol)	*112*		*20 - 121*
(d8-Naphthalene)	*100*		*44 - 119*

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

Lab Sample ID: 22DSG026WB
Matrix: WATER
Analysis Batch: 22DSG026W

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			07/28/22 16:03	1
JP5	ND	U	0.05		mg/L			07/28/22 16:03	1

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

Lab Sample ID: 22DSG026WB
Matrix: WATER
Analysis Batch: 22DSG026W

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
JP8	ND	U	0.05		mg/L			07/28/22 16:03	1
MOTOR OIL	ND	U	0.05		mg/L			07/28/22 16:03	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOBENZENE					*07/28/22 16:03*	*1*
HEXACOSANE					*07/28/22 16:03*	*1*

Lab Sample ID: 22DSG026WL
Matrix: WATER
Analysis Batch: 22DSG026W

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
DIESEL			2.5	2.24		mg/L		90	50 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*83*		*60 - 130*
HEXACOSANE	*90*		*60 - 130*

Lab Sample ID: 22J5G026WL
Matrix: WATER
Analysis Batch: 22DSG026W

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
JP5			2.5	2.03		mg/L		81	30 - 160		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*85*		*60 - 130*
HEXACOSANE	*82*		*60 - 130*

Lab Sample ID: 22J8G026WL
Matrix: WATER
Analysis Batch: 22DSG026W

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
JP8			2.5	2.19		mg/L		88	30 - 160		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOBENZENE	*108*		*60 - 130*
HEXACOSANE	*93*		*60 - 130*

Lab Sample ID: 22G213-01M
Matrix: WATER
Analysis Batch: 22DSG026W

Client Sample ID: 380-11192-1 MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
DIESEL	ND		2.58	2.3		mg/L		89	50 - 130		

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

Lab Sample ID: 22G213-01M
Matrix: WATER
Analysis Batch: 22DSG026W

Client Sample ID: 380-11192-1 MS
Prep Type: Total/NA

Surrogate	MS %Recovery	MS Qualifier	Limits
BROMOBENZENE	67		60 - 130
HEXACOSANE	86		60 - 130

Lab Sample ID: 22G213-01M
Matrix: WATER
Analysis Batch: 22DSG026W

Client Sample ID: 380-11192-1 MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
JP5	ND		2.72	1.97		mg/L		72	30 - 160		

Surrogate	MS %Recovery	MS Qualifier	Limits
BROMOBENZENE	79		60 - 130
HEXACOSANE	80		60 - 130

Lab Sample ID: 22G213-01M
Matrix: WATER
Analysis Batch: 22DSG026W

Client Sample ID: 380-11192-1 MS
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec Limits		
JP8	ND		2.55	1.84		mg/L		72	30 - 160		

Surrogate	MS %Recovery	MS Qualifier	Limits
BROMOBENZENE	96		60 - 130
HEXACOSANE	100		60 - 130

Lab Sample ID: 22G213-01S
Matrix: WATER
Analysis Batch: 22DSG026W

Client Sample ID: 380-11192-1 MSD
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
DIESEL	ND		2.65	2.62		mg/L		99	50 - 130	13	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
BROMOBENZENE	68		60 - 130
HEXACOSANE	89		60 - 130

Lab Sample ID: 22G213-01S
Matrix: WATER
Analysis Batch: 22DSG026W

Client Sample ID: 380-11192-1 MSD
Prep Type: Total/NA

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
JP5	ND		2.7	1.92		mg/L		71	30 - 160	3	30

Surrogate	MSD %Recovery	MSD Qualifier	Limits
BROMOBENZENE	77		60 - 130
HEXACOSANE	93		60 - 130

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

Lab Sample ID: 22G213-01S
Matrix: WATER
Analysis Batch: 22DSG026W

Client Sample ID: 380-11192-1 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		2.6	1.85		mg/L		71	30 - 160	1	30

Surrogate	*MSD %Recovery*	*MSD Qualifier*	*Limits*
BROMOBENZENE	*81*		*60 - 130*
HEXACOSANE	*87*		*60 - 130*

Method: 8015 Ethanol - SW846 8015B Gasoline Range Organics

Lab Sample ID: 22MEG003WB
Matrix: WATER
Analysis Batch: 22MEG003W

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
ETHANOL	ND	U	2000		ug/L			07/26/22 11:42	1

Lab Sample ID: 22MEG003WL
Matrix: WATER
Analysis Batch: 22MEG003W

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
ETHANOL			10000	9140		ug/L		91	60 - 130		

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

Lab Sample ID: 22VGH7G04B
Matrix: WATER
Analysis Batch: 22VGH7G04

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
GASOLINE	ND	U	0.02		mg/L			07/22/22 14:05	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
BROMOFLUOROBENZENE					*07/22/22 14:05*	*1*

Lab Sample ID: 22VGH7G04L
Matrix: WATER
Analysis Batch: 22VGH7G04

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
GASOLINE			0.5	0.455		mg/L		91	60 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
BROMOFLUOROBENZENE	*110*		*70 - 130*

Subcontract

Analysis Batch: O-38066

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-11192-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	625 PAH Physis LL (EAL) + TICs	O-38066_P
98642-B1	Method Blank	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38066_P
98642-BS1	Lab Control Sample	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38066_P
98642-BS2	Lab Control Sample Dup	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38066_P

Analysis Batch: 22DSG026W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-11192-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	8015 Diesel LL (EAL) and Motor Oil	
380-11192-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	8015 Diesel LL (EAL) and Motor Oil	
22DSG026WB	Method Blank	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22DSG026WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22J5G026WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22J8G026WL	Lab Control Sample	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22G213-01M	380-11192-1 MS	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22G213-01M	380-11192-1 MS	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22G213-01M	380-11192-1 MS	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22G213-01S	380-11192-1 MSD	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22G213-01S	380-11192-1 MSD	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	
22G213-01S	380-11192-1 MSD	Total/NA	WATER	8015 Diesel LL (EAL) and Motor Oil	

Analysis Batch: 22MEG003W

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-11192-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	8015 Ethanol	
22MEG003WB	Method Blank	Total/NA	WATER	8015 Ethanol	
22MEG003WL	Lab Control Sample	Total/NA	WATER	8015 Ethanol	

Subcontract

Analysis Batch: 22VGH7G04

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-11192-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-11192-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-11192-2	TB :: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
380-11192-2	TB :: MOANALUA WELLS (331-223-TP202)	Total/NA	Water	8015 Gas (Purgeable) LL (EAL)	
22VGH7G04B	Method Blank	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	
22VGH7G04L	Lab Control Sample	Total/NA	WATER	8015 Gas (Purgeable) LL (EAL)	

Prep Batch: O-38066_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-11192-1	MOANALUA WELLS (331-223-TP202)	Total/NA	Water	EPA_625	
98642-B1	Method Blank	Total/NA	water	EPA_625	
98642-BS1	Lab Control Sample	Total/NA	water	EPA_625	
98642-BS2	Lab Control Sample Dup	Total/NA	water	EPA_625	

Lab Chronicle

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

Job ID: 380-11192-1

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

Lab Sample ID: 380-11192-1

Date Collected: 07/18/22 10:45
Matrix: Water
Date Received: 07/20/22 10:10

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-38066_P			07/25/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38066	YC		08/01/22 12:32
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSG026W	SDees		07/28/22 17:36
Total/NA	Analysis	8015 Diesel LL (EAL) and Motor Oil		1	22DSG026W	SDees		07/28/22 17:36
Total/NA	Analysis	8015 Ethanol		1	22MEG003W	ASitu		07/26/22 16:39
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7G04	SCerva		07/22/22 21:10
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7G04	SCerva		07/22/22 21:10

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

Lab Sample ID: 380-11192-2

Date Collected: 07/18/22 10:45
Matrix: Water
Date Received: 07/20/22 10:10

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	22VGH7G04	SCerva		07/22/22 21:46
Total/NA	Analysis	8015 Gas (Purgeable) LL (EAL)		1	22VGH7G04	SCerva		07/22/22 21:46

Laboratory References:

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

Method Summary

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

Job ID: 380-11192-1

Method	Method Description	Protocol	Laboratory
625	EPA 625 Base/Neutral and Acid Organics i	EPA	
8015	8015 - TPH DRO/ORO	EPA	
8015B	SW846 8015B Gasoline Range Organics	SW846	

Protocol References:

EPA = US Environmental Protection Agency

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

Laboratory References:

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

Sample Summary

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

Job ID: 380-11192-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-11192-1	MOANALUA WELLS (331-223-TP202)	Water	07/18/22 10:45	07/20/22 10:10
380-11192-2	TB :: MOANALUA WELLS (331-223-TP202)	Water	07/18/22 10:45	07/20/22 10:10

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

Date: 08-17-2022
EMAX Batch No.: 22G213

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-11192

Enclosed is the Laboratory report for samples received on 07/22/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-11192-1	G213-01	07/18/22	WATER	TPH GASOLINE
				TPH
				ETHANOL
380-11192-2	G213-02	07/18/22	WATER	TPH GASOLINE
380-11192-1MS	G213-01M	07/18/22	WATER	TPH
380-11192-1MSD	G213-01S	07/18/22	WATER	TPH

The results are summarized on the following pages.

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

Sincerely yours,

Caspar J. Pang
Laboratory Director

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

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

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

22G213

Chain of Custody Record

eurofins | Environment Testing America

10/9/2022

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-13746.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Debbie.Frank@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: EMAX Laboratories Inc		Accreditations Required (See note): State - Hawaii		Job #: 380-11192-1
Address: 3051 Fujita Street, ,	Due Date Requested: 8/3/2022			
City: Torrance	TAT Requested (days):			
State, Zip: CA, 90505				
Phone:	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#:			

Analysis Requested

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

	Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (8015 Ethanol)/ 8015 Ethanol	SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)	Total Number of containers	Special Instructions/Note:
	Preservation Code:										
1	MOANALUA WELLS (331-223-TP202) (380-11192-1)	7/18/22	10:45 Hawaiian		Water			X	X	2	See Attached Instructions
2	TB :: MOANALUA WELLS (331-223-TP202) (380-11192-2)	7/18/22	10:45 Hawaiian		Water				X	1	See Attached Instructions

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

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

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	7/22/22 1015	EEA	[signature]	7/22/22 10:15	Emax
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:
Yes / No		5.1/4.9 ① 4.7/4.5 ②

EMAX LABORATORIES, INC.

