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ANALYTICAL REPORT

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

Laboratory Job ID: 380-12276-1
Client Project/Site: INTERA - Red-Hill-Incident

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:
10/19/2022 7:09:59 PM
Debbie Frank, Project Manager
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Designee for

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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)

Debbie Frank
Project Manager
10/19/2022 7:09:59 PM

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Definitions/Glossary

Client: City & County of Honolulu
Job ID: 380-12276-1
Project/Site: INTERA - Red-Hill-Incident

Glossary

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

Job ID: 380-12276-1

Laboratory: Eurofins Eaton Monrovia

Narrative

Job Narrative
380-12276-1

Comments

ND on SubContract Lab reports for this project:
MDL is listed due to report format restrictions; it is not used in reporting. Analytical results reported are ND at the RL.

Receipt
The sample was received on 7/27/2022 9:15 AM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice.

Subcontract non-Sister
See attached subcontract report.

Subcontract Work
Method 625 PAH Physis LL (EAL) + TICs: This method was subcontracted to Physis Environmental Laboratories. The subcontract laboratory certification is different from that of the facility issuing the final report.

Detection Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-12276-1

Client Sample ID: BWS2253-J1-AQ

Lab Sample ID: 380-12276-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Benzo[a]pyrene	0.00545		0.005	0.001	µg/L	1		625 PAH Physis LL (EAL) + TICs	Total/NA
Benzo[e]pyrene	0.00819		0.005	0.001	µg/L	1		625 PAH Physis LL (EAL) + TICs	Total/NA
Benzo[g,h,i]perylene	0.0373		0.005	0.001	µg/L	1		625 PAH Physis LL (EAL) + TICs	Total/NA
Fluoranthene	0.02		0.005	0.001	µg/L	1		625 PAH Physis LL (EAL) + TICs	Total/NA
Indeno[1,2,3-cd]pyrene	0.0103		0.005	0.001	µg/L	1		625 PAH Physis LL (EAL) + TICs	Total/NA
Phenanthrene	0.00753		0.005	0.001	µg/L	1		625 PAH Physis LL (EAL) + TICs	Total/NA
Pyrene	0.121		0.005	0.001	µg/L	1		625 PAH Physis LL (EAL) + TICs	Total/NA

This Detection Summary does not include radiochemical test results.

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-12276-1

Client Sample ID: BWS2253-J1-AQ
Date Collected: 07/26/22 09:30
Date Received: 07/27/22 09:15

Lab Sample ID: 380-12276-1
Matrix: Drinking 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		07/27/22 00:00	07/31/22 22:28	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Acenaphthene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Acenaphthylene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Anthracene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Benzo[a]pyrene	**0.00545**		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Benzo[e]pyrene	**0.00819**		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Benzo[g,h,i]perylene	**0.0373**		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Biphenyl	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Chrysene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Dibenzothiophene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		07/27/22 00:00	07/31/22 22:28	1
Fluoranthene	**0.02**		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Fluorene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Indeno[1,2,3-cd]pyrene	**0.0103**		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Naphthalene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Perylene	ND		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Phenanthrene	**0.00753**		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1
Pyrene	**0.121**		0.005	0.001	µg/L		07/27/22 00:00	07/31/22 22:28	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*80*		*45 - 118*	*07/27/22 00:00*	*07/31/22 22:28*	*1*
(d10-Phenanthrene)	*84*		*56 - 123*	*07/27/22 00:00*	*07/31/22 22:28*	*1*
(d12-Chrysene)	*61*		*36 - 142*	*07/27/22 00:00*	*07/31/22 22:28*	*1*
(d12-Perylene)	*73*		*36 - 161*	*07/27/22 00:00*	*07/31/22 22:28*	*1*
(d8-Naphthalene)	*82*		*20 - 112*	*07/27/22 00:00*	*07/31/22 22:28*	*1*

Surrogate Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-12276-1

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

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

		Percent Surrogate Recovery (Acceptance Limits)							
		Acenapht	Phenanth	CRY	NPT	PRY			
Lab Sample ID	Client Sample ID	(45-118)	(56-123)	(36-142)	(20-112)	(36-161)			
380-12276-1	BWS2253-J1-AQ	80	84	61	82	73			

Surrogate Legend

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

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

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

		Percent Surrogate Recovery (Acceptance Limits)							
		Acenapht	Phenanth	CRY	NPT	PRY			
Lab Sample ID	Client Sample ID	(65-113)	(80-111)	(60-139)	(44-119)	(36-161)			
98722-B1	Method Blank	98	97	92	99	87			
98722-BS1	Lab Control Sample	101	98	101	98	87			
98722-BS2	Lab Control Sample Dup	100	99	107	98	85			

