eurofins | Eaton Analytical

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (866) 988-3757
1 800 566 LABS (1 800 566 5227)

A2LA ACCREDITED
CERTIFICATE #'s 5890.01 & 5890.02

Laboratory Report

for

Honolulu Board of Water Supply
630 South Beretania Street
Public Service Bldg." Room 308
Honolulu, HI 96843
Attention: Erwin Kawata
Fax: 808-550-5018

NELAP ACCREDITED TNI LABORATORY
Utah ELCP CA00006

Date of Issue
06/05/2022
EUROFINS EATON ANALYTICAL, LLC

DEB: Debbie L Frank
Project Manager

Report: 998864
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

* Accredited in accordance with **TNI 2016 and ISO/IEC 17025:2017**.
* Laboratory certifies that the test results meet all **TNI 2016 and ISO/IEC 17025:2017** requirements unless noted under the individual analysis.
* As applicable, this report consists of the cover page, State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms.
* Test results relate only to the sample(s) tested.
* Test results apply to the sample(s) as received, unless otherwise noted in the comments report (ISO/IEC 17025:2017).
* This report shall not be reproduced except in full, without the written approval of the laboratory.
* This report includes ISO/IEC 17025 and non-ISO 17025 accredited methods.

STATE CERTIFICATION LIST

State	Certification Number	State	Certification Number
Alabama	41060	Montana	Cert 0035
Arizona	AZ0778	Nebraska	NE-OS-21-13
Arkansas	CA00006	Nevada	CA00006
California	2813	New Hampshire *	2959
Colorado	CA00006	New Jersey *	CA 008
Connecticut	PH-0107	New Mexico	CA00006
Delaware	CA 006	New York *	11320
Florida *	E871024	North Carolina	06701
Georgia	947	North Dakota	R-009
Guam	21-008R	Ohio - 537.1	87786
Hawaii	CA00006	Oregon *	4034
Idaho	CA00006	Pennsylvania *	68-00565
Illinois	200033	Puerto Rico	CA00006
Indiana	C-CA-01	Rhode Island	LAO00326
Iowa – Asbestos	413	South Carolina	87016
Kansas *	E-10268	South Dakota	CA11320
Kentucky	90107	Tennessee	TN02839
Louisiana *	LA008	Texas *	T104704230-20-18
Maine	CA00006	Utah (Primary AB) *	CA00006
Maryland	224	Vermont	VT0114
Marianas Islands	MP0004	Virginia *	460260
Massachusetts	M-CA006	Washington	C838
Michigan	9906	EPA Region 5	CA00006
Mississippi	CA00006	Los Angeles County Sanitation Districts	10264

* NELAP/TNI Recognized Accreditation Bodies

Eurofins Eaton Analytical, LLC
750 Royal Oaks Drive, Suite 100
Monrovia, CA 91016-3629
T | 626-386-1100
F | 866-988-3757
www.EurofinsUS.com/Eaton

ISO/IEC 17025:2917 Accredited Method List

The test listed below are accredited and met the requirements of ISO/IEC 17025 as verify by A2LA.

Refer to our certificates and scope of accreditations (no. 5890-1 and 5890-2) found at:

https://www.eurofinsus.com/Eaton

Test(s)	Method(s)	Potable Water *	Waste Water
Enterococci	Enterolert	x	x
Escherichia coli (Enumeration)	SM 9221 B.1 SM 9221 F	x	
Fecal Coliform (P/A and Enumeration)	SM 9221 C (MTF/EC), SM 9221 E (MTF/EC)	x	x
Fecal Streptococci and Enterococci	SM 9230 B	x	x
Heterotrophic Bacteria	SM 9215 B	x	
Legionella	Legiolert®	x	
Pseudomonas aeruginosa	Idexx Pseudalert	x	
Total Coliform (P/A and Enumeration)	SM 9221A, SM 9221B, SM 9221 C	x	x
Total Coliform, Total Coliform with Chlorine Present	SM 9221 B	x	x
Total Coliform/E. coli (P/A and Enumeration, Idexx Colilert, Idexx Colilert 18, Colisure)	SM 9223	x	
Total Microcystins and Nodularins	EPA 546	X	
Yeast and Mold	SM 9610	x	
1,2,3-Trichloropropane (TCP) at 5 PPT	CA SRL 524M-TCP	x	
1,4-Dioxane	EPA 522	x	
2,3,7,8-TCDD	Modified EPA 1613 B	X	
Acrylamide	+LCMS 2440)	x	
Algal Toxins/Microcys in	+ LCMS 3570	x	
Alkalinity	SM 2320B	x	x
Ammonia	EPA 350.1, SM 4500-NH3 H		x
Asbestos	EPA 100.2	x	x
Bicarbonate Alkalinity as HCO3	SM 2330 B	x	x
BOD/CBOD	SM 5210 B		x
Bromate	+LCMS- 2447	x	
Carbonate as CO3	SM 2330 B	x	x
Carbonyls	EPA 556	x	x
Chemical Oxygen Demand	EPA 410.4, SM 5220D		x
Chlorinated Acids	EPA 515.4	x	
Chlorine Dioxide	Palin Test Chlordio X Plus, SM 4500-CLO2 D	x	
Chlorine, Free, Combined, Total Residual, Chloramines	SM 4500-Cl G	x	
Color	SM2120B	x	
Conductivity	EPA 120.1, SM 2510B	x	x
Corrosivity (Langelier Index), Carbonate as CO3, Hydroxide as OH Calculated	SM 2330 B	x	
Cyanide (Amenable)	SM 4500-CN G	x	x
Cyanide (Free)	SM 4500CN F	x	x
Cyanide (Total)	EPA 335.4	x	x
Cyanogen Chloride (Screen)	+335 Mod (WC-24467)	x	
Diquat and Paraquat	EPA 549.2	x	
DBP and HAA	SM 6251 B	x	
Dissolved Organic Carbon	SM 5310 C	x	
Dissolved Oxygen	SM 4500-O G		x
EDB/DCBP/TCP	EPA 504.1	x	
EDB/DBCP and Disinfection Byproducts	EPA 551.1	x	
EDTA and NTA	+ WC-2454	x	
Endothall	EPA 548.1, +(LCMS-2445)	x	
Fluoride	SM 4500F C	x	x
Glyphosate	EPA 547	x	
Glyphosate and AMPA	+LCMS-3618	x	
Gross Alpha and Gross Beta	EPA 900.0	x	x

Test(s)	Method(s)	Potable Water *	Waste Water
Gross Alpha coprecipitation	SM 7110 C	x	x
Hardness	SM 2340 B	x	x
Hexavalent Chromium	EPA 218.6,	x	x
Hexavalent Chromium	EPA 218.7,	x	
Hexavalent Chromium	SM 3500-Cr B		x
Inorganic Anions and DBPs	EPA 300.0	x	x
Norganic Anions and DBPs	EPA 300.1	x	
Kjeldahl Nitrogen	EPA 351.2		x
Metals	EPA 200.7, EPA200.8	x	x
Nitrosamines	EEA-Agilent 521.1 (GCMS-24250)	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x
Odor	SM2150B	x	
Organohalide Pesticides and PCB	EPA 505	x	
Ortho Phosphate	SM 4500P E	x	
Oxyhalides Disinfec ion Byproducts	EPA 317.0	x	
Perchlorate	EPA 331.0	x	
Perchlorate (Low and High Levels)	EPA 314.0	x	
Perfluorinated Alkyl Acids	EPA 533, EPA 537, EPA 537.1	x	
PPCP and EDC	+LCMS-2443	x	
pH	EPA 150.1 SM 4500-H+ B	x	x
Phenolics – Low Level	+WC 2493 (EPA 420.2 and EPA 420.4 MOD)	x	x
Phenylurea Pesticides/Herbicides	+LCMS-2448	x	
Radium-226, Radium-228	GA Tech (Rad-2374)	x	
Radon-222	SM 7500RN	x	
Residue (Filterable)	SM 2540C	x	x
Residue (Non-Filterable)	SM 2540D		x
Residue (Total)	SM 2540B		x
Residue (Volatile)	EPA 160.4		x
Semi-Volatile Compounds	EPA 525.2	x	
Silica	SM 4500-SiO2 C	x	x
Sulfide	SM 4500-S D		x
Sulfite	SM 4500-SO3 B	x	x
Surfactants	SM 5540C	x	x
Taste and Odor	SM 6040 E	x	
Total Organic Carbon	SM 5310 C	x	x
Total Phenols	EPA 420.1		x
Total Phenols	EPA 420.4	x	x
Triazine Pesticides and their Degradates	+LCMS-3617	x	
Turbidity	EPA 180.1	x	x
Uranium by ICP/MS	EPA 200.8	x	
UV 254 Organic Constituents	SM 5910B	x	
VOCs	EPA 524.2	x	
VOCs	+(GCMS 2412) by EPA 524.2 modified	x	

(*) includes: Bottled Water, Drinking Water and Water as Component of Food & Beverage.