REFERENCE: EMAX-SM02 Rev. 12

SAMPLE RECEIPT FORM 1

Type of Delivery	Airbill / Tracking Number	ECN 22G213
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Maria Rivera
☐ EMAX Courier ☒ Client Delivery		Date 07/22/22 Time 10:15

COC INSPECTION

☒ Client Name ☒ Client PM/FC ☐ Sampler Name ☒ Sampling Date/Time ☒ Sample ID ☒ Matrix

☒ Address ☐ Tel # / Fax # ☐ Courier Signature ☒ Analysis Required ☐ Preservative (if any) ☒ TAT

Safety Issues (if any) ☐ High concentrations expected ☐ From Superfund Site ☐ Rad screening required

Note:

PACKAGING INSPECTION

Container ☒ Cooler ☐ Box ☐ Other

Condition ☐ Custody Seal ☐ Intact ☐ Damaged

Packaging ☒ Bubble Pack ☐ Styrofoam ☐ Popcorn ☐ Sufficient ☐

*correction Factor: -0.2

Temperatures (Cool, ≤6 °C but not frozen) ☒ Cooler 1 5.1/4.9 °C ☒ Cooler 2 4.7/4.5 °C ☐ Cooler 3 ___ °C ☐ Cooler 4 ___ °C ☐ Cooler 5 ___ °C

☐ Cooler 6 ___ °C ☐ Cooler 7 ___ °C ☐ Cooler 8 ___ °C ☐ Cooler 9 ___ °C ☐ Cooler 10 ___ °C

Thermometer: A - S/N 210583479 (B) - S/N 210760237 C - S/N 210271399 D - S/N ______

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

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
2	10, 11	D22	2nd Date reads: 7/8/22	R1. R8
1	6	D23	Septa on top of vial is bulged	R8. R9
			outwards, there is a small opening	
1 (*)	9	D9/D1	recieved 1 Amber for 625 Acid(LL)	
			with thio sulfate preservative,	

c 7/22/22   MS 7/26/22

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

NOTES/OBSERVATIONS: Ethanol pres. w/ $Na_2S_2O_3$

SAMPLE MATRIX IS DRINKING WATER? ☐ YES ☐ NO

(*) Additional volume for sample #1, 8015 received on 7/26/22 @ 14:30 - Temp - 3.5° - 1 cooler delivered by DCS analysis not requested in original COC c 7/26/22

LEGEND: ☐ **Continue to next page.**

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
(D1)	Analysis is not indicated in COC	D13	Out of Holding Time	R1	Proceed as indicated in ☒ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in ______	D16	Preservation not indicated in ______	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in ______	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filter and preserved as necessary
D8	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	Informed client.
(D9)	Sample received is not listed in COC	D21	No sample for moisture determination	R9	Used other vials
D10	No initial/date on corrections in COC/label	(D22)	2nd Date on label is incorrect	R10	
D11	Container count mismatch COC vs received	(D23)	Head space in vial	R11	
D12	Container size mismatch COC vs received	D24		R12	

REVIEWS:

Sample Labeling Maria Rivera [signature] Date 07/22/22 7/22/22

SRF [signature] Date 7/22/22

PM [signature] Date 7/26/22

Per Richard, add to SDG 22G213

Sanchez, Joseph

From: Frank, Debbie
Sent: Tuesday, July 26, 2022 10:31 AM
To: Sanchez, Joseph; Ramos, Marnellie; Viernes, Mary Ann; Chapman, Patrick
Subject: Changed Information Notification for 380-11192

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

380-11192-1 Method: 525.2_PREC had its condition changed from Active to Cancel.
380-11192-1 Method: 525.2_Prep had its condition changed from Active to Cancel.
duplicate login see 11169. report on 11169

380-11192-1 Method: SUBCONTRACT has been added to an existing Login.
380-11192-1 Method: SUBCONTRACT has been added to an existing Login.
380-11192-1 Method: SUBCONTRACT has been added to an existing Login.
380-11192-1 Method: SUBCONTRACT has been added to an existing Login.
send any remaining 8015 Nathiosulfate+HCL) to EMAX for back-up volume on their report Emax# 22G213

Debbie L Frank
Project Manager

Monrovia, CA (Suite 100)

E-mail: Debbie.Frank@et.eurofinsus.com
www.eurofinsus.com/env

Reference: [380-013780]

RELINQUISHED BY: J A GREDNER 7/26/22 12:41
RECEIVED BY: Charles DeLeon DCS 7/26/22 12:41 pm
Relinquished By: Charles DeLeon DCS 7/26/22 1:34 pm
Received By:

Temp. 3.5
7/26/22 14:3

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

380-11192

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

SDG#: 22G213

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-11192

SDG : 22G213

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

A total of two(2) water samples were received on 07/22/22 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method 5030B/8015B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

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

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VGH7G04B - 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. VGH7G04L/VGH7G04C 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 G209-01M/G209-01S. Refer to Matrix QC summary form for details.

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

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

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : EUROFINS EATON ANALYTICAL
Project : 380-11192
SDG NO. : 22G213
Instrument ID : H7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VGH7G04B	1	NA	07/22/2214:05	07/22/2214:05	AG22005A	AG22004A	22VGH7G04	Method Blank
LCS1W	VGH7G04L	1	NA	07/22/2214:40	07/22/2214:40	AG22006A	AG22004A	22VGH7G04	Lab Control Sample (LCS)
LCD1W	VGH7G04C	1	NA	07/22/2215:16	07/22/2215:16	AG22007A	AG22004A	22VGH7G04	LCS Duplicate
380-11192-1	G213-01	1	NA	07/22/2221:10	07/22/2221:10	AG22017A	AG22014A	22VGH7G04	Field Sample
380-11192-2	G213-02	1	NA	07/22/2221:46	07/22/2221:46	AG22018A	AG22014A	22VGH7G04	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/18/22 10:45
Project	: 380-11192	Date Received:	07/22/22
Batch No.	: 22G213	Date Extracted:	07/22/22 21:10
Sample ID	: 380-11192-1	Date Analyzed:	07/22/22 21:10
Lab Samp ID:	G213-01	Dilution Factor:	1
Lab File ID:	AG22017A	Matrix:	WATER
Ext Btch ID:	22VGH7G04	% Moisture:	NA
Calib. Ref.:	AG22014A	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	0.0350	0.0400	88	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/18/22 10:45
Project	: 380-11192	Date Received:	07/22/22
Batch No.	: 22G213	Date Extracted:	07/22/22 21:46
Sample ID	: 380-11192-2	Date Analyzed:	07/22/22 21:46
Lab Samp ID:	G213-02	Dilution Factor:	1
Lab File ID:	AG22018A	Matrix:	WATER
Ext Btch ID:	22VGH7G04	% Moisture:	NA
Calib. Ref.:	AG22014A	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	0.0327	0.0400	82	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

QC SUMMARIES

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/22/22 14:05
Project	: 380-11192	Date Received:	07/22/22
Batch No.	: 22G213	Date Extracted:	07/22/22 14:05
Sample ID	: MBLK1W	Date Analyzed:	07/22/22 14:05
Lab Samp ID:	VGH7G04B	Dilution Factor:	1
Lab File ID:	AG22005A	Matrix:	WATER
Ext Btch ID:	22VGH7G04	% Moisture:	NA
Calib. Ref.:	AG22004A	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	0.0336	0.0400	84	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-11192
BATCH NO. : 22G213
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VGH7G04B	VGH7G04L	VGH7G04C
LAB FILE ID	: AG22005A	AG22006A	AG22007A
DATE PREPARED	: 07/22/22 14:05	07/22/22 14:40	07/22/22 15:16
DATE ANALYZED	: 07/22/22 14:05	07/22/22 14:40	07/22/22 15:16
PREP BATCH	: 22VGH7G04	22VGH7G04	22VGH7G04
CALIBRATION REF	: AG22004A	AG22004A	AG22004A

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	0.455	91	0.500	0.440	88	3	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0438	110	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 : 380-11135
BATCH NO. : 22G209
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-11135-1	380-11135-1MS	380-11135-1MSD
LAB SAMPLE ID	: G209-01	G209-01M	G209-01S
LAB FILE ID	: AG22010A	AG22011A	AG22012A
DATE PREPARED	: 07/22/22 17:02	07/22/22 17:38	07/22/22 18:13
DATE ANALYZED	: 07/22/22 17:02	07/22/22 17:38	07/22/22 18:13
PREP BATCH	: 22VGH7G04	22VGH7G04	22VGH7G04
CALIBRATION REF:	AG22004A	AG22004A	AG22004A

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	0.443	89	0.500	0.430	86	3	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0442	111	0.0400	0.0428	107	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-11192

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22G213

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-11192

SDG : 22G213

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 07/22/22 to be analyzed for Total Petroleum Hydrocarbons by Extraction in accordance with Method 3520C/8015B and project specific requirements.

Holding Time
The sample was analyzed within the prescribed holding time.

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

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. DSG026WB - 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 DSG026WL. 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 22G213-01M/22G213-01S. 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: 380-11192

SDG : 22G213

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 07/22/22 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. DSG026WB - 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 J5G026WL. 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 22G213-01M/22G213-01S. 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: 380-11192

SDG : 22G213

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 07/22/22 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. DSG026WB - 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 J8G026WL. 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 22G213-01M/22G213-01S. Refer to Matrix QC summary form for details.

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

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

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-11192

SDG NO. : 22G213
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSG026WB	1	NA	07/28/2216:03	07/27/2211:45	LG27079A	LG27073A	22DSG026W	Method Blank
LCS1W	DSG026WL	1	NA	07/28/2216:22	07/27/2211:45	LG27080A	LG27073A	22DSG026W	Lab Control Sample (LCS)
380-11192-1	G213-01	1	NA	07/28/2217:36	07/27/2211:45	LG27084A	LG27073A	22DSG026W	Field Sample
380-11192-1MS	G213-01M	1	NA	07/28/2217:54	07/27/2211:45	LG27085A	LG27073A	22DSG026W	Matrix Spike Sample (MS)
380-11192-1MSD	G213-01S	1	NA	07/28/2218:13	07/27/2211:45	LG27086A	LG27073A	22DSG026W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-11192

SDG NO. : 22G213
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSG026WB	1	NA	07/28/2216:03	07/27/2211:45	LG27079A	LG27074A	22DSG026W	Method Blank
LCS1W	J5G026WL	1	NA	07/28/2216:40	07/27/2211:45	LG27081A	LG27074A	22DSG026W	Lab Control Sample (LCS)
380-11192-1	G213-01	1	NA	07/28/2217:36	07/27/2211:45	LG27084A	LG27074A	22DSG026W	Field Sample
380-11192-1MS	G213-01M	1	NA	07/28/2218:31	07/27/2211:45	LG27087A	LG27074A	22DSG026W	Matrix Spike Sample (MS)
380-11192-1MSD	G213-01S	1	NA	07/28/2218:50	07/27/2211:45	LG27088A	LG27074A	22DSG026W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 380-11192

SDG NO. : 22G213
Instrument ID : D5

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	DSG026WB	1	NA	07/28/2216:03	07/27/2211:45	LG27079A	LG27075A	22DSG026W	Method Blank
LCS1W	J8G026WL	1	NA	07/28/2216:59	07/27/2211:45	LG27082A	LG27075A	22DSG026W	Lab Control Sample (LCS)
380-11192-1	G213-01	1	NA	07/28/2217:36	07/27/2211:45	LG27084A	LG27075A	22DSG026W	Field Sample
380-11192-1MS	G213-01M	1	NA	07/28/2219:09	07/27/2211:45	LG27089A	LG27075A	22DSG026W	Matrix Spike Sample (MS)
380-11192-1MSD	G213-01S	1	NA	07/28/2219:27	07/27/2211:45	LG27090A	LG27075A	22DSG026W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/18/22 10:45
Project	: 380-11192	Date Received:	07/22/22
Batch No.	: 22G213	Date Extracted:	07/27/22 11:45
Sample ID	: 380-11192-1	Date Analyzed:	07/28/22 17:36
Lab Samp ID:	22G213-01	Dilution Factor:	1
Lab File ID:	LG27084A	Matrix:	WATER
Ext Btch ID:	22DSG026W	% Moisture:	NA
Calib. Ref.:	LG27073A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.028	0.014
Motor Oil	ND	0.057	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.377	0.570	66	60-130
Hexacosane	0.101	0.142	71	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 : 880ml Final Volume : 5ml
Prepared by : JMuert Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/18/22 10:45
Project	: 380-11192	Date Received:	07/22/22
Batch No.	: 22G213	Date Extracted:	07/27/22 11:45
Sample ID	: 380-11192-1	Date Analyzed:	07/28/22 17:36
Lab Samp ID:	22G213-01	Dilution Factor:	1
Lab File ID:	LG27084A	Matrix:	WATER
Ext Btch ID:	22DSG026W	% Moisture:	NA
Calib. Ref.:	LG27074A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.057	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.377	0.570	66	60-130
Hexacosane	0.101	0.142	71	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 : 880ml Final Volume : 5ml
Prepared by : JMuert Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/18/22 10:45
Project	: 380-11192	Date Received:	07/22/22
Batch No.	: 22G213	Date Extracted:	07/27/22 11:45
Sample ID	: 380-11192-1	Date Analyzed:	07/28/22 17:36
Lab Samp ID:	22G213-01	Dilution Factor:	1
Lab File ID:	LG27084A	Matrix:	WATER
Ext Btch ID:	22DSG026W	% Moisture:	NA
Calib. Ref.:	LG27075A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.057	0.028