Surrogate Legend

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

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

Lab Sample ID: 98722-B1
Matrix: water
Analysis Batch: O-38064

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: O-38064_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	07/31/22 06:55	1
1-Methylphenanthrene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
2,3,5-Trimethylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
2,6-Dimethylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
2-Methylnaphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Acenaphthene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Acenaphthylene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Benz[a]anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Benzo[a]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Benzo[b]fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Benzo[e]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Benzo[g,h,i]perylene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Benzo[k]fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Biphenyl	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Chrysene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Dibenz[a,h]anthracene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Dibenzo[a,l]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Dibenzothiophene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Disalicylidenepropanediamine	ND		0.1	0.05	µg/L		07/25/22 00:00	07/31/22 06:55	1
Fluoranthene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Fluorene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Indeno[1,2,3-cd]pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Naphthalene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Perylene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Phenanthrene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1
Pyrene	ND		0.005	0.001	µg/L		07/25/22 00:00	07/31/22 06:55	1

Surrogate	*Blank %Recovery*	*Blank Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
(d10-Acenaphthene)	*98*		*65 - 113*	*07/25/22 00:00*	*07/31/22 06:55*	*1*
(d10-Phenanthrene)	*97*		*80 - 111*	*07/25/22 00:00*	*07/31/22 06:55*	*1*
(d12-Chrysene)	*92*		*60 - 139*	*07/25/22 00:00*	*07/31/22 06:55*	*1*
(d12-Perylene)	*87*		*36 - 161*	*07/25/22 00:00*	*07/31/22 06:55*	*1*
(d8-Naphthalene)	*99*		*44 - 119*	*07/25/22 00:00*	*07/31/22 06:55*	*1*

Lab Sample ID: 98722-BS1
Matrix: water
Analysis Batch: O-38064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-38064_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits
1-Methylnaphthalene	0.5	0.478		µg/L		96	49 - 117
1-Methylphenanthrene	0.5	0.414		µg/L		83	66 - 127
2,3,5-Trimethylnaphthalene	0.5	0.453		µg/L		91	57 - 120
2,6-Dimethylnaphthalene	0.5	0.463		µg/L		93	54 - 117
2-Methylnaphthalene	0.5	0.484		µg/L		97	47 - 130
Acenaphthene	0.5	0.471		µg/L		94	53 - 131
Acenaphthylene	0.5	0.475		µg/L		95	43 - 140
Anthracene	0.5	0.434		µg/L		87	58 - 135

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

Lab Sample ID: 98722-BS1
Matrix: water
Analysis Batch: O-38064

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: O-38064_P

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Benz[a]anthracene			0.5	0.401		µg/L		80	55 - 145		
Benzo[a]pyrene			0.5	0.415		µg/L		83	51 - 143		
Benzo[b]fluoranthene			0.5	0.496		µg/L		99	46 - 165		
Benzo[e]pyrene			0.5	0.454		µg/L		91	42 - 152		
Benzo[g,h,i]perylene			0.5	0.438		µg/L		88	63 - 133		
Benzo[k]fluoranthene			0.5	0.445		µg/L		89	56 - 145		
Biphenyl			0.5	0.485		µg/L		97	56 - 119		
Chrysene			0.5	0.432		µg/L		86	56 - 141		
Dibenz[a,h]anthracene			0.5	0.437		µg/L		87	55 - 150		
Dibenzo[a,l]pyrene			0.25	0.202		µg/L		81	50 - 150		
Dibenzothiophene			0.5	0.449		µg/L		90	75 - 113		
Disalicylidenepropanediamine			10	9.48		µg/L		95	50 - 150		
Fluoranthene			0.5	0.436		µg/L		87	60 - 146		
Fluorene			0.5	0.469		µg/L		94	58 - 131		
Indeno[1,2,3-cd]pyrene			0.5	0.435		µg/L		87	50 - 151		
Naphthalene			0.5	0.479		µg/L		96	41 - 126		
Perylene			0.5	0.397		µg/L		79	48 - 141		
Phenanthrene			0.5	0.458		µg/L		92	67 - 127		
Pyrene			0.5	0.411		µg/L		82	54 - 156		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
(d10-Acenaphthene)	*101*		*65 - 113*
(d10-Phenanthrene)	*98*		*80 - 111*
(d12-Chrysene)	*101*		*60 - 139*
(d12-Perylene)	*87*		*36 - 161*
(d8-Naphthalene)	*98*		*44 - 119*