(+) In-House Method

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Acknowledgement of Samples Received

Addr: **Honolulu Board of Water Supply**
630 South Beretania Street
Public Service Bldg." Room 308
Honolulu, HI 96843

Attn: Erwin Kawata
Phone: 808-748-5091

Client ID: HONOLULU
Folder #: 998864
Project: RED-HILL
Sample Group: Quarterly Red-Hill Expanded List (Albuquerque+)
Project Manager: Debbie L Frank
Phone: (626) 386-1149
PO #: C20525101 exp 05312023

The following samples were received from you on **April 13, 2022 at 1500**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical, LLC.

Sample #	Sample ID	Sample Date
202204130686	Halawa Shaft Viewing Pool	04/11/2022 0930
	@625A_Physis C	@625BN_Physis C	@625PAH_Physis_TICS_C
	(SUB)Gas Fraction Hydrocarbons	TPH 8015 Diesel and Motor Oil	TPH 8015 Jet Fuel 5
	TPH 8015 Jef Fuel 8		
202204130687	Travel Blank	04/11/2022 0930
	(SUB)Gas Fraction Hydrocarbons		

Test Description

@625A_Physis C -- 625 Acid Extractable in ug/L

@625BN_Physis C -- 625 Base Neutral Extractable in ug/L

@625PAH_Physis_TICS_C -- 625PAH in ug/L

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CHAIN OF CUSTODY RECORD

998864

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: GF

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 1.6 °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:	EEA CLIENT CODE:	COC ID:	SAMPLE GROUP:
BWS HONOLULU	Red Hill	Honolulu		

(check for yes) (check for yes)

COMPLIANCE SAMPLES ☐ NON-COMPLIANCE SAMPLES ☒

- Requires state forms ☐ REGULATION INVOLVED: _____

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 STD ___ 1 wk _X_ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	TPH 8015	8015 Gas_C	625BN											SAMPLER COMMENTS
4-11-22	0830	Halawa Shaft Viewing Pool		RGW			x	x	x											
		Travel Blank		CFW				x												
		Temperature Blank																		Temp Blank: 18.5 °C

* **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]	Derek Dotson	Honolulu Board of Water Supply	4-11-2022	
RELINQUISHED BY:		Derek Dotson	Honolulu Board of Water Supply	4-12-2022	1200
RECEIVED BY:		G. REITNER	EEA	04.13.2022	15:00
RELINQUISHED BY:					
RECEIVED BY:					

PAGE 1 OF 1

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INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: 998864

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 = 649A (Observation= 1.6 °C) (Corr.Factor -0.3 °C) (Final = 1.3 °C)

TYPE OF ICE: Real ____ Synthetic ✓ No Ice ____

CONDITION OF ICE: Frozen ____ Partially Frozen ✓ Thawed ____ N/A ____

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

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]	G. REITNER	Eurofins Eaton Analytical	04-13-2022	15:00
SAMPLES CHECKED AGAINST COC BY:			Eurofins Eaton Analytical		

QA FO-FRM5504 (9.28.21) Ver 9

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INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: 998864

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 = 649A (Observation= 1.5 °C) (Corr.Factor -0.3 °C) (Final = 1.2 °C)

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

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

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]	G.REITNER	Eurofins Eaton Analytical	04.13.2022	15:00
SAMPLES CHECKED AGAINST COC BY:			Eurofins Eaton Analytical		

QA FO-FRM5504 (9.28.21) Ver 9

eurofins | Eaton Analytical

INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: 998864

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 = 649A (Observation= 6.2 °C) (Corr.Factor -0.3 °C) (Final = 5.9 °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]	G. REITNER	Eurofins Eaton Analytical	04-13-2022	15:00
SAMPLES CHECKED AGAINST COC BY:			Eurofins Eaton Analytical		

QA FO-FRM5504 (9.28.21) Ver 9

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INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: 998864

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 = 649A (Observation= 6.0 °C) (Corr.Factor -0.3 °C) (Final = 5.7 °C)

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

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

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]	G. REITNER	Eurofins Eaton Analytical	04-13-2022	15:00
SAMPLES CHECKED AGAINST COC BY:			Eurofins Eaton Analytical		

eurofins | Eaton Analytical

INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: 998864

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 = 649A (Observation= 4.7 °C) (Corr.Factor -0.3 °C) (Final = 4.4 °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]	G.REITNER	Eurofins Eaton Analytical	04.13.2022	15:00
SAMPLES CHECKED AGAINST COC BY:			Eurofins Eaton Analytical		