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.377	0.570	66	60-130
Hexacosane	0.101	0.142	71	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 : 880ml Final Volume : 5ml
Prepared by : JMuert Analyzed by : SDeeso

QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/27/22 11:45
Project	: 380-11192	Date Received:	07/27/22
Batch No.	: 22G213	Date Extracted:	07/27/22 11:45
Sample ID	: MBLK1W	Date Analyzed:	07/28/22 16:03
Lab Samp ID:	DSG026WB	Dilution Factor:	1
Lab File ID:	LG27079A	Matrix:	WATER
Ext Btch ID:	22DSG026W	% Moisture:	NA
Calib. Ref.:	LG27073A	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	0.388	0.500	78	60-130
Hexacosane	0.109	0.125	87	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 : JMuert Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-11192
BATCH NO. : 22G213
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSG026WB	DSG026WL
LAB FILE ID	: LG27079A	LG27080A
DATE PREPARED	: 07/27/22 11:45	07/27/22 11:45
DATE ANALYZED	: 07/28/22 16:03	07/28/22 16:22
PREP BATCH	: 22DSG026W	22DSG026W
CALIBRATION REF	: LG27073A	LG27073A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.24	90	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.413	83	60-130
Hexacosane	0.125	0.112	90	60-130

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/27/22 11:45
Project	: 380-11192	Date Received:	07/27/22
Batch No.	: 22G213	Date Extracted:	07/27/22 11:45
Sample ID	: MBLK1W	Date Analyzed:	07/28/22 16:03
Lab Samp ID:	DSG026WB	Dilution Factor:	1
Lab File ID:	LG27079A	Matrix:	WATER
Ext Btch ID:	22DSG026W	% Moisture:	NA
Calib. Ref.:	LG27074A	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	0.388	0.500	78	60-130
Hexacosane	0.109	0.125	87	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 : JMuert Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-11192
BATCH NO. : 22G213
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSG026WB	J5G026WL
LAB FILE ID	: LG27079A	LG27081A
DATE PREPARED	: 07/27/22 11:45	07/27/22 11:45
DATE ANALYZED	: 07/28/22 16:03	07/28/22 16:40
PREP BATCH	: 22DSG026W	22DSG026W
CALIBRATION REF	: LG27074A	LG27074A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP5	ND	2.50	2.03	81	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.424	85	60-130
Hexacosane	0.125	0.103	82	60-130

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/27/22 11:45
Project	: 380-11192	Date Received:	07/27/22
Batch No.	: 22G213	Date Extracted:	07/27/22 11:45
Sample ID	: MBLK1W	Date Analyzed:	07/28/22 16:03
Lab Samp ID:	DSG026WB	Dilution Factor:	1
Lab File ID:	LG27079A	Matrix:	WATER
Ext Btch ID:	22DSG026W	% Moisture:	NA
Calib. Ref.:	LG27075A	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	0.388	0.500	78	60-130
Hexacosane	0.109	0.125	87	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 : JMuert Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-11192
BATCH NO. : 22G213
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSG026WB	J8G026WL
LAB FILE ID	: LG27079A	LG27082A
DATE PREPARED	: 07/27/22 11:45	07/27/22 11:45
DATE ANALYZED	: 07/28/22 16:03	07/28/22 16:59
PREP BATCH	: 22DSG026W	22DSG026W
CALIBRATION REF	: LG27075A	LG27075A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP8	ND	2.50	2.19	88	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.539	108	60-130
Hexacosane	0.125	0.117	94	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-11192
BATCH NO. : 22G213
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-11192-1	380-11192-1MS	380-11192-1MSD
LAB SAMPLE ID	: 22G213-01	22G213-01M	22G213-01S
LAB FILE ID	: LG27084A	LG27085A	LG27086A
DATE PREPARED	: 07/27/22 11:45	07/27/22 11:45	07/27/22 11:45
DATE ANALYZED	: 07/28/22 17:36	07/28/22 17:54	07/28/22 18:13
PREP BATCH	: 22DSG026W	22DSG026W	22DSG026W
CALIBRATION REF:	LG27073A	LG27073A	LG27073A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.58	2.30	89	2.65	2.62	99	13	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.515	0.345	67	0.530	0.358	68	60-130
Hexacosane	0.129	0.111	86	0.132	0.118	89	60-130

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

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-11192
BATCH NO. : 22G213
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-11192-1	380-11192-1MS	380-11192-1MSD
LAB SAMPLE ID	: 22G213-01	22G213-01M	22G213-01S
LAB FILE ID	: LG27084A	LG27087A	LG27088A
DATE PREPARED	: 07/27/22 11:45	07/27/22 11:45	07/27/22 11:45
DATE ANALYZED	: 07/28/22 17:36	07/28/22 18:31	07/28/22 18:50
PREP BATCH	: 22DSG026W	22DSG026W	22DSG026W
CALIBRATION REF	: LG27074A	LG27074A	LG27074A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.72	1.97	72	2.70	1.92	71	3	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.545	0.432	79	0.540	0.415	77	60-130
Hexacosane	0.136	0.109	80	0.135	0.125	93	60-130

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

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-11192
BATCH NO. : 22G213
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 380-11192-1	380-11192-1MS	380-11192-1MSD
LAB SAMPLE ID	: 22G213-01	22G213-01M	22G213-01S
LAB FILE ID	: LG27084A	LG27089A	LG27090A
DATE PREPARED	: 07/27/22 11:45	07/27/22 11:45	07/27/22 11:45
DATE ANALYZED	: 07/28/22 17:36	07/28/22 19:09	07/28/22 19:27
PREP BATCH	: 22DSG026W	22DSG026W	22DSG026W
CALIBRATION REF:	LG27075A	LG27075A	LG27075A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.55	1.84	72	2.60	1.85	71	1	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.510	0.492	96	0.520	0.419	81	60-130
Hexacosane	0.127	0.127	100	0.130	0.113	87	60-130

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-11192

METHOD SW8015C
ALCOHOLS BY GC

SDG#: 22G213

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-11192

SDG : 22G213

METHOD SW8015C
ALCOHOLS BY GC

One(1) water sample was received on 07/22/22 to be analyzed for Alcohols by GC in accordance with Method SW8015C and project specific requirements.

Holding Time
The sample was analyzed out of 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. MEG003WB - 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. MEG003WL/MEG003WC 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. Ethanol was within MS QC limits in G238-01M/G238-01S. Refer to Matrix QC summary form for details.

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

LAB CHRONICLE
ALCOHOLS BY GC

Client : EUROFINS EATON ANALYTICAL
Project : 380-11192

SDG NO. : 22G213
Instrument ID : GCT050

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	MEG003WB	1	NA	07/26/2211:42	NA	TG26004A	TG26002A	MEG003W	Method Blank
LCS1W	MEG003WL	1	NA	07/26/2211:57	NA	TG26005A	TG26002A	MEG003W	Lab Control Sample (LCS)
LCD1W	MEG003WC	1	NA	07/26/2212:11	NA	TG26006A	TG26002A	MEG003W	LCS Duplicate
380-11192-1	G213-01	1	NA	07/26/2216:39	NA	TG26012A	TG26010A	MEG003W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8015C
ALCOHOLS BY GC

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/18/22
Project	: 380-11192	Date Received:	07/22/22
Batch No.	: 22G213	Date Extracted:	NA
Sample ID:	380-11192-1	Date Analyzed:	07/26/22 16:39
Lab Samp ID:	G213-01	Dilution Factor:	1
Lab File ID:	TG26012A	Matrix :	WATER
Ext Btch ID:	MEG003W	% Moisture :	NA
Calib. Ref.:	TG26010A	Instrument ID :	GCT050

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANOL	ND	2000	500

RL : Reporting Limit

QC SUMMARIES

METHOD SW8015C
ALCOHOLS BY GC

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 380-11192	Date Received: NA
Batch No. : 22G213	Date Extracted: NA
Sample ID: MBLK1W	Date Analyzed: 07/26/22 11:42
Lab Samp ID: MEG003WB	Dilution Factor: 1
Lab File ID: TG26004A	Matrix : WATER
Ext Btch ID: MEG003W	% Moisture : NA
Calib. Ref.: TG26002A	Instrument ID : GCT050

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANOL	ND	2000	500

RL : Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-11192
BATCH NO.: 22G213
METHOD: METHOD SW8015C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	MEG003WB	MEG003WL	MEG003WC		
LAB FILE ID:	TG26004A	TG26005A	TG26006A		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	07/26/2211:42	07/26/2211:57	07/26/2212:11	DATE RECEIVED:	NA
PREP. BATCH:	MEG003W	MEG003W	MEG003W		
CALIB. REF:	TG26002A	TG26002A	TG26002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethanol	ND	10000	9140	91	10000	8960	90	2	60-130	30

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-11532
BATCH NO.: 22G238
METHOD: METHOD SW8015C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	380-11532-1				
LAB SAMP ID:	G238-01	G238-01M	G238-01S		
LAB FILE ID:	TG26007A	TG26008A	TG26009A		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	07/20/22
DATE ANALYZED:	07/26/2212:27	07/26/2212:40	07/26/2212:53	DATE RECEIVED:	07/25/22
PREP. BATCH:	MEG003W	MEG003W	MEG003W		
CALIB. REF:	TG26002A	TG26002A	TG26002A		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethanol	ND	10000	9900	99	10000	9320	93	6	60-130	30

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

Date: 08-17-2022
EMAX Batch No.: 22G215

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 380-11218

Enclosed is the Laboratory report for samples received on 07/22/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
380-11218-1	G215-01	07/18/22	WATER	TPH GASOLINE ETHANOL
380-11218-2	G215-02	07/18/22	WATER	TPH GASOLINE

The results are summarized on the following pages.