Lab Sample ID: 98722-BS2
Matrix: water
Analysis Batch: O-38064

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-38064_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	0	30
1-Methylphenanthrene			0.5	0.431		µg/L		86	66 - 127	4	30
2,3,5-Trimethylnaphthalene			0.5	0.466		µg/L		93	57 - 120	2	30
2,6-Dimethylnaphthalene			0.5	0.47		µg/L		94	54 - 117	1	30
2-Methylnaphthalene			0.5	0.489		µg/L		98	47 - 130	1	30
Acenaphthene			0.5	0.472		µg/L		94	53 - 131	0	30
Acenaphthylene			0.5	0.478		µg/L		96	43 - 140	1	30
Anthracene			0.5	0.447		µg/L		89	58 - 135	2	30
Benz[a]anthracene			0.5	0.43		µg/L		86	55 - 145	7	30
Benzo[a]pyrene			0.5	0.436		µg/L		87	51 - 143	5	30
Benzo[b]fluoranthene			0.5	0.531		µg/L		106	46 - 165	7	30
Benzo[e]pyrene			0.5	0.48		µg/L		96	42 - 152	5	30
Benzo[g,h,i]perylene			0.5	0.444		µg/L		89	63 - 133	1	30
Benzo[k]fluoranthene			0.5	0.473		µg/L		95	56 - 145	7	30
Biphenyl			0.5	0.489		µg/L		98	56 - 119	1	30
Chrysene			0.5	0.449		µg/L		90	56 - 141	5	30

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

Lab Sample ID: 98722-BS2
Matrix: water
Analysis Batch: O-38064

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: O-38064_P

Analyte			Spike Added	LCS DUP Result	LCS DUP Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Dibenz[a,h]anthracene			0.5	0.438		µg/L		88	55 - 150	1	30
Dibenzo[a,l]pyrene			0.25	0.213		µg/L		85	50 - 150	5	30
Dibenzothiophene			0.5	0.459		µg/L		92	75 - 113	2	30
Disalicylidenepropanediamine			10	9.77		µg/L		98	50 - 150	3	30
Fluoranthene			0.5	0.441		µg/L		88	60 - 146	1	30
Fluorene			0.5	0.474		µg/L		95	58 - 131	1	30
Indeno[1,2,3-cd]pyrene			0.5	0.435		µg/L		87	50 - 151	0	30
Naphthalene			0.5	0.478		µg/L		96	41 - 126	0	30
Perylene			0.5	0.421		µg/L		84	48 - 141	6	30
Phenanthrene			0.5	0.468		µg/L		94	67 - 127	2	30
Pyrene			0.5	0.421		µg/L		84	54 - 156	2	30

Surrogate	*LCS DUP %Recovery*	*LCS DUP Qualifier*	*Limits*
(d10-Acenaphthene)	*100*		*65 - 113*
(d10-Phenanthrene)	*99*		*80 - 111*
(d12-Chrysene)	*107*		*60 - 139*
(d12-Perylene)	*85*		*36 - 161*
(d8-Naphthalene)	*98*		*44 - 119*

QC Association Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-12276-1

Subcontract

Analysis Batch: O-38064

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-12276-1	BWS2253-J1-AQ	Total/NA	Drinking Water	625 PAH Physis LL (EAL) + TICs	O-38064_P
98722-B1	Method Blank	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38064_P
98722-BS1	Lab Control Sample	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38064_P
98722-BS2	Lab Control Sample Dup	Total/NA	water	625 PAH Physis LL (EAL) + TICs	O-38064_P

Prep Batch: O-38064_P

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
380-12276-1	BWS2253-J1-AQ	Total/NA	Drinking Water	EPA_625	
98722-B1	Method Blank	Total/NA	water	EPA_625	
98722-BS1	Lab Control Sample	Total/NA	water	EPA_625	
98722-BS2	Lab Control Sample Dup	Total/NA	water	EPA_625	

Lab Chronicle

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-12276-1

Client Sample ID: BWS2253-J1-AQ

Date Collected: 07/26/22 09:30
Date Received: 07/27/22 09:15

Lab Sample ID: 380-12276-1

Matrix: Drinking Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Analyst	Lab	Prepared or Analyzed
Total/NA	Prep	EPA_625		1	O-38064_P			07/27/22 00:00
Total/NA	Analysis	625 PAH Physis LL (EAL) + TICs		1	O-38064	YC		07/31/22 22:28

Laboratory References:

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

Method Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-12276-1

Method	Method Description	Protocol	Laboratory
625	EPA 625 Base/Neutral and Acid Organics i	EPA	

Protocol References:

EPA = US Environmental Protection Agency

Laboratory References:

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

Sample Summary

Client: City & County of Honolulu
Project/Site: INTERA - Red-Hill-Incident

Job ID: 380-12276-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
380-12276-1	BWS2253-J1-AQ	Drinking Water	07/26/22 09:30	07/27/22 09:15

August 08, 2022

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

Project Name: RED HILL
Physis Project ID: 1407003-257

Dear Debbie,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 7/27/2022. 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

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: 1407003-257

RED HILL

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
98723	BWS2253-J1-AQ		7/26/2022	9:30	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: 1407003-257
Client: Eurofins Eaton Analytical
Project: RED HILL