QA FO-FRM5504 (9.28.21) Ver 9

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INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: 998864

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 = 649A (Observation= 1.9 °C) (Corr.Factor -0.3 °C) (Final = 1.6 °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]	G.REITNER	Eurofins Eaton Analytical	04.13.2022	15:00
SAMPLES CHECKED AGAINST COC BY:			Eurofins Eaton Analytical		

QA FO-FRM5504 (9.28.21) Ver 9

Page 6 of 6

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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.

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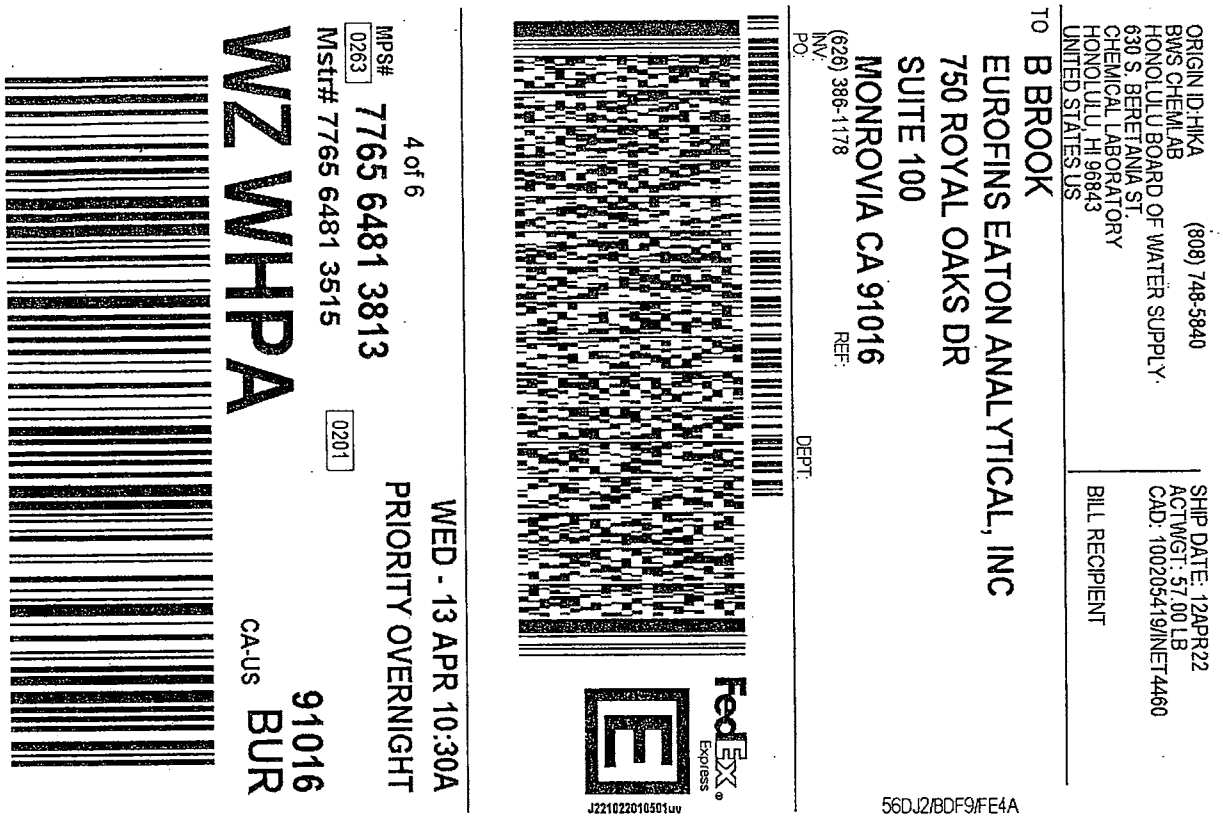

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Laboratory Comments

Report: 998864
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply
Erwin Kawata
630 South Beretania Street
Public Service Bldg." Room 308
Honolulu, HI 96843

Folder Comments

Analytical results for TPH 8015 Diesel and Motor Oil, Total Hydrocarbons and Jet Fuel are submitted by Emax Laboratories, Inc. Torrance, CA
Analytical results for 625 BNA are submitted by Physis Environmental Laboratories, Inc.