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

Sincerely yours,

Caspar J. Pang
Laboratory Director

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

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

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

226215

Chain of Custody Record

eurofins | Environment Testing America

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-13746.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Debbie.Frank@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: EMAX Laboratories Inc		Accreditations Required (See note): State - Hawaii		Job #: 380-11218-1
Address: 3051 Fujita Street, ,	Due Date Requested: 8/3/2022			
City: Torrance	TAT Requested (days):			
State, Zip: CA, 90505				
Phone:	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#:			

Analysis Requested

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

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (8015 Ethanol)/ 8015 Ethanol	SUB (8015 Gas (Purgeable) LL (EAL))/ 8015 Gas (Purgeable) LL (EAL)	Total Number of Containers	Special Instructions/Note:
			Preservation Code:							
HALAWA SHAFT (331-241-TP401) (380-11218-1)	7/18/22	09:45 Hawaiian		Water			X	X	3	See Attached Instructions
TB::HALAWA SHAFT (331-241-TP401) (380-11218-2)	7/18/22	09:45 Hawaiian		Water				X	2	See Attached Instructions

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

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

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	[signature]	7/22/22 1015	EAT	Alan R.	7/22/22 1015	Emax
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks: 5.1/4.9 ① 4.7/4.5 ②

EMAX LABORATORIES, INC.

REFERENCE: EMAX-SM02 Rev. 12

SAMPLE RECEIPT FORM 1

Type of Delivery	Airbill / Tracking Number	ECN 22G215
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Alan Ramos
☐ EMAX Courier ☒ Client Delivery		Date 07/22/22 Time 10:15

COC INSPECTION

☒ Client Name ☒ Client PM/FC ☐ Sampler Name ☒ Sampling Date/Time ☒ Sample ID ☒ Matrix

☒ Address ☐ Tel # / Fax # ☐ Courier Signature ☒ Analysis Required ☐ Preservative (if any) ☒ TAT

Safety Issues (if any) ☐ High concentrations expected ☐ From Superfund Site ☐ Rad screening required

Note:

PACKAGING INSPECTION

Container ☒ Cooler ☐ Box ☐ Other

Condition *Correction ☐ Custody Seal ☐ Intact ☐ Damaged

Packaging Factor: ☒ Bubble Pack ☐ Styrofoam ☐ Popcorn ☐ Sufficient ☐ ______

Temperatures -0.2 ☒ Cooler 1 5.1/4.9 °C ☒ Cooler 2 4.7/4.5 °C ☐ Cooler 3 ___ °C ☐ Cooler 4 ___ °C ☐ Cooler 5 ___ °C

(Cool, ≤6 °C but not frozen) ☐ Cooler 6 ___ °C ☐ Cooler 7 ___ °C ☐ Cooler 8 ___ °C ☐ Cooler 9 ___ °C ☐ Cooler 10 ___ °C

Thermometer: A - S/N 210583479 (B) - S/N 210760237 C - S/N 210271399 D - S/N ______

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

Note:

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
1	5	D1		R1
2	7,8	D22	2nd Date reads: 7/8/22	R8
1		D8	Ethanol	↓
1	5-6	D9	2-1L w/ Sod. thiosulfate and HCl	R8

7/22/22 AB 7/22/22

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

NOTES/OBSERVATIONS:

SAMPLE MATRIX IS DRINKING WATER? ☐ YES ☐ NO

LEGEND:

☐ Continue to next page.

Code	Description- Sample Management	Code	Description-Sample Management	Code	Description-Sample Management
(D1)	Analysis is not indicated in label	D13	Out of Holding Time	R1	Proceed as indicated in ☒ COC ☐ Label
D2	Analysis mismatch COC vs label	D14	Bubble is >6mm	R2	Refer to attached instruction
D3	Sample ID mismatch COC vs label	D15	No trip blank in cooler	R3	Cancel the analysis
D4	Sample ID is not indicated in ______	D16	Preservation not indicated in ______	R4	Use vial with smallest bubble first
D5	Container -[improper] [leaking] [broken]	D17	Preservation mismatch COC vs label	R5	Log-in with latest sampling date and time+1 min
D6	Date/Time is not indicated in ______	D18	Insufficient chemical preservative	R6	Adjust pH as necessary
D7	Date/Time mismatch COC vs label	D19	Insufficient Sample	R7	Filtered and preserved as necessary
(D8)	Sample listed in COC is not received	D20	No filtration info for dissolved analysis	R8	Informed Client.
(D9)	Sample received is not listed in COC	D21	No sample for moisture determination	R9	
D10	No initial/date on corrections in COC/label	(D22)	2nd date on label is incorrect	R10	
D11	Container count mismatch COC vs received	D23		R11	
D12	Container size mismatch COC vs received	D24		R12	

REVIEWS:

Sample Labeling Marla Rivera [signature] Date 07/22/22 7/22/22

SRF [signature] Date 7/22/22

PM [signature] Date 7/22/22

REPORTING CONVENTIONS

DATA QUALIFIERS:

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

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

ACRONYMS AND ABBREVIATIONS:

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

DATES

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-11218

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

SDG#: 22G215

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-11218

SDG : 22G215

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

A total of two(2) water samples were received on 07/22/22 to be analyzed for Total Petroleum Hydrocarbons by Purge And Trap in accordance with Method 5030B/8015B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

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

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VGH7G04B - 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. VGH7G04L/VGH7G04C 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 G209-01M/G209-01S. Refer to Matrix QC summary form for details.

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

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

LAB CHRONICLE
TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : EUROFINS EATON ANALYTICAL
Project : 380-11218

SDG NO. : 22G215
Instrument ID : H7

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VGH7G04B	1	NA	07/22/2214:05	07/22/2214:05	AG22005A	AG22004A	22VGH7G04	Method Blank
LCS1W	VGH7G04L	1	NA	07/22/2214:40	07/22/2214:40	AG22006A	AG22004A	22VGH7G04	Lab Control Sample (LCS)
LCD1W	VGH7G04C	1	NA	07/22/2215:16	07/22/2215:16	AG22007A	AG22004A	22VGH7G04	LCS Duplicate
380-11218-1	G215-01	1	NA	07/22/2223:32	07/22/2223:32	AG22021A	AG22014A	22VGH7G04	Field Sample
380-11218-2	G215-02	1	NA	07/23/2200:07	07/23/2200:07	AG22022A	AG22014A	22VGH7G04	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/18/22 09:45
Project	: 380-11218	Date Received:	07/22/22
Batch No.	: 22G215	Date Extracted:	07/22/22 23:32
Sample ID	: 380-11218-1	Date Analyzed:	07/22/22 23:32
Lab Samp ID:	G215-01	Dilution Factor:	1
Lab File ID:	AG22021A	Matrix:	WATER
Ext Btch ID:	22VGH7G04	% Moisture:	NA
Calib. Ref.:	AG22014A	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	0.0349	0.0400	87	60-140

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

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/18/22 09:45
Project	: 380-11218	Date Received:	07/22/22
Batch No.	: 22G215	Date Extracted:	07/23/22 00:07
Sample ID	: 380-11218-2	Date Analyzed:	07/23/22 00:07
Lab Samp ID:	G215-02	Dilution Factor:	1
Lab File ID:	AG22022A	Matrix:	WATER
Ext Btch ID:	22VGH7G04	% Moisture:	NA
Calib. Ref.:	AG22014A	Instrument ID:	H7

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0343	0.0400	86	60-140

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

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

QC SUMMARIES

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	07/22/22 14:05
Project	: 380-11218	Date Received:	07/22/22
Batch No.	: 22G215	Date Extracted:	07/22/22 14:05
Sample ID	: MBLK1W	Date Analyzed:	07/22/22 14:05
Lab Samp ID:	VGH7G04B	Dilution Factor:	1
Lab File ID:	AG22005A	Matrix:	WATER
Ext Btch ID:	22VGH7G04	% Moisture:	NA
Calib. Ref.:	AG22004A	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	0.0336	0.0400	84	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 380-11218
BATCH NO. : 22G215
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VGH7G04B	VGH7G04L	VGH7G04C
LAB FILE ID	: AG22005A	AG22006A	AG22007A
DATE PREPARED	: 07/22/22 14:05	07/22/22 14:40	07/22/22 15:16
DATE ANALYZED	: 07/22/22 14:05	07/22/22 14:40	07/22/22 15:16
PREP BATCH	: 22VGH7G04	22VGH7G04	22VGH7G04
CALIBRATION REF	: AG22004A	AG22004A	AG22004A

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	0.455	91	0.500	0.440	88	3	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0438	110	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 : 380-11135
BATCH NO. : 22G209
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 380-11135-1	380-11135-1MS	380-11135-1MSD
LAB SAMPLE ID	: G209-01	G209-01M	G209-01S
LAB FILE ID	: AG22010A	AG22011A	AG22012A
DATE PREPARED	: 07/22/22 17:02	07/22/22 17:38	07/22/22 18:13
DATE ANALYZED	: 07/22/22 17:02	07/22/22 17:38	07/22/22 18:13
PREP BATCH	: 22VGH7G04	22VGH7G04	22VGH7G04
CALIBRATION REF	: AG22004A	AG22004A	AG22004A

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	0.443	89	0.500	0.430	86	3	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0442	111	0.0400	0.0428	107	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

380-11218

METHOD SW8015C
ALCOHOLS BY GC

SDG#: 22G215

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 380-11218

SDG : 22G215

METHOD SW8015C
ALCOHOLS BY GC

One(1) water sample was received on 07/22/22 to be analyzed for Alcohols by GC in accordance with Method SW8015C and project specific requirements.

Holding Time
The sample was analyzed out of 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. MEG003WB - 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. MEG003WL/MEG003WC 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. Ethanol was within MS QC limits in G238-01M/G238-01S. Refer to Matrix QC summary form for details.

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

LAB CHRONICLE
ALCOHOLS BY GC

Client : EUROFINS EATON ANALYTICAL
Project : 380-11218

SDG NO. : 22G215
Instrument ID : GCT050

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	MEG003WB	1	NA	07/26/2211:42	NA	TG26004A	TG26002A	MEG003W	Method Blank
LCS1W	MEG003WL	1	NA	07/26/2211:57	NA	TG26005A	TG26002A	MEG003W	Lab Control Sample (LCS)
LCD1W	MEG003WC	1	NA	07/26/2212:11	NA	TG26006A	TG26002A	MEG003W	LCS Duplicate
380-11218-1	G215-01	1	NA	07/26/2216:53	NA	TG26013A	TG26010A	MEG003W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8015C
ALCOHOLS BY GC

Client : EUROFINS EATON ANALYTICAL	Date Collected: 07/18/22
Project : 380-11218	Date Received: 07/22/22
Batch No. : 22G215	Date Extracted: NA
Sample ID: 380-11218-1	Date Analyzed: 07/26/22 16:53
Lab Samp ID: G215-01	Dilution Factor: 1
Lab File ID: TG26013A	Matrix : WATER
Ext Btch ID: MEG003W	% Moisture : NA
Calib. Ref.: TG26010A	Instrument ID : GCT050

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANOL	ND	2000	500

RL : Reporting Limit

QC SUMMARIES

METHOD SW8015C
ALCOHOLS BY GC

Client	: EUROFINS EATON ANALYTICAL	Date Collected	: NA
Project	: 380-11218	Date Received	: NA
Batch No.	: 22G215	Date Extracted	: NA
Sample ID	: MBLK1W	Date Analyzed	: 07/26/22 11:42
Lab Samp ID	: MEG003WB	Dilution Factor	: 1
Lab File ID	: TG26004A	Matrix	: WATER
Ext Btch ID	: MEG003W	% Moisture	: NA
Calib. Ref.	: TG26002A	Instrument ID	: GCT050