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 98723-R1	**BWS2253-J1-AQ**		**Matrix: Samplewater**				**Sampled:**	**26-Jul-22 9:30**		**Received:**	**27-Jul-22**
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-38064	27-Jul-22	31-Jul-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 98723-R1	**BWS2253-J1-AQ**		**Matrix: Samplewater**				**Sampled:**	**26-Jul-22 9:30**		**Received:**	**27-Jul-22**
(d10-Acenaphthene)	EPA 625.1	% Recovery	80	1			Total		O-38064	27-Jul-22	31-Jul-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	84	1			Total		O-38064	27-Jul-22	31-Jul-22
(d12-Chrysene)	EPA 625.1	% Recovery	61	1			Total		O-38064	27-Jul-22	31-Jul-22
(d12-Perylene)	EPA 625.1	% Recovery	73	1			Total		O-38064	27-Jul-22	31-Jul-22
(d8-Naphthalene)	EPA 625.1	% Recovery	82	1			Total		O-38064	27-Jul-22	31-Jul-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Benzo[a]pyrene	EPA 625.1	µg/L	0.00545	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Benzo[e]pyrene	EPA 625.1	µg/L	0.00819	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	0.0373	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22

PHYSIS Project ID: 1407003-257
Client: Eurofins Eaton Analytical
Project: RED HILL

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	0.02	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	0.0103	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Phenanthrene	EPA 625.1	µg/L	0.00753	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22
Pyrene	EPA 625.1	µg/L	0.121	1	0.001	0.005	Total		O-38064	27-Jul-22	31-Jul-22

QUALITY CONTROL REPORT

PHYSIS Project ID: 1407003-257
Client: Eurofins Eaton Analytical
Project: RED HILL

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: 98722-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**	
		Method: EPA 625.1				Batch ID: O-38064		Prepared: 25-Jul-22					Analyzed: 31-Jul-22	
Disalicylidenepropanediamin	Total	ND	1	0.05	0.1	µg/L								
Sample ID: 98722-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**	
		Method: EPA 625.1				Batch ID: O-38064		Prepared: 25-Jul-22					Analyzed: 31-Jul-22	
Disalicylidenepropanediamin	Total	9.48	1	0.05	0.1	µg/L	10	0	95	50 - 150%	PASS			
Sample ID: 98722-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**	
		Method: EPA 625.1				Batch ID: O-38064		Prepared: 25-Jul-22					Analyzed: 31-Jul-22	
Disalicylidenepropanediamin	Total	9.77	1	0.05	0.1	µg/L	10	0	98	50 - 150%	PASS	3	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: 98722-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**					**Received:**	
	Method: EPA 625.1					Batch ID: O-38064		Prepared: 25-Jul-22				Analyzed: 31-Jul-22	
(d10-Acenaphthene)	Total	98	1			% Recovery	100	98		65 - 113%		PASS	
(d10-Phenanthrene)	Total	97	1			% Recovery	100	97		80 - 111%		PASS	
(d12-Chrysene)	Total	92	1			% Recovery	100	92		60 - 139%		PASS	
(d12-Perylene)	Total	87	1			% Recovery	100	87		36 - 161%		PASS	
(d8-Naphthalene)	Total	99	1			% Recovery	100	99		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: 1407003-257
Client: Eurofins Eaton Analytical
Project: RED HILL

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: 98722-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
		Method: EPA 625.1				Batch ID: O-38064		Prepared: 25-Jul-22				Analyzed: 31-Jul-22	
(d10-Acenaphthene)	Total	101	1			% Recovery	100	0	101	65 - 113%		PASS	
(d10-Phenanthrene)	Total	98	1			% Recovery	100	0	98	80 - 111%		PASS	
(d12-Chrysene)	Total	101	1			% Recovery	100	0	101	60 - 139%		PASS	
(d12-Perylene)	Total	87	1			% Recovery	100	0	87	36 - 161%		PASS	
(d8-Naphthalene)	Total	98	1			% Recovery	100	0	98	44 - 119%		PASS	
1-Methylnaphthalene	Total	0.478	1	0.001	0.005	µg/L	0.5	0	96	49 - 117%		PASS	
1-Methylphenanthrene	Total	0.414	1	0.001	0.005	µg/L	0.5	0	83	66 - 127%		PASS	
2,3,5-Trimethylnaphthalene	Total	0.453	1	0.001	0.005	µg/L	0.5	0	91	57 - 120%		PASS	
2,6-Dimethylnaphthalene	Total	0.463	1	0.001	0.005	µg/L	0.5	0	93	54 - 117%		PASS	
2-Methylnaphthalene	Total	0.484	1	0.001	0.005	µg/L	0.5	0	97	47 - 130%		PASS	
Acenaphthene	Total	0.471	1	0.001	0.005	µg/L	0.5	0	94	53 - 131%		PASS	
Acenaphthylene	Total	0.475	1	0.001	0.005	µg/L	0.5	0	95	43 - 140%		PASS	
Anthracene	Total	0.434	1	0.001	0.005	µg/L	0.5	0	87	58 - 135%		PASS	
Benz[a]anthracene	Total	0.401	1	0.001	0.005	µg/L	0.5	0	80	55 - 145%		PASS	
Benzo[a]pyrene	Total	0.415	1	0.001	0.005	µg/L	0.5	0	83	51 - 143%		PASS	
Benzo[b]fluoranthene	Total	0.496	1	0.001	0.005	µg/L	0.5	0	99	46 - 165%		PASS	
Benzo[e]pyrene	Total	0.454	1	0.001	0.005	µg/L	0.5	0	91	42 - 152%		PASS	
Benzo[g,h,i]perylene	Total	0.438	1	0.001	0.005	µg/L	0.5	0	88	63 - 133%		PASS	
Benzo[k]fluoranthene	Total	0.445	1	0.001	0.005	µg/L	0.5	0	89	56 - 145%		PASS	
Biphenyl	Total	0.485	1	0.001	0.005	µg/L	0.5	0	97	56 - 119%		PASS	
Chrysene	Total	0.432	1	0.001	0.005	µg/L	0.5	0	86	56 - 141%		PASS	
Dibenz[a,h]anthracene	Total	0.437	1	0.001	0.005	µg/L	0.5	0	87	55 - 150%		PASS	
Dibenzo[a,l]pyrene	Total	0.202	1	0.001	0.005	µg/L	0.25	0	81	50 - 150%		PASS	