Subcontracted Data -- Please review Subcontractor's report in full. EEA enters Subcontractor data into EEA system for archive tracking purposes of final result. See subcontractor's report for Qualifier definition.

ND reporting (subcontract lab reports)

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

Tentatively Identified compounds (TIC).

The analyte has been "tentatively identified" as present and the associated numerical value is the estimated concentration in the sample. The analytes are not positively identified or quantified. Presentation of results in this report does not indicate actual presence of the compound identified in the TIC summary. Information is for study purposes only.

@625mod (Low Level SVOCs by GCMS (PAH/BNA - Base/Neutral/Acid Extractables) See subcontractor's report.

Quarterly Red-Hill Expanded List (Albuquerque+) Halawa Shaft Viewing Pool , quarterly testing is reduced due to sampling difficulties to 8015 and 625. COC notes 625BN only (monthly BCEE). Sufficient volume was received to run full 625 (Base Neutral, Acid, and PAH Red-Hill analytes). Report full Quarterly 625s per Erwin Kawata voice call.

The Comments Report may be blank if there are no comments for this report.

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Laboratory Hits

Report: 998864
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply
Erwin Kawata
630 South Beretania Street
Public Service Bldg." Room 308
Honolulu, HI 96843

Samples Received on:
04/13/2022 1500

Analyzed	Analyte	Sample ID	Result	HI Limit	Units	MRL

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Data

Report: 998864
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply
Erwin Kawata
630 South Beretania Street
Public Service Bldg." Room 308
Honolulu, HI 96843

Samples Received on:
04/13/2022 1500

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
Halawa Shaft Viewing Pool (202204130686)							**Sampled on 04/11/2022 0930**		
				SW 8015B - (SUB)Gas Fraction Hydrocarbons					
04/14/22	04/14/22 23:31			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.02	1
				SW 8015B - TPH 8015 Diesel and Motor Oil					
04/18/22	04/20/22 00:07			(SW 8015B)	TPH Diesel	ND	mg/L	0.026	1
04/18/22	04/20/22 00:07			(SW 8015B)	TPH Motor Oil	ND	mg/L	0.052	1
				EPA 8015 - Jet Fuel 5 C8-C18					
04/18/22	04/20/22 00:07			(EPA 8015)	Jet Fuel 5	ND	mg/L	0.052	1
				EPA 625 - 625PAH in ug/L					
04/07/22	05/13/22 :			(EPA 625)	1-Methylnaphthalene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	1-Methylphenanthrene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	2,3,5-Trimethylnaphthalene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	2,4,6-Trichlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 :			(EPA 625)	2,6-Dimethylnaphthalene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	2-Methylnaphthalene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Acenaphthene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Acenaphthylene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Anthracene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Benz(a)Anthracene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Benzo(a)pyrene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Benzo(b)fluoranthene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Benzo(e)pyrene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Benzo(g,h,i)perylene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Benzo(k)fluoranthene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Biphenyl	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Chrysene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Dibenz(a,h)Anthracene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Dibenzo(a,l)pyrene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Dibenzothiophene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Fluoranthene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Fluorene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Naphthalene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Pentachlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 :			(EPA 625)	Perylene	ND	ug/L	0.005	1
04/07/22	05/13/22 :			(EPA 625)	Phenanthrene	ND	ug/L	0.005	1

Rounding on totals after summation.
(c) - indicates calculated results. Analysis is a calculated result. Reported results are not rounded until the final step before reporting. Therefore methods that use a test result with further calculation may have slight differences in final result than the component analyses.

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Laboratory Data

Report: 998864
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply
Erwin Kawata
630 South Beretania Street
Public Service Bldg." Room 308
Honolulu, HI 96843