PARAMETERS	RESULTS (ug/L)	RL (ug/L)	MDL (ug/L)
ETHANOL	ND	2000	500

RL : Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-11218
BATCH NO.: 22G215
METHOD: METHOD SW8015C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	MEG003WB	MEG003WL	MEG003WC		
LAB FILE ID:	TG26004A	TG26005A	TG26006A		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	07/26/2211:42	07/26/2211:57	07/26/2212:11	DATE RECEIVED:	NA
PREP. BATCH:	MEG003W	MEG003W	MEG003W		
CALIB. REF:	TG26002A	TG26002A	TG26002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethanol	ND	10000	9140	91	10000	8960	90	2	60-130	30

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 380-11532
BATCH NO.: 22G238
METHOD: METHOD SW8015C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	380-11532-1				
LAB SAMP ID:	G238-01	G238-01M	G238-01S		
LAB FILE ID:	TG26007A	TG26008A	TG26009A		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	07/20/22
DATE ANALYZED:	07/26/2212:27	07/26/2212:40	07/26/2212:53	DATE RECEIVED:	07/25/22
PREP. BATCH:	MEG003W	MEG003W	MEG003W		
CALIB. REF:	TG26002A	TG26002A	TG26002A		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethanol	ND	10000	9900	99	10000	9320	93	6	60-130	30

August 29, 2022

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

Project Name: RED-HILL Project # 38001111 Job # 380-11192-1
Physis Project ID: 1407003-247

Dear Debbie,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 7/22/2022. A total of 1 sample was received for analysis in accordance with the attached chain of custody (COC). Per the COC, the sample was analyzed for:

Organics
Polynuclear Aromatic Hydrocarbons by EPA 625.1
Disalicylidenepropanediamine by EPA 625.1
Dibenzo [a,l] Pyrene w/ PAHs by EPA 625.1
Base/Neutral Extractable Compounds by EPA 625.1
Acid Extractable Compounds w/ PAHs by EPA 625.1
6-tert-Butyl-2,4-dimethylphenol by EPA 625.1
2,6-Di-tert-butylphenol by EPA 625.1
2,6-Di-tert-butyl-4-methylphenol by EPA 625.1
p-tert-Butylphenol by EPA 625.1

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

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

Regards,

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

PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-247

RED-HILL Project # 38001111 Job # 380-11192-1

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
98643	MOANALUA WELLS	331-223-T P202	7/18/2022	10:45	Samplewater	Not Specified

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ABBREVIATIONS and ACRONYMS

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

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QUALITY ASSURANCE SUMMARY

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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PHYSIS QUALIFIER CODES

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

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CASE NARRATIVE

QUALIFIER NOTES

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

ND

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

ANALYTICAL REPORT

PHYSIS Project ID: 1407003-247
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-11192-1

Acid Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 98643-R1	**MOANALUA WELLS 331-223-T P202**	**Matrix: Samplewater**					**Sampled:**	**18-Jul-22 10:45**		**Received:**	**22-Jul-22**
(2,4,6-Tribromophenol)	EPA 625.1	% Recovery	91	1			Total		O-38066	25-Jul-22	01-Aug-22
(d5-Phenol)	EPA 625.1	% Recovery	30	1			Total		O-38066	25-Jul-22	01-Aug-22
2,4,5-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
2,4,6-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
2,4-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
2,4-Dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22
2,6-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
2,6-Di-tert-butyl-4-methylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
2,6-Di-tert-butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
2-Chlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
2-Methyl-4,6-dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22
2-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22
2-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22
3+4-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22
4-Chloro-3-methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22
4-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22
6-tert-butyl-2,4-dimethylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Benzoic Acid	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22
Benzyl Alcohol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22
Pentachlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Phenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-38066	25-Jul-22	01-Aug-22
p-tert-Butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 98643-R1	**MOANALUA WELLS 331-223-T P202**	**Matrix: Samplewater**					**Sampled:**	**18-Jul-22 10:45**		**Received:**	**22-Jul-22**
2-Chloronaphthalene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
2-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
3-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
4-Bromophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
4-Chloroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
4-Chlorophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
4-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Aniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Benzidine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Bis(2-Chloroethoxy) methane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Bis(2-Chloroethyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Bis(2-Chloroisopropyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
D benzofuran	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Hexachloroethane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
Nitrobenzene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
N-Nitrosodi-n-propylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22
N-Nitrosodiphenylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38066	25-Jul-22	01-Aug-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 98643-R1	**MOANALUA WELLS 331-223-T P202 Matrix: Samplewater**						**Sampled:**	**18-Jul-22 10:45**		**Received:**	**22-Jul-22**
(d10-Acenaphthene)	EPA 625.1	% Recovery	87	1			Total		O-38066	25-Jul-22	01-Aug-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	95	1			Total		O-38066	25-Jul-22	01-Aug-22
(d12-Chrysene)	EPA 625.1	% Recovery	104	1			Total		O-38066	25-Jul-22	01-Aug-22
(d12-Perylene)	EPA 625.1	% Recovery	78	1			Total		O-38066	25-Jul-22	01-Aug-22
(d8-Naphthalene)	EPA 625.1	% Recovery	85	1			Total		O-38066	25-Jul-22	01-Aug-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22

PHYSIS Project ID: 1407003-247
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-11192-1

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38066	25-Jul-22	01-Aug-22

QUALITY CONTROL REPORT

Acid Extractable Compounds — QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 98642-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**					**Received:**	
		Method: EPA 625.1				Batch ID: O-38066		Prepared: 25-Jul-22				Analyzed: 01-Aug-22	
(2,4,6-Tribromophenol)	Total	95	1			% Recovery	100	95		44 - 159%		PASS	
(d5-Phenol)	Total	119	1			% Recovery	100	119		20 - 121%		PASS	
2,4,5-Trichlorophenol	Total	ND	1	0.05	0.1	µg/L							
2,4,6-Trichlorophenol	Total	ND	1	0.05	0.1	µg/L							
2,4-Dichlorophenol	Total	ND	1	0.05	0.1	µg/L							
2,4-Dinitrophenol	Total	ND	1	0.1	0.2	µg/L							
2,6-Dichlorophenol	Total	ND	1	0.05	0.1	µg/L							
2,6-Di-tert-butyl-4-methylphenol	Total	ND	1	0.05	0.1	µg/L							
2,6-Di-tert-butylphenol	Total	ND	1	0.05	0.1	µg/L							
2-Chlorophenol	Total	ND	1	0.05	0.1	µg/L							
2-Methyl-4,6-dinitrophenol	Total	ND	1	0.1	0.2	µg/L							
2-Methylphenol	Total	ND	1	0.1	0.2	µg/L							
2-Nitrophenol	Total	ND	1	0.1	0.2	µg/L							
3+4-Methylphenol	Total	ND	1	0.1	0.2	µg/L							
4-Chloro-3-methylphenol	Total	ND	1	0.1	0.2	µg/L							
4-Nitrophenol	Total	ND	1	0.1	0.2	µg/L							
6-tert-butyl-2,4-dimethylphenol	Total	ND	1	0.05	0.1	µg/L							
Benzoic Acid	Total	ND	1	0.1	0.2	µg/L							
Benzyl Alcohol	Total	ND	1	0.1	0.2	µg/L							
Pentachlorophenol	Total	ND	1	0.05	0.1	µg/L							
Phenol	Total	ND	1	0.1	0.2	µg/L							
p-tert-Butylphenol	Total	ND	1	0.05	0.1	µg/L							

Acid Extractable Compounds QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 98642-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**					**Received:**	
	Method: EPA 625.1					Batch ID: O-38066			Prepared: 25-Jul-22			Analyzed: 01-Aug-22	
(2,4,6-Tribromophenol)	Total	144	1			% Recovery	100	0	144	44 - 159%	PASS		
(d5-Phenol)	Total	113	1			% Recovery	100	0	113	20 - 121%	PASS		
2,4,5-Trichlorophenol	Total	0.736	1	0.05	0.1	µg/L	1	0	74	57 - 116%	PASS		
2,4,6-Trichlorophenol	Total	0.667	1	0.05	0.1	µg/L	1	0	67	56 - 118%	PASS		
2,4-Dichlorophenol	Total	0.798	1	0.05	0.1	µg/L	1	0	80	51 - 117%	PASS		
2,4-Dinitrophenol	Total	0.522	1	0.1	0.2	µg/L	0.5	0	104	0 - 152%	PASS		
2,6-Dichlorophenol	Total	0.842	1	0.05	0.1	µg/L	1	0	84	30 - 130%	PASS		
2,6-Di-tert-butyl-4-methylphenol	Total	0.356	1	0.05	0.1	µg/L	0.5	0	71	50 - 150%	PASS		
2,6-Di-tert-butylphenol	Total	0.501	1	0.05	0.1	µg/L	1	0	50	50 - 150%	PASS		
2-Chlorophenol	Total	0.896	1	0.05	0.1	µg/L	1	0	90	41 - 110%	PASS		
2-Methyl-4,6-dinitrophenol	Total	0.517	1	0.1	0.2	µg/L	0.5	0	103	0 - 141%	PASS		
2-Methylphenol	Total	0.742	1	0.1	0.2	µg/L	1	0	74	40 - 117%	PASS		
2-Nitrophenol	Total	0.569	1	0.1	0.2	µg/L	1	0	57	40 - 117%	PASS		
3+4-Methylphenol	Total	0.922	1	0.1	0.2	µg/L	1	0	92	0 - 130%	PASS		
4-Chloro-3-methylphenol	Total	0.683	1	0.1	0.2	µg/L	1	0	68	51 - 128%	PASS		
4-Nitrophenol	Total	0.513	1	0.1	0.2	µg/L	1	0	51	10 - 164%	PASS		
6-tert-butyl-2,4-dimethylphenol	Total	0.501	1	0.05	0.1	µg/L	1	0	50	50 - 150%	PASS		
Benzoic Acid	Total	0.457	1	0.1	0.2	µg/L	0.5	0	91	2 - 145%	PASS		
Benzyl Alcohol	Total	1.02	1	0.1	0.2	µg/L	1	0	102	43 - 148%	PASS		
Pentachlorophenol	Total	0.482	1	0.05	0.1	µg/L	1	0	48	36 - 111%	PASS		
Phenol	Total	0.904	1	0.1	0.2	µg/L	1	0	90	29 - 114%	PASS		
p-tert-Butylphenol	Total	0.5	1	0.05	0.1	µg/L	1	0	50	50 - 150%	PASS		