PHYSIS Project ID: 1407003-257
Client: Eurofins Eaton Analytical
Project: RED HILL

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	0.449	1	0.001	0.005	µg/L	0.5	0	90	75 - 113%	PASS			
Fluoranthene	Total	0.436	1	0.001	0.005	µg/L	0.5	0	87	60 - 146%	PASS			
Fluorene	Total	0.469	1	0.001	0.005	µg/L	0.5	0	94	58 - 131%	PASS			
Indeno[1,2,3-cd]pyrene	Total	0.435	1	0.001	0.005	µg/L	0.5	0	87	50 - 151%	PASS			
Naphthalene	Total	0.479	1	0.001	0.005	µg/L	0.5	0	96	41 - 126%	PASS			
Perylene	Total	0.397	1	0.001	0.005	µg/L	0.5	0	79	48 - 141%	PASS			
Phenanthrene	Total	0.458	1	0.001	0.005	µg/L	0.5	0	92	67 - 127%	PASS			
Pyrene	Total	0.411	1	0.001	0.005	µg/L	0.5	0	82	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: 98722-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**		
		Method: EPA 625.1				Batch ID: O-38064		Prepared: 25-Jul-22				Analyzed: 31-Jul-22		
(d10-Acenaphthene)	Total	100	1			% Recovery	100	0	100	65 - 113%	PASS	1	30	PASS
(d10-Phenanthrene)	Total	99	1			% Recovery	100	0	99	80 - 111%	PASS	1	30	PASS
(d12-Chrysene)	Total	107	1			% Recovery	100	0	107	60 - 139%	PASS	6	30	PASS
(d12-Perylene)	Total	85	1			% Recovery	100	0	85	36 - 161%	PASS	2	30	PASS
(d8-Naphthalene)	Total	98	1			% Recovery	100	0	98	44 - 119%	PASS	0	30	PASS
1-Methylnaphthalene	Total	0.48	1	0.001	0.005	µg/L	0.5	0	96	49 - 117%	PASS	0	30	PASS
1-Methylphenanthrene	Total	0.431	1	0.001	0.005	µg/L	0.5	0	86	66 - 127%	PASS	4	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.466	1	0.001	0.005	µg/L	0.5	0	93	57 - 120%	PASS	2	30	PASS
2,6-Dimethylnaphthalene	Total	0.47	1	0.001	0.005	µg/L	0.5	0	94	54 - 117%	PASS	1	30	PASS
2-Methylnaphthalene	Total	0.489	1	0.001	0.005	µg/L	0.5	0	98	47 - 130%	PASS	1	30	PASS
Acenaphthene	Total	0.472	1	0.001	0.005	µg/L	0.5	0	94	53 - 131%	PASS	0	30	PASS
Acenaphthylene	Total	0.478	1	0.001	0.005	µg/L	0.5	0	96	43 - 140%	PASS	1	30	PASS
Anthracene	Total	0.447	1	0.001	0.005	µg/L	0.5	0	89	58 - 135%	PASS	2	30	PASS
Benz[a]anthracene	Total	0.43	1	0.001	0.005	µg/L	0.5	0	86	55 - 145%	PASS	7	30	PASS
Benzo[a]pyrene	Total	0.436	1	0.001	0.005	µg/L	0.5	0	87	51 - 143%	PASS	5	30	PASS
Benzo[b]fluoranthene	Total	0.531	1	0.001	0.005	µg/L	0.5	0	106	46 - 165%	PASS	7	30	PASS
Benzo[e]pyrene	Total	0.48	1	0.001	0.005	µg/L	0.5	0	96	42 - 152%	PASS	5	30	PASS
Benzo[g,h,i]perylene	Total	0.444	1	0.001	0.005	µg/L	0.5	0	89	63 - 133%	PASS	1	30	PASS
Benzo[k]fluoranthene	Total	0.473	1	0.001	0.005	µg/L	0.5	0	95	56 - 145%	PASS	7	30	PASS
Biphenyl	Total	0.489	1	0.001	0.005	µg/L	0.5	0	98	56 - 119%	PASS	1	30	PASS
Chrysene	Total	0.449	1	0.001	0.005	µg/L	0.5	0	90	56 - 141%	PASS	5	30	PASS
Dibenz[a,h]anthracene	Total	0.438	1	0.001	0.005	µg/L	0.5	0	88	55 - 150%	PASS	1	30	PASS
Dibenzo[a,l]pyrene	Total	0.213	1	0.001	0.005	µg/L	0.25	0	85	50 - 150%	PASS	5	30	PASS