Samples Received on:
04/13/2022 1500

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/07/22	05/13/22 :			(EPA 625)	Pyrene	ND	ug/L	0.005	1
		EPA 8015 - Jet Fuel 8 C8-C18							
	04/20/22 00:07			(EPA 8015)	Jet Fuel 8	ND	mg/L	0.052	1
		EPA 625 - 625 Acid Extractable in ug/L							
04/07/22	05/13/22 :			(EPA 625)	2,4,5-Trichlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 :			(EPA 625)	2,4,6-Trichlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 :			(EPA 625)	2,4-Dichlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 :			(EPA 625)	2,4-Dinitrophenol	ND	ug/L	0.2	1
04/07/22	05/13/22 :			(EPA 625)	2,6-Dichlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 :			(EPA 625)	2,6-Di-tert-butyl-4-methylphenol	ND	ug/L	0.1	1
04/07/22	05/13/22 :			(EPA 625)	2,6-Di-tert-butylphenol	ND	ug/L	0.1	1
04/07/22	05/13/22 :			(EPA 625)	2-Chlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 :			(EPA 625)	2-Methylphenol	ND	ug/L	0.2	1
04/07/22	05/13/22 :			(EPA 625)	2-Nitrophenol	ND	ug/L	0.2	1
04/07/22	05/13/22 :			(EPA 625)	4,6-Dinitro-2-methylphenol	ND	ug/L	0.2	1
04/07/22	05/13/22 :			(EPA 625)	4-Chloro-3-methyl phenol	ND	ug/L	0.2	1
04/07/22	05/13/22 :			(EPA 625)	4-Methylphenol	ND	ug/L	0.2	1
04/07/22	05/13/22 :			(EPA 625)	4-Nitrophenol	ND	ug/L	0.2	1
04/07/22	05/13/22 :			(EPA 625)	6-tert-Butyl-2,4-dimethylphenol	ND	ug/L	0.1	1
04/07/22	05/13/22 :			(EPA 625)	Benzoic acid	ND	ug/L	0.2	1
04/07/22	05/13/22 :			(EPA 625)	Benzyl alcohol	ND	ug/L	0.2	1
04/07/22	05/13/22 :			(EPA 625)	pentachlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 :			(EPA 625)	Phenol	ND	ug/L	0.2	1
04/07/22	05/13/22 :			(EPA 625)	p-tert-Butylphenol	ND	ug/L	0.1	1
		EPA 625 - 625 Base Neutral Extractable in ug/L							
04/14/22	05/13/22 00:00			(EPA 625)	2-Chloronaphthalene	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	2-Nitroaniline	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	3-Nitroaniline	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	4-Bromophenylphenyl Ether	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	4-Chlorophenylphenyl Ether	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	4-Nitroaniline	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	Aniline	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	Benzidine	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	bis(2-Chloroethoxy)methane	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	bis(2-Chloroethyl)ether	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	bis(2-Chloroisopropyl) ether	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	Dibenzofuran	ND	ug/L	0.1	1

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Laboratory Data

Report: 998864
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply
Erwin Kawata
630 South Beretania Street
Public Service Bldg." Room 308
Honolulu, HI 96843

Samples Received on:
04/13/2022 1500

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/14/22	05/13/22 00:00			(EPA 625)	Disalicylidenepropanediamine	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	Hexachloroethane	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	Nitrobenzene	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	N-Nitrosodi-N-propylamine	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	N-Nitrosodiphenylamine	ND	ug/L	0.1	1
04/14/22	05/13/22 00:00			(EPA 625)	p-Chloroaniline	ND	ug/L	0.1	1

Travel Blank (202204130687) **Sampled on 04/11/2022 0930**

SW 8015B - (SUB)Gas Fraction Hydrocarbons

04/15/22	04/15/22 00:44			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.02	1

Rounding on totals after summation.
(c) - indicates calculated results. Analysis is a calculated result. Reported results are not rounded until the final step before reporting. Therefore methods that use a test result with further calculation may have slight differences in final result than the component analyses.

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

May 26, 2022

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

Project Name: Folder # 998864 Job # 1000014
Physis Project ID: 1407003-236

Dear Debbie,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 4/14/2022. 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: 1407003-236

Folder # 998864 Job # 1000014

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
96419	202204130686	Halawa Shaft Viewing Pool	4/11/2022	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: 1407003-236
Client: Eurofins Eaton Analytical
Project: Folder # 998864 Job # 1000014