Acid Extractable Compounds QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 98642-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**		
		Method: EPA 625.1				Batch ID: O-38066		Prepared: 25-Jul-22				Analyzed: 01-Aug-22		
(2,4,6-Tribromophenol)	Total	136	1			% Recovery	100	0	136	44 - 159%	PASS	6	30	PASS
(d5-Phenol)	Total	112	1			% Recovery	100	0	112	20 - 121%	PASS	1	30	PASS
2,4,5-Trichlorophenol	Total	0.837	1	0.05	0.1	µg/L	1	0	84	57 - 116%	PASS	13	30	PASS
2,4,6-Trichlorophenol	Total	0.868	1	0.05	0.1	µg/L	1	0	87	56 - 118%	PASS	26	30	PASS
2,4-Dichlorophenol	Total	0.899	1	0.05	0.1	µg/L	1	0	90	51 - 117%	PASS	12	30	PASS
2,4-Dinitrophenol	Total	0.655	1	0.1	0.2	µg/L	0.5	0	131	0 - 152%	PASS	23	30	PASS
2,6-Dichlorophenol	Total	0.962	1	0.05	0.1	µg/L	1	0	96	30 - 130%	PASS	13	30	PASS
2,6-Di-tert-butyl-4-methylphenol	Total	0.437	1	0.05	0.1	µg/L	0.5	0	87	50 - 150%	PASS	20	30	PASS
2,6-Di-tert-butylphenol	Total	0.5	1	0.05	0.1	µg/L	1	0	50	50 - 150%	PASS	0	30	PASS
2-Chlorophenol	Total	0.937	1	0.05	0.1	µg/L	1	0	94	41 - 110%	PASS	4	30	PASS
2-Methyl-4,6-dinitrophenol	Total	0.69	1	0.1	0.2	µg/L	0.5	0	138	0 - 141%	PASS	29	30	PASS
2-Methylphenol	Total	0.935	1	0.1	0.2	µg/L	1	0	94	40 - 117%	PASS	24	30	PASS
2-Nitrophenol	Total	0.741	1	0.1	0.2	µg/L	1	0	74	40 - 117%	PASS	26	30	PASS
3+4-Methylphenol	Total	0.975	1	0.1	0.2	µg/L	1	0	98	0 - 130%	PASS	6	30	PASS
4-Chloro-3-methylphenol	Total	0.832	1	0.1	0.2	µg/L	1	0	83	51 - 128%	PASS	20	30	PASS
4-Nitrophenol	Total	0.653	1	0.1	0.2	µg/L	1	0	65	10 - 164%	PASS	24	30	PASS
6-tert-butyl-2,4-dimethylphenol	Total	0.501	1	0.05	0.1	µg/L	1	0	50	50 - 150%	PASS	0	30	PASS
Benzoic Acid	Total	0.601	1	0.1	0.2	µg/L	0.5	0	120	2 - 145%	PASS	27	30	PASS
Benzyl Alcohol	Total	0.978	1	0.1	0.2	µg/L	1	0	98	43 - 148%	PASS	4	30	PASS
Pentachlorophenol	Total	0.638	1	0.05	0.1	µg/L	1	0	64	36 - 111%	PASS	29	30	PASS
Phenol	Total	0.91	1	0.1	0.2	µg/L	1	0	91	29 - 114%	PASS	1	30	PASS
p-tert-Butylphenol	Total	0.567	1	0.05	0.1	µg/L	1	0	57	50 - 150%	PASS	13	30	PASS

Base/Neutral Extractable Compounds QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 98642-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**				**Received:**		
	Method: EPA 625.1					Batch ID: O-38066	Prepared: 25-Jul-22				Analyzed: 01-Aug-22		
2-Chloronaphthalene	Total	ND	1	0.05	0.1	µg/L							
2-Nitroaniline	Total	ND	1	0.05	0.1	µg/L							
3-Nitroaniline	Total	ND	1	0.05	0.1	µg/L							
4-Bromophenylphenyl ether	Total	ND	1	0.05	0.1	µg/L							
4-Chloroaniline	Total	ND	1	0.05	0.1	µg/L							
4-Chlorophenylphenyl ether	Total	ND	1	0.05	0.1	µg/L							
4-Nitroaniline	Total	ND	1	0.05	0.1	µg/L							
Aniline	Total	ND	1	0.05	0.1	µg/L							
Benzidine	Total	ND	1	0.05	0.1	µg/L							
Bis(2-Chloroethoxy) methane	Total	ND	1	0.05	0.1	µg/L							
Bis(2-Chloroethyl) ether	Total	ND	1	0.05	0.1	µg/L							
Bis(2-Chloroisopropyl) ether	Total	ND	1	0.05	0.1	µg/L							
Dibenzofuran	Total	ND	1	0.05	0.1	µg/L							
Disalicylidenepropanediamin e	Total	ND	1	0.05	0.1	µg/L							
Hexachloroethane	Total	ND	1	0.05	0.1	µg/L							
Nitrobenzene	Total	ND	1	0.05	0.1	µg/L							
N-Nitrosodi-n-propylamine	Total	ND	1	0.05	0.1	µg/L							
N-Nitrosodiphenylamine	Total	ND	1	0.05	0.1	µg/L							

Base/Neutral Extractable Compounds QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 98642-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**					**Received:**	
		Method: EPA 625.1				Batch ID: O-38066			Prepared: 25-Jul-22			Analyzed: 01-Aug-22	
2-Chloronaphthalene	Total	1.06	1	0.05	0.1	µg/L	1	0	106	53 - 130%	PASS		
2-Nitroaniline	Total	0.8	1	0.05	0.1	µg/L	1	0	80	69 - 114%	PASS		
3-Nitroaniline	Total	0.511	1	0.05	0.1	µg/L	0.5	0	102	23 - 137%	PASS		
4-Bromophenylphenyl ether	Total	0.82	1	0.05	0.1	µg/L	1	0	82	61 - 132%	PASS		
4-Chloroaniline	Total	0.573	1	0.05	0.1	µg/L	0.5	0	115	50 - 150%	PASS		
4-Chlorophenylphenyl ether	Total	0.99	1	0.05	0.1	µg/L	1	0	99	63 - 130%	PASS		
4-Nitroaniline	Total	0.707	1	0.05	0.1	µg/L	1	0	71	10 - 159%	PASS		
Aniline	Total	0.106	1	0.05	0.1	µg/L	0.1	0	106	50 - 150%	PASS		
Benzidine	Total	0.0243	1	0.05	0.1	µg/L	0.1	0	24	0 - 125%	PASS		
Bis(2-Chloroethoxy) methane	Total	0.91	1	0.05	0.1	µg/L	1	0	91	66 - 122%	PASS		
Bis(2-Chloroethyl) ether	Total	0.898	1	0.05	0.1	µg/L	1	0	90	43 - 127%	PASS		
Bis(2-Chloroisopropyl) ether	Total	1.58	1	0.05	0.1	µg/L	2	0	79	49 - 128%	PASS		
Dibenzofuran	Total	1.04	1	0.05	0.1	µg/L	1	0	104	50 - 150%	PASS		
Disalicylidenepropanediamin	Total	9.89	1	0.05	0.1	µg/L	10	0	99	50 - 150%	PASS		
Hexachloroethane	Total	1.03	1	0.05	0.1	µg/L	1	0	103	27 - 130%	PASS		
Nitrobenzene	Total	0.994	1	0.05	0.1	µg/L	1	0	99	54 - 111%	PASS		
N-Nitrosodi-n-propylamine	Total	0.728	1	0.05	0.1	µg/L	1	0	73	61 - 152%	PASS		
N-Nitrosodiphenylamine	Total	0.869	1	0.05	0.1	µg/L	1	0	87	49 - 142%	PASS		

PHYSIS Project ID: 1407003-247
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-11192-1

Base/Neutral Extractable Compounds QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODEc
Sample ID: 98642-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**						**Received:**		
		Method: EPA 625.1				Batch ID: O-38066			Prepared: 25-Jul-22				Analyzed: 01-Aug-22		
2-Chloronaphthalene	Total	1.05	1	0.05	0.1	µg/L	1	0	105	53 - 130%	PASS	1	30	PASS	
2-Nitroaniline	Total	0.809	1	0.05	0.1	µg/L	1	0	81	69 - 114%	PASS	1	30	PASS	
3-Nitroaniline	Total	0.685	1	0.05	0.1	µg/L	0.5	0	137	23 - 137%	PASS	29	30	PASS	
4-Bromophenylphenyl ether	Total	0.934	1	0.05	0.1	µg/L	1	0	93	61 - 132%	PASS	13	30	PASS	
4-Chloroaniline	Total	0.689	1	0.05	0.1	µg/L	0.5	0	138	50 - 150%	PASS	18	30	PASS	
4-Chlorophenylphenyl ether	Total	1.03	1	0.05	0.1	µg/L	1	0	103	63 - 130%	PASS	4	30	PASS	
4-Nitroaniline	Total	0.872	1	0.05	0.1	µg/L	1	0	87	10 - 159%	PASS	20	30	PASS	
Aniline	Total	0.0968	1	0.05	0.1	µg/L	0.1	0	97	50 - 150%	PASS	9	30	PASS	
Benzidine	Total	0.0217	1	0.05	0.1	µg/L	0.1	0	22	0 - 125%	PASS	9	30	PASS	
Bis(2-Chloroethoxy) methane	Total	0.97	1	0.05	0.1	µg/L	1	0	97	66 - 122%	PASS	6	30	PASS	
Bis(2-Chloroethyl) ether	Total	0.894	1	0.05	0.1	µg/L	1	0	89	43 - 127%	PASS	1	30	PASS	
Bis(2-Chloroisopropyl) ether	Total	1.5	1	0.05	0.1	µg/L	2	0	75	49 - 128%	PASS	5	30	PASS	
Dibenzofuran	Total	1.06	1	0.05	0.1	µg/L	1	0	106	50 - 150%	PASS	2	30	PASS	
Disalicylidenepropanediamin	Total	10.2	1	0.05	0.1	µg/L	10	0	102	50 - 150%	PASS	3	30	PASS	
Hexachloroethane	Total	0.938	1	0.05	0.1	µg/L	1	0	94	27 - 130%	PASS	9	30	PASS	
Nitrobenzene	Total	0.965	1	0.05	0.1	µg/L	1	0	96	54 - 111%	PASS	3	30	PASS	
N-Nitrosodi-n-propylamine	Total	0.939	1	0.05	0.1	µg/L	1	0	94	61 - 152%	PASS	25	30	PASS	
N-Nitrosodiphenylamine	Total	1.03	1	0.05	0.1	µg/L	1	0	103	49 - 142%	PASS	17	30	PASS	

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 98642-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
		Method: EPA 625.1				Batch ID: O-38066		Prepared: 25-Jul-22				Analyzed: 01-Aug-22	
(d10-Acenaphthene)	Total	97	1			% Recovery	100	97	65 - 113%	PASS			
(d10-Phenanthrene)	Total	82	1			% Recovery	100	82	80 - 111%	PASS			
(d12-Chrysene)	Total	71	1			% Recovery	100	71	60 - 139%	PASS			
(d12-Perylene)	Total	70	1			% Recovery	100	70	36 - 161%	PASS			
(d8-Naphthalene)	Total	117	1			% Recovery	100	117	44 - 119%	PASS			
1-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
1-Methylphenanthrene	Total	ND	1	0.001	0.005	µg/L							
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
2,6-Dimethylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
2-Methylnaphthalene	Total	ND	1	0.001	0.005	µg/L							
Acenaphthene	Total	ND	1	0.001	0.005	µg/L							
Acenaphthylene	Total	ND	1	0.001	0.005	µg/L							
Anthracene	Total	ND	1	0.001	0.005	µg/L							
Benz[a]anthracene	Total	ND	1	0.001	0.005	µg/L							
Benzo[a]pyrene	Total	ND	1	0.001	0.005	µg/L							
Benzo[b]fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Benzo[e]pyrene	Total	ND	1	0.001	0.005	µg/L							
Benzo[g,h,i]perylene	Total	ND	1	0.001	0.005	µg/L							
Benzo[k]fluoranthene	Total	ND	1	0.001	0.005	µg/L							
Biphenyl	Total	ND	1	0.001	0.005	µg/L							
Chrysene	Total	ND	1	0.001	0.005	µg/L							
Dibenz[a,h]anthracene	Total	ND	1	0.001	0.005	µg/L							
Dibenzo[a,l]pyrene	Total	ND	1	0.001	0.005	µg/L							