PHYSIS Project ID: 1407003-257
Client: Eurofins Eaton Analytical
Project: RED HILL

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	0.459	1	0.001	0.005	µg/L	0.5	0	92	75 - 113%	PASS	2	30	PASS	
Fluoranthene	Total	0.441	1	0.001	0.005	µg/L	0.5	0	88	60 - 146%	PASS	1	30	PASS	
Fluorene	Total	0.474	1	0.001	0.005	µg/L	0.5	0	95	58 - 131%	PASS	1	30	PASS	
Indeno[1,2,3-cd]pyrene	Total	0.435	1	0.001	0.005	µg/L	0.5	0	87	50 - 151%	PASS	0	30	PASS	
Naphthalene	Total	0.478	1	0.001	0.005	µg/L	0.5	0	96	41 - 126%	PASS	0	30	PASS	
Perylene	Total	0.421	1	0.001	0.005	µg/L	0.5	0	84	48 - 141%	PASS	6	30	PASS	
Phenanthrene	Total	0.468	1	0.001	0.005	µg/L	0.5	0	94	67 - 127%	PASS	2	30	PASS	
Pyrene	Total	0.421	1	0.001	0.005	µg/L	0.5	0	84	54 - 156%	PASS	2	30	PASS	

TENTATIVELY IDENTIFIED COMPOUNDS

Sample ID: 98723

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6416	0.2865	1111	Anthracene-D10-	1719-06-8	96
59.1141	23.0433	89377	1-Hexene, 3,5,5-trimethyl-	4316-65-8	84
35.5919	0.4386	1701	1,2-Benzenedicarboxylic acid, bis(2-methylpropyl) ester	84-69-5	98
25.1194	0.0872	338	Diethyl Phthalate	84-66-2	97
39.1191	0.0662	257	1,4-Dibutyl benzene-1,4-dicarboxylate	1962-75-0	98
20.7578	0.0562	218	2,5-Cyclohexadiene-1,4-dione, 2,6-bis(1,1-dimethylethyl)-	719-22-2	87
57.3745	0.0548	212	Bis(2-ethylhexyl) phthalate	117-81-7	81
44.6676	0.0441	171	Pyrene	129-00-0	97
60.3903	0.0360	140	Heneicosane	629-94-7	92
66.0568	0.0345	134	Hentriacontane	630-04-6	89
63.2690	0.0273	106	Hentriacontane	630-04-6	91
52.5711	0.0222	86	Benzyl butyl phthalate	85-68-7	88

Concentration estimated using the response for Anthracene-d10

Sample ID: Lab Blank Batch O-38064

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Match Qual
32.6440	5.5511	1111	Anthracene-D10-	1719-06-8	96
14.9715	1.2315	246	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	82
14.9715	1.2098	242	3-Hexene, 3-ethyl-2,5-dimethyl-	62338-08-3	82
43.1778	0.9236	185	Terephthalic acid, isobutyl butyl ester	1000323-56-2	95
60.3753	0.7547	151	Heneicosane	629-94-7	91
14.8120	0.6560	131	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	83
25.1154	0.6335	127	Diethyl Phthalate	84-66-2	99
66.0814	0.5730	115	Heneicosane	629-94-7	94
15.6916	0.5092	102	3-Octene, 2,2-dimethyl-	86869-76-3	84

Concentration estimated using the response for Anthracene-d10

CHAIN OF CUSTODY

eurofins | Eaton Analytical

CHAIN OF CUSTODY RECORD

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: _____ SAMPLES CHECKED AGAINST COC BY: _____

SAMPLES LOGGED IN BY: _____

SAMPLE TEMP RECEIVED AT: SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

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

☐ Monrovia _____ °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: _____

10/19/2022

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME:	PROJECT CODE:	COMPLIANCE SAMPLES (check for yes) ☐ / NON-COMPLIANCE SAMPLES (check for yes) ☒
Honolulu Board of Water Supply	RED HILL	- Requires state forms ☐ / REGULATION INVOLVED: _____
EEA CLIENT CODE: HONOLULU / COC ID:	SAMPLE GROUP: MW - INTERA Albuquerque +	Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA,...)