Acid Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 96419-R1	**202204130686 Halawa Shaft Viewi**	**Matrix: Samplewater**					**Sampled:**	**11-Apr-22 9:30**		**Received:**	**14-Apr-22**
(2,4,6-Tribromophenol)	EPA 625.1	% Recovery	56	1			Total		O-35138	14-Apr-22	13-May-22
(d5-Phenol)	EPA 625.1	% Recovery	23	1			Total		O-35138	14-Apr-22	13-May-22
2,4,5-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
2,4,6-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
2,4-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
2,4-Dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	14-Apr-22	13-May-22
2,6-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
2,6-Di-tert-butyl-4-methylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
2,6-Di-tert-butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
2-Chlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
2-Methyl-4,6-dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	14-Apr-22	13-May-22
2-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	14-Apr-22	13-May-22
2-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	14-Apr-22	13-May-22
3+4-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	14-Apr-22	13-May-22
4-Chloro-3-methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	14-Apr-22	13-May-22
4-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	14-Apr-22	13-May-22
6-tert-butyl-2,4-dimethylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
Benzoic Acid	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	14-Apr-22	13-May-22
Benzyl Alcohol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	14-Apr-22	13-May-22
Pentachlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
Phenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	14-Apr-22	13-May-22
p-tert-Butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 96419-R1	**202204130686 Halawa Shaft Viewi**	**Matrix: Samplewater**					**Sampled:**	**11-Apr-22 9:30**		**Received:**	**14-Apr-22**
2-Chloronaphthalene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
2-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
3-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
4-Bromophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
4-Chloroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
4-Chlorophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
4-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
Aniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
Benzidine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
Bis(2-Chloroethoxy) methane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
Bis(2-Chloroethyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
Bis(2-Chloroisopropyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
D benzofuran	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
Hexachloroethane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
Nitrobenzene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
N-Nitrosodi-n-propylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22
N-Nitrosodiphenylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	14-Apr-22	13-May-22

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 96419-R1	**202204130686 Halawa Shaft Viewi**	**Matrix: Samplewater**					**Sampled:**	**11-Apr-22**	**9:30**	**Received:**	**14-Apr-22**
(d10-Acenaphthene)	EPA 625.1	% Recovery	85	1			Total		O-35138	14-Apr-22	13-May-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	93	1			Total		O-35138	14-Apr-22	13-May-22
(d12-Chrysene)	EPA 625.1	% Recovery	91	1			Total		O-35138	14-Apr-22	13-May-22
(d12-Perylene)	EPA 625.1	% Recovery	96	1			Total		O-35138	14-Apr-22	13-May-22
(d8-Naphthalene)	EPA 625.1	% Recovery	70	1			Total		O-35138	14-Apr-22	13-May-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22

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-35138	14-Apr-22	13-May-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	14-Apr-22	13-May-22

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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: 96418-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**					**Received:**	
	Method: EPA 625.1					Batch ID: O-35138		Prepared: 07-Apr-22				Analyzed: 13-May-22	
(2,4,6-Tribromophenol)	Total	56	1			% Recovery	100	56	44 - 159%	PASS			
(d5-Phenol)	Total	75	1			% Recovery	100	75	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							