PHYSIS Project ID: 1407003-247
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-11192-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

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

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS	PRECISION %	PRECISION LIMITS	QA CODEc
Sample ID: 98642-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**					**Received:**	
		Method: EPA 625.1				Batch ID: O-38066			Prepared: 25-Jul-22			Analyzed: 01-Aug-22	
(d10-Acenaphthene)	Total	102	1			% Recovery	100	0	102	65 - 113%	PASS		
(d10-Phenanthrene)	Total	92	1			% Recovery	100	0	92	80 - 111%	PASS		
(d12-Chrysene)	Total	120	1			% Recovery	100	0	120	60 - 139%	PASS		
(d12-Perylene)	Total	88	1			% Recovery	100	0	88	36 - 161%	PASS		
(d8-Naphthalene)	Total	99	1			% Recovery	100	0	99	44 - 119%	PASS		
1-Methylnaphthalene	Total	0.434	1	0.001	0.005	µg/L	0.5	0	87	49 - 117%	PASS		
1-Methylphenanthrene	Total	0.356	1	0.001	0.005	µg/L	0.5	0	71	66 - 127%	PASS		
2,3,5-Trimethylnaphthalene	Total	0.39	1	0.001	0.005	µg/L	0.5	0	78	57 - 120%	PASS		
2,6-Dimethylnaphthalene	Total	0.451	1	0.001	0.005	µg/L	0.5	0	90	54 - 117%	PASS		
2-Methylnaphthalene	Total	1.63	1	0.001	0.005	µg/L	1.5	0	109	47 - 130%	PASS		
Acenaphthene	Total	1.56	1	0.001	0.005	µg/L	1.5	0	104	53 - 131%	PASS		
Acenaphthylene	Total	1.58	1	0.001	0.005	µg/L	1.5	0	105	43 - 140%	PASS		
Anthracene	Total	1.6	1	0.001	0.005	µg/L	1.5	0	107	58 - 135%	PASS		
Benz[a]anthracene	Total	1.44	1	0.001	0.005	µg/L	1.5	0	96	55 - 145%	PASS		
Benzo[a]pyrene	Total	1.85	1	0.001	0.005	µg/L	1.5	0	123	51 - 143%	PASS		
Benzo[b]fluoranthene	Total	1.62	1	0.001	0.005	µg/L	1.5	0	108	46 - 165%	PASS		
Benzo[e]pyrene	Total	0.443	1	0.001	0.005	µg/L	0.5	0	89	42 - 152%	PASS		
Benzo[g,h,i]perylene	Total	1.77	1	0.001	0.005	µg/L	1.5	0	118	63 - 133%	PASS		
Benzo[k]fluoranthene	Total	1.54	1	0.001	0.005	µg/L	1.5	0	103	56 - 145%	PASS		
Biphenyl	Total	0.532	1	0.001	0.005	µg/L	0.5	0	106	56 - 119%	PASS		
Chrysene	Total	1.96	1	0.001	0.005	µg/L	1.5	0	131	56 - 141%	PASS		
Dibenz[a,h]anthracene	Total	1.33	1	0.001	0.005	µg/L	1.5	0	89	55 - 150%	PASS		
Dibenzo[a,l]pyrene	Total	0.372	1	0.001	0.005	µg/L	0.5	0	74	50 - 150%	PASS		

PHYSIS Project ID: 1407003-247
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-11192-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS	QA CODEc
Dibenzothiophene	Total	0.411	1	0.001	0.005	µg/L	0.5	0	82	75 - 113%	PASS			
Fluoranthene	Total	1.55	1	0.001	0.005	µg/L	1.5	0	103	60 - 146%	PASS			
Fluorene	Total	1.65	1	0.001	0.005	µg/L	1.5	0	110	58 - 131%	PASS			
Indeno[1,2,3-cd]pyrene	Total	1.3	1	0.001	0.005	µg/L	1.5	0	87	50 - 151%	PASS			
Naphthalene	Total	1.59	1	0.001	0.005	µg/L	1.5	0	106	41 - 126%	PASS			
Perylene	Total	0.417	1	0.001	0.005	µg/L	0.5	0	83	48 - 141%	PASS			
Phenanthrene	Total	1.62	1	0.001	0.005	µg/L	1.5	0	108	67 - 127%	PASS			
Pyrene	Total	1.52	1	0.001	0.005	µg/L	1.5	0	101	54 - 156%	PASS			

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODEc
Sample ID: 98642-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**		
		Method: EPA 625.1				Batch ID: O-38066		Prepared: 25-Jul-22					Analyzed: 01-Aug-22		
(d10-Acenaphthene)	Total	105	1			% Recovery	100	0	105	65 - 113%	PASS	3	30	PASS	
(d10-Phenanthrene)	Total	106	1			% Recovery	100	0	106	80 - 111%	PASS	14	30	PASS	
(d12-Chrysene)	Total	136	1			% Recovery	100	0	136	60 - 139%	PASS	12	30	PASS	
(d12-Perylene)	Total	104	1			% Recovery	100	0	104	36 - 161%	PASS	17	30	PASS	
(d8-Naphthalene)	Total	100	1			% Recovery	100	0	100	44 - 119%	PASS	1	30	PASS	
1-Methylnaphthalene	Total	0.48	1	0.001	0.005	µg/L	0.5	0	96	49 - 117%	PASS	10	30	PASS	
1-Methylphenanthrene	Total	0.45	1	0.001	0.005	µg/L	0.5	0	90	66 - 127%	PASS	24	30	PASS	
2,3,5-Trimethylnaphthalene	Total	0.473	1	0.001	0.005	µg/L	0.5	0	95	57 - 120%	PASS	20	30	PASS	
2,6-Dimethylnaphthalene	Total	0.486	1	0.001	0.005	µg/L	0.5	0	97	54 - 117%	PASS	7	30	PASS	
2-Methylnaphthalene	Total	1.68	1	0.001	0.005	µg/L	1.5	0	112	47 - 130%	PASS	3	30	PASS	
Acenaphthene	Total	1.62	1	0.001	0.005	µg/L	1.5	0	108	53 - 131%	PASS	4	30	PASS	
Acenaphthylene	Total	1.64	1	0.001	0.005	µg/L	1.5	0	109	43 - 140%	PASS	4	30	PASS	
Anthracene	Total	1.7	1	0.001	0.005	µg/L	1.5	0	113	58 - 135%	PASS	5	30	PASS	
Benz[a]anthracene	Total	1.68	1	0.001	0.005	µg/L	1.5	0	112	55 - 145%	PASS	15	30	PASS	
Benzo[a]pyrene	Total	1.95	1	0.001	0.005	µg/L	1.5	0	130	51 - 143%	PASS	6	30	PASS	
Benzo[b]fluoranthene	Total	1.75	1	0.001	0.005	µg/L	1.5	0	117	46 - 165%	PASS	8	30	PASS	
Benzo[e]pyrene	Total	0.537	1	0.001	0.005	µg/L	0.5	0	107	42 - 152%	PASS	18	30	PASS	
Benzo[g,h,i]perylene	Total	1.95	1	0.001	0.005	µg/L	1.5	0	130	63 - 133%	PASS	10	30	PASS	
Benzo[k]fluoranthene	Total	1.61	1	0.001	0.005	µg/L	1.5	0	107	56 - 145%	PASS	4	30	PASS	
Biphenyl	Total	0.521	1	0.001	0.005	µg/L	0.5	0	104	56 - 119%	PASS	2	30	PASS	
Chrysene	Total	2.12	1	0.001	0.005	µg/L	1.5	0	141	56 - 141%	PASS	7	30	PASS	
Dibenz[a,h]anthracene	Total	1.56	1	0.001	0.005	µg/L	1.5	0	104	55 - 150%	PASS	16	30	PASS	
Dibenzo[a,l]pyrene	Total	0.324	1	0.001	0.005	µg/L	0.5	0	65	50 - 150%	PASS	13	30	PASS	

PHYSIS Project ID: 1407003-247
Client: Eurofins Eaton Analytical
Project: RED-HILL Project # 38001111 Job # 380-11192-1

Polynuclear Aromatic Hydrocarbons QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	ACCURACY LIMITS		PRECISION %	PRECISION LIMITS		QA CODEc
Dibenzothiophene	Total	0.5	1	0.001	0.005	µg/L	0.5	0	100	75 - 113%	PASS	20	30	PASS	
Fluoranthene	Total	1.74	1	0.001	0.005	µg/L	1.5	0	116	60 - 146%	PASS	12	30	PASS	
Fluorene	Total	1.76	1	0.001	0.005	µg/L	1.5	0	117	58 - 131%	PASS	6	30	PASS	
Indeno[1,2,3-cd]pyrene	Total	1.55	1	0.001	0.005	µg/L	1.5	0	103	50 - 151%	PASS	17	30	PASS	
Naphthalene	Total	1.58	1	0.001	0.005	µg/L	1.5	0	105	41 - 126%	PASS	1	30	PASS	
Perylene	Total	0.482	1	0.001	0.005	µg/L	0.5	0	96	48 - 141%	PASS	15	30	PASS	
Phenanthrene	Total	1.75	1	0.001	0.005	µg/L	1.5	0	117	67 - 127%	PASS	8	30	PASS	
Pyrene	Total	1.76	1	0.001	0.005	µg/L	1.5	0	117	54 - 156%	PASS	15	30	PASS	

TENTATIVELY IDENTIFIED COMPOUNDS

Sample ID: 98643

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6478	6.6914	1111	Anthracene-D10-	1517-22-2	95
43.1756	1.9109	317	Terephthalic acid, isobutyl butyl ester	1000323-56-2	95
14.9717	1.2735	211	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	82
41.8397	1.0479	174	Cyclic octaatomic sulfur	10544-50-0	96

Concentration estimated using the response for Anthracene-d10

Sample ID: Lab Blank Batch O-38066

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6450	7.2436	1111	Anthracene-D10-	1719-06-8	96
14.9726	1.4015	215	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	81
14.8120	0.7195	110	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	80

Concentration estimated using the response for Anthracene-d10

CHAIN OF CUSTODY

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

Chain of Custody Record

eurofins | Environment Testing America

10/9/2022

Client Information (Sub Contract Lab)	Sampler:	Lab PM: Frank, Debbie L	Carrier Tracking No(s):	COC No: 380-13748.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: Debbie.Frank@et.eurofinsus.com	State of Origin: Hawaii	Page: Page 1 of 1
Company: Physis Environmental Laboratories		Accreditations Required (See note): State - Hawaii		Job #: 380-11192-1
Address: 1904 Wright Circle, ,	Due Date Requested: 8/3/2022			
City: Anaheim	TAT Requested (days):			
State, Zip: CA, 92806				
Phone:	PO #:			
Email:	WO #:			
Project Name: RED-HILL	Project #: 38001111			
Site: Honolulu BWS Sites	SSOW#:			

Analysis Requested

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

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUB (625 Acid LL (EAL) Physis)/ 625 Acid LL (EAL) Physis	SUB (625 Base Neutral LL (EAL) Physis)/ 625 Base Neutral LL (EAL) Physis	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MOANALUA WELLS (331-223-TP202) (380-11192-1)	7/18/22	10:45 Hawaiian		Water			X	X	2	See Attached Instructions