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

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

TAT requested: rush by adv notice only: **RUSH** STD __ 1 wk ___ **3 day __X_** 2 day ___ 1 day ___

Ship to: PHYSIS Laboratories
1904 E. Wright Circle
Anaheim, CA 92806
714-602-5320
Attn: Misty Mercier
misty@physislabs.com

Bill and Report to EEA-Monvovia

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	625 PAH Physis LL (EAL) + TIC	SAMPLER COMMENTS
7/26/22	9:30a		BWS2253-J1-AQ	RGW			6	kit# 2340
								Provided by EEA
			[Bottle Size]					

*** 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:		~~Kevin Feng/Justin Barnes~~/Scott Lai	The Limtiaco Consulting Group	7/26/22	9:30a
RELINQUISHED BY:		~~Kevin Feng/Justin Barnes~~/Scott Lai	The Limtiaco Consulting Group	7/26/22	11:45a
RECEIVED BY:	Adam Idell	Adam Idell	Physis	7/27/22	0915
RELINQUISHED BY:					
RECEIVED BY:					

PAGE 1 OF 1

Shipping Order Form - Bottle Order

eurofins | Environment Testing America

S380-8489

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

10/19/2022

Shipping Order ID: 8489

Ship Via: FedEx

Due On: 7/7/2022 11:59:00PM

Ship To Information

Project Manager: Debbie Frank
Em: Debbie.Frank@et.eurofinsus.com
Company Name: THE LIMTIACO CONSULTING GROUP, INC.
Attention: Scott Lai
Address 1: 1622 KANAKANUI STREET
Address 2:
Address 3:
City: Honolulu
State: HI
Zip: 96817
Phone #: +1-808-596-7790
Project Ref: INTERA - Red-Hill-Incident

Notes to Bottle/Shipping Department

WET ICE KIT
Organize Containers by Sample ID and package by Sample ID in 4 separate coolers 6 bottles each
Label the cooler under the left hand handle with the ID of the samples that are in the cooler (Print extra set of labels to use for this)
Send only medium to large coolers
Pack small orders by sample ID in a single cooler separated by sample ID, either Baggied or dividers, as needed.

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

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

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

Bottle Order Information

Bottle Order: INTERA - (625PAH Supplementals)
Bottle Order #: 2340
Request From Client: 7/7/2022
Date Order Posted: 7/7/2022 12:38:25PM
Order Status: Ready To Process
Prepared By: Davis Haley
Deliver By Date: ***7/7/2022 11:59:00PM***
Lab Project Number: 38000861
PWSID:

Order Completion Information

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

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
4	6	24	Amber Glass 1 liter - unpreserved	None	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	Water	Normal		

Total Bottle Summary

Bottle Type Description	Preservative	Bottle Count
Amber Glass 1 liter - unpreserved	None	24
	Total Bottles:	24

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative | Comment

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

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

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

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

Project Iteration ID: 1407003-257
Client Name: Eurofins Eaton Analytical
Project Name: RED HILL
COC Page Number: 4 of 4
Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: [initials]
2. Date Received: 7/27/22
3. Time Received: 0915
4. Client Name: Eurofins
5. Courier Information: (Please circle)
   - Client
   - UPS
   - Area Fast
   - DRS
   - FedEx
   - GSO/GLS
   - Ontrac
   - PAMS
   - PHYSIS Driver:
     - i. Start Time:_____
     - ii. End Time:_____
     - iii. Total Mileage:_____
     - iv. Number of Pickups:_____
6. Container Information: (Please put the # of containers or circle none)
   - 1 Cooler
   - __ Styrofoam Cooler
   - ____ Boxes
   - None
   - ___ Carboy(s)
   - __Carboy Trash Can(s)
   - ____ Carboy Cap(s)
   - Other _____
7. What type of ice was used: (Please circle any that apply)
   - Wet Ice
   - Blue Ice
   - Dry Ice
   - Water
   - None
8. ~~Randomly~~ Selected Samples Temperature (°C): 3.1 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: [initials]

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 per lab

Notes:

eurofins | Eaton Analytical

CHAIN OF CUSTODY RECORD

750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: _____ SAMPLES CHECKED AGAINST COC BY: _____

SAMPLES LOGGED IN BY: _____

SAMPLE TEMP RECEIVED AT: SAMPLES REC'D DAY OF COLLECTION? ☐ (check for yes)

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

☐ Monrovia _____ °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: _____

10/19/2022

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME:	PROJECT CODE:	COMPLIANCE SAMPLES (check for yes) ☐ / NON-COMPLIANCE SAMPLES (check for yes) ☒
Honolulu Board of Water Supply	RED HILL	- Requires state forms ☐ / REGULATION INVOLVED: _____
EEA CLIENT CODE: HONOLULU / COC ID:	SAMPLE GROUP: MW - INTERA Albuquerque +	Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA,...)