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

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

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

	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
1	[signature]	7/22/22 1153	[illegible]	[signature]	7/22/22 1153	Physis
2	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company
3	Relinquished by:	Date/Time:	Company	Received by:	Date/Time:	Company

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

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

PHYSIS

Project Iteration ID: 1407003-247
Client Name: Eurofins Eaton Analytical
Project Name: RED-HILL Project # 38001111
Job # 380-11192-1
COC Page Number: 2 of 2
Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: [signature]
2. Date Received: 7/22/20
3. Time Received: 1153
4. Client Name: Eurofins
5. ~~Courier~~ Information: (Please circle)
   - (Client)
   - UPS
   - Area Fast
   - DRS
   - FedEx
   - GSO/GLS
   - Ontrac
   - PAMS
   - PHYSIS Driver:
     - i. Start Time:_____
     - ii. End Time:_____
     - iii. Total Mileage:_____
     - iv. Number of Pickups:_____
6. Container Information: (Please put the # of containers or circle none)
   - 3 Cooler
   - __ Styrofoam Cooler
   - ____ Boxes
   - None
   - ___ Carboy(s)
   - __Carboy Trash Can(s)
   - ____ Carboy Cap(s)
   - Other _____
7. ~~What type~~ of ice was used: (Please circle any that apply)
   - (Wet Ice)
   - Blue Ice
   - Dry Ice
   - Water
   - None
8. Randomly Selected Samples Temperature (°C): 1.2 Used I/R Thermometer # I-2

Inspection Info

1. Initials Inspected By: [signature]

Sample Integrity Upon Receipt:

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

Notes:

eurofins | Eaton Analytical

CHAIN OF CUSTODY RECORD

750 Royal Oaks Drive
Monrovia, CA 91016-3
Phone: 626 386 1100
Fax: 626 386 1101
800 566 LABS (800 56

380-11192 COC

EUROFINS EATON ANALYTICAL USE ONLY

LOGIN COMMENTS: _____

SAMPLES CHECKED AGAINST COC BY: W

SAMPLES LOGGED IN BY: GS

SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

SAMPLE TEMP RECEIVED AT:

☐ Colton / No California / Arizona _____ °C (Compliance 4 ± 2 °C)

☑ Monrovia 3.1 °C (Compliance 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen _____ Partially Frozen _____ Thawed _____ Wet Ice _____ No Ice _____

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

TO BE COMPLETED BY SAMPLER

COMPANY/AGENCY NAME:	PROJECT CODE:	COMPLIANCE SAMPLES (check for yes) ☐	NON-COMPLIANCE SAMPLES (check for yes) X
HONOLULU BOARD OF WATER SUPPLY	RED HILL-3Q	- Requires state forms ☐	REGULATION INVOLVED
EEA CLIENT CODE:	COC ID:	SAMPLE GROUP:	Type of samples (circle one) ROUTINE SPECIAL CONFIRMATION (eg SDWA, Phase V, NPDES, FDA,)

SEE ATTACHED BOTTLE ORDER FOR ANALYSES X (check for yes), *OR*

list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)

TAT requested: **RUSH** STD_X_ 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	Red Hill												SAMPLER COMMENTS
7/18/22	1045	Moanalua Wells	HI0000331-223	CFW			X												

* **MATRIX TYPES:** **RSW** = Raw Surface Water, **RGW** = Raw Ground Water, **CFW** = Chlor(am)inated Finished Water, **FW** = Other Finished Water, **SEAW** = Sea Water, **WW** = Waste Water, **BW** = Bottled Water, **SW** = Storm Water, **SO** = Soil, **SL** = Sludge, **O** = Other - Please Identify

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY	[redacted]	RN	BWS HONOLULU	07/18/2022	1045
RELINQUISHED BY		RN	BWS HONOLULU	07/19/22	1200
RECEIVED BY		Victor Mascena	EEA	7.20.22	1010
RELINQUISHED BY					
RECEIVED BY					

PAGE 1 OF 1

10/9/2022

Bottle Order Information

Bottle Order RED-HILL - Quarterly
Bottle Order # 1845
Request From Client: 6/23/2022
Date Order Posted: 6/23/2022 7:29:27AM
Order Status Ready To Process
Prepared By Davis Haley
Deliver By Date: ***6/27/2022 11:59:00PM***
Lab Project Number: 38001111
PWSID: HI00000331-201-TP071, HI00000331-202-TP072, HI0000(

Order Completion Information

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

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
6	6	36	Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	504.1_PREC - Local Method	Water	Normal		
					505_LL_PREC - ML505 +505-EAL Aldrin Dieldrin Toxaphene	Water	Normal		
6	1	6	Plastic 250ml - unpreserved	None	2320B - (MOD) Total Alkalinity	Water	Normal		
					SM4500_H+ - Local Method	Water	Normal		
					2510B - Conductivity	Water	Normal		
6	1	6	Plastic 500ml - with Nitric Acid	Nitric Acid	200.8 - Metals, Priority Pollutant by 200.8	Water	Normal		
					200.7 - (MOD) Custom	Water	Normal		
6	1	6	Plastic 500ml - unpreserved	None	2540C_Calcd - Total Dissolved Solids (TDS)	Water	Normal		
6	1	6	Plastic 250ml - with Zinc Acetate & NaOH	Zinc Acetate and Sodium Hydroxide	SM4500_S2_D - Sulfide, Total	Water	Normal		
6	6	36	Voa Vial 40ml Amber - Ascor. Acid & HCL	Ascorbic Acid and Hydrochloric Acid	524.2_Pres_PREC - VOASDWA plus TICs + Acetone	Water	Normal		
					524.2_SIM_PREC - TBA by 524.2 SIM	Water	Normal		
6	2	12	Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	525.2_PREC - 525plus Plus TICs	Water	Normal		

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

	0	0	Clear Glass unpreserved	one	SUBCONTRACT - 625 Acid LL Physis		rmal			
					SUBCONTRACT - 625 Base Neutral LL (EAL) Physis	Water	Normal			
					SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	Water	Normal			
					SUBCONTRACT - 8015 Ethanol	Water	Normal			
					SUBCONTRACT - 8015 Gas (Purgeable) LL (EAL)	Water	Normal			
					SUBCONTRACT - 8015 Diesel LL (EAL) and Motor Oil	Water	Normal			
					SUBCONTRACT - 8015 Jet Fuel 5 (JP5)	Water	Normal			
					SUBCONTRACT - 8015 Jet Fuel 8 (JP8)	Water	Normal			
6	2	12	Plastic 125mL - unpreserved	None	300_OF_28D_B - Bromide	Water	Normal			
					4500_F_C - Fluoride	Water	Normal			
					300_OF_28D_PREC - Chloride and Sulfate	Water	Normal			
					300_OF_48H_PREC - Nitrite, Nitrate, and Nitrite+Nitrate	Water	Normal			
6	1	6	Plastic 250ml - with Nitric Acid	Nitric Acid	245.1 - Local Method	Water	Normal			

Total Bottle Summary

Bottle Type Description	Preservative	Bottle Count
Amber Glass 1 Liter- Sodium Sulfite/HCl	Sodium Sulfite w/HCl	12
Clear Glass 1 gallon Wide - unpreserved	None	0
Plastic 125mL - unpreserved	None	12
Plastic 250ml - unpreserved	None	6
Plastic 250ml - with Nitric Acid	Nitric Acid	6
Plastic 250ml - with Zinc Acetate & NaOH	Zinc Acetate and Sodium Hydroxide	6
Plastic 500ml - unpreserved	None	6
Plastic 500ml - with Nitric Acid	Nitric Acid	6
Voa Vial 40ml Amber - Ascor. Acid & HCL	Ascorbic Acid and Hydrochloric Acid	36
Voa Vial 40ml Amber - Sodium thiosulfate	Sodium Thiosulfate	36
	Total Bottles:	**126**

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative	Comment
Ascorbic Acid and Hydrochloric Acid	Contains 25mg/ml Ascorbic Acid. May cause mild irritation to skin and eyes. CAUTION! CONTAINS 1:1 HYDROCHLORIC ACID. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.
Nitric Acid	CAUTION! STRONG OXIDIZER! CONTAINS 1:1 NITRIC ACID. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.

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

Shipping Order Form - Bottle Order

eurofins | Er... Ame...

S380-6988

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

Shipping Order ID: 6988

Ship Via: FedEx

Due On: 6/27/2022 11:59:00PM

Ship To Information

Project Manager: Debbie Frank
Em: Debbie.Frank@et.eurofinsus.com
Company Name: City & County of Honolulu
Attention: Ron Fenstemacher
Address 1: 630 South Beretania Street
Address 2: Chemistry Lab
Address 3:
City: Honolulu
State: HI
Zip: 96843
Phone #: +1-808-748-5841
Project Ref: RED-HILL

Shipping Method: **Pack by sample set (affixed TALS labels)**

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

Notes to Bottle/Shipping Department

Pack with Gel Ice

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

Shipping Assets

Assets	Quantity	Description	Filled
Gel Ice	1	Pack with Gel Ice	☐

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

Health and Safety Note Preservative	Comment
Sodium Sulfite w/HCl	CAUTION! CONTAINS SODIUM SULFITE. Harmful if inhaled Use adequate ventilation. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.
Sodium Thiosulfate	CAUTION! CONTAINS 10% SODIUM THIOSULFATE. Harmful if inhaled Use adequate ventilation. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water
Zinc Acetate and Sodium Hydroxide	Contains 2N Zinc Acetate. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water. CAUTION! STRONG CAUSTIC! CONTAINS SODIUM HYDROXIDE PELLETS. Avoid skin and eye contact. If contact is made, FLUSH IMMEDIATELY with water.

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

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

eurofins | Eaton Analytical

INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

SAMPLE TEMP RECEIVED:

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

SAMPLES REC'D DAY OF COLLECTION? Yes (No)

IR Gun ID = 630 (Observation= 3.3 °C) (Corr.Factor -0.2 °C) (Final = 3.1 °C)

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

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

Compliance Acceptance Criteria:

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

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

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

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

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

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

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

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

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

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

Exempt from headspace concerns: Methods 515.4, HAA(6251,552), 505, SPME, @CH, 532LCMS, 556, 536, Anatoxin, LCMS methods using 40 ml vials, International clients:

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

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

	SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
RECEIVED BY:	[signature]	Victor Nascimento	Eurofins Eaton Analytical	7-20-22	1010
SAMPLES CHECKED AGAINST COC BY:			Eurofins Eaton Analytical		

QA FO-FRM5504 (9.28.21) Ver 9

Page ___ of ___

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

SHIP DATE: 19JUL22
ACTWGT: 75.00 LB
CAD: 100205419/INET4490

BILL RECIPIENT

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

581J2/0A92/FE4A

FedEx Express E
J222022041201uv

12 of 12
MPS# 7774 2766 6692 0201
0263
Mstr# 7774 2766 5413

WED - 20 JUL 10:30A
PRIORITY OVERNIGHT

WZ WHPA 91016
CA-US BUR

After printing this label:
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.
2. Fold the printed page along the horizontal line.
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-11192-1

Login Number: 11192
List Number: 1
Creator: Sanchez Velasquez, Gustavo

List Source: Eurofins Eaton Monrovia

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