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

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

TAT requested: rush by adv notice only: **RUSH** STD __ 1 wk ___ **3 day** __X_ 2 day ___ 1 day ___

Ship to: PHYSIS Laboratories
1904 E. Wright Circle
Anaheim, CA 92806
714-602-5320
Attn: Misty Mercier
misty@physislabs.com

Bill and Report to EEA-Monvovia

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	625 PAH Physis LL (EAL) + TIC	SAMPLER COMMENTS
7/26/22	9:30a		BWS2253-J1-AQ	RGW			6	kit# 2340
								Provided by EEA
			[Bottle Size]					

*** 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:		~~Kevin Feng/Justin Barnes~~/Scott Lai	The Limtiaco Consulting Group	7/26/22	9:30a
RELINQUISHED BY:		~~Kevin Feng/Justin Barnes~~/Scott Lai	The Limtiaco Consulting Group	7/26/22	11:45a
RECEIVED BY:	Adam Idell	Adam Idell	Physis	7/27/22	0915
RELINQUISHED BY:					
RECEIVED BY:					

PAGE 1 OF 1

Shipping Order Form - Bottle Order

eurofins | Environment Testing America

S380-8489

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

10/19/2022

Shipping Order ID: 8489 | **Ship Via: FedEx** | **Due On: 7/7/2022 11:59:00PM**

Ship To Information

Project Manager: Debbie Frank
Em: Debbie.Frank@et.eurofinsus.com
Company Name: THE LIMTIACO CONSULTING GROUP, INC.
Attention: Scott Lai
Address 1: 1622 KANAKANUI STREET
Address 2:
Address 3:
City: Honolulu
State: HI
Zip: 96817
Phone #: +1-808-596-7790
Project Ref: INTERA - Red-Hill-Incident

Notes to Bottle/Shipping Department

WET ICE KIT
Organize Containers by Sample ID and package by Sample ID in 4 separate coolers 6 bottles each
Label the cooler under the left hand handle with the ID of the samples that are in the cooler (Print extra set of labels to use for this)
Send only medium to large coolers
Pack small orders by sample ID in a single cooler separated by sample ID, either Baggied or dividers, as needed.

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

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

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

Bottle Order Information

Bottle Order: INTERA - (625PAH Supplementals)
Bottle Order #: 2340
Request From Client: 7/7/2022
Date Order Posted: 7/7/2022 12:38:25PM
Order Status: Ready To Process
Prepared By: Davis Haley
Deliver By Date: ***7/7/2022 11:59:00PM***
Lab Project Number: 38000861
PWSID:

Order Completion Information

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

Sets	Bottles/Set	Qty	Bottle Type Description	Preservative	Method	Matrix	Sample Type	Comments	Lot #
4	6	24	Amber Glass 1 liter - unpreserved	None	SUBCONTRACT - 625 PAH Physis LL (EAL) + TICs	Water	Normal		

Total Bottle Summary

Bottle Type Description	Preservative	Bottle Count
Amber Glass 1 liter - unpreserved	None	24
	Total Bottles:	24

Notes to Field Staff:

Scan QR code for field sampler instructions

Health and Safety Notes:

Preservative | Comment

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

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

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

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.

Project Iteration ID: 1407003-257
Client Name: Eurofins Eaton Analytical
Project Name: RED HILL
COC Page Number: 4 of 4
Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: [initials]
2. Date Received: 7/27/22
3. Time Received: 0915
4. Client Name: Eurofins
5. Courier Information: (Please circle)
   - Client
   - UPS
   - Area Fast
   - DRS
   - FedEx
   - GSO/GLS
   - Ontrac
   - PAMS
   - PHYSIS Driver:
     - i. Start Time:_____
     - ii. End Time:_____
     - iii. Total Mileage:_____
     - iv. Number of Pickups:_____
6. Container Information: (Please put the # of containers or circle none)
   - 1 Cooler
   - __ Styrofoam Cooler
   - ____ Boxes
   - None
   - ___ Carboy(s)
   - __Carboy Trash Can(s)
   - ____ Carboy Cap(s)
   - Other _____
7. What type of ice was used: (Please circle any that apply)
   - Wet Ice
   - Blue Ice
   - Dry Ice
   - Water
   - None
8. ~~Randomly~~ Selected Samples Temperature (°C): 3.1 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: [initials]

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 per lab

Notes:

Login Sample Receipt Checklist

Client: City & County of Honolulu

Job Number: 380-12276-1

Login Number: 12276
List Number: 1
Creator: Ngo, Theodore

List Source: Eurofins Eaton Monrovia

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