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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: 96418-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
	Method: EPA 625.1					Batch ID: O-35138		Prepared: 07-Apr-22				Analyzed: 13-May-22	
(2,4,6-Tribromophenol)	Total	65	1			% Recovery	100	0	65	44 - 159%	PASS		
(d5-Phenol)	Total	84	1			% Recovery	100	0	84	20 - 121%	PASS		
2,4,5-Trichlorophenol	Total	0.967	1	0.05	0.1	µg/L	1	0	97	57 - 116%	PASS		
2,4,6-Trichlorophenol	Total	0.961	1	0.05	0.1	µg/L	1	0	96	56 - 118%	PASS		
2,4-Dichlorophenol	Total	0.925	1	0.05	0.1	µg/L	1	0	93	51 - 117%	PASS		
2,4-Dinitrophenol	Total	0.642	1	0.1	0.2	µg/L	1	0	64	0 - 152%	PASS		
2,6-Dichlorophenol	Total	0.938	1	0.05	0.1	µg/L	1	0	94	30 - 130%	PASS		
2,6-Di-tert-butyl-4-methylphenol	Total	0.708	1	0.05	0.1	µg/L	1	0	71	50 - 150%	PASS		
2,6-Di-tert-butylphenol	Total	0.825	1	0.05	0.1	µg/L	1	0	82	50 - 150%	PASS		
2-Chlorophenol	Total	0.883	1	0.05	0.1	µg/L	1	0	88	41 - 110%	PASS		
2-Methyl-4,6-dinitrophenol	Total	0.707	1	0.1	0.2	µg/L	1	0	71	0 - 141%	PASS		
2-Methylphenol	Total	1.03	1	0.1	0.2	µg/L	1	0	103	40 - 117%	PASS		
2-Nitrophenol	Total	0.862	1	0.1	0.2	µg/L	1	0	86	40 - 117%	PASS		
3+4-Methylphenol	Total	0.887	1	0.1	0.2	µg/L	1	0	89	0 - 130%	PASS		
4-Chloro-3-methylphenol	Total	0.939	1	0.1	0.2	µg/L	1	0	94	51 - 128%	PASS		
4-Nitrophenol	Total	0.844	1	0.1	0.2	µg/L	1	0	84	10 - 164%	PASS		
6-tert-butyl-2,4-dimethylphenol	Total	0.639	1	0.05	0.1	µg/L	1	0	64	50 - 150%	PASS		
Benzoic Acid	Total	0.499	1	0.1	0.2	µg/L	1	0	50	2 - 145%	PASS		
Benzyl Alcohol	Total	0.889	1	0.1	0.2	µg/L	1	0	89	43 - 148%	PASS		
Pentachlorophenol	Total	0.957	1	0.05	0.1	µg/L	1	0	96	36 - 111%	PASS		
Phenol	Total	0.805	1	0.1	0.2	µg/L	1	0	81	29 - 114%	PASS		
p-tert-Butylphenol	Total	0.996	1	0.05	0.1	µg/L	1	0	100	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: 96418-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**		
		Method: EPA 625.1				Batch ID: O-35138		Prepared: 07-Apr-22				Analyzed: 13-May-22		
(2,4,6-Tribromophenol)	Total	67	1			% Recovery	100	0	67	44 - 159%	PASS	3	30	PASS
(d5-Phenol)	Total	86	1			% Recovery	100	0	86	20 - 121%	PASS	2	30	PASS
2,4,5-Trichlorophenol	Total	0.989	1	0.05	0.1	µg/L	1	0	99	57 - 116%	PASS	2	30	PASS
2,4,6-Trichlorophenol	Total	0.974	1	0.05	0.1	µg/L	1	0	97	56 - 118%	PASS	1	30	PASS
2,4-Dichlorophenol	Total	0.934	1	0.05	0.1	µg/L	1	0	93	51 - 117%	PASS	1	30	PASS
2,4-Dinitrophenol	Total	0.676	1	0.1	0.2	µg/L	1	0	68	0 - 152%	PASS	6	30	PASS
2,6-Dichlorophenol	Total	0.962	1	0.05	0.1	µg/L	1	0	96	30 - 130%	PASS	2	30	PASS
2,6-Di-tert-butyl-4-methylphenol	Total	0.711	1	0.05	0.1	µg/L	1	0	71	50 - 150%	PASS	0	30	PASS
2,6-Di-tert-butylphenol	Total	0.853	1	0.05	0.1	µg/L	1	0	85	50 - 150%	PASS	4	30	PASS
2-Chlorophenol	Total	0.887	1	0.05	0.1	µg/L	1	0	89	41 - 110%	PASS	1	30	PASS
2-Methyl-4,6-dinitrophenol	Total	0.734	1	0.1	0.2	µg/L	1	0	73	0 - 141%	PASS	3	30	PASS
2-Methylphenol	Total	1.03	1	0.1	0.2	µg/L	1	0	103	40 - 117%	PASS	0	30	PASS
2-Nitrophenol	Total	0.855	1	0.1	0.2	µg/L	1	0	86	40 - 117%	PASS	0	30	PASS
3+4-Methylphenol	Total	0.921	1	0.1	0.2	µg/L	1	0	92	0 - 130%	PASS	3	30	PASS
4-Chloro-3-methylphenol	Total	0.985	1	0.1	0.2	µg/L	1	0	99	51 - 128%	PASS	4	30	PASS
4-Nitrophenol	Total	0.888	1	0.1	0.2	µg/L	1	0	89	10 - 164%	PASS	6	30	PASS
6-tert-butyl-2,4-dimethylphenol	Total	0.653	1	0.05	0.1	µg/L	1	0	65	50 - 150%	PASS	2	30	PASS
Benzoic Acid	Total	0.525	1	0.1	0.2	µg/L	1	0	52	2 - 145%	PASS	4	30	PASS
Benzyl Alcohol	Total	0.915	1	0.1	0.2	µg/L	1	0	92	43 - 148%	PASS	3	30	PASS
Pentachlorophenol	Total	1	1	0.05	0.1	µg/L	1	0	100	36 - 111%	PASS	4	30	PASS
Phenol	Total	0.804	1	0.1	0.2	µg/L	1	0	80	29 - 114%	PASS	0	30	PASS
p-tert-Butylphenol	Total	1.03	1	0.05	0.1	µg/L	1	0	103	50 - 150%	PASS	3	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: 96418-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**					**Received:**	
	Method: EPA 625.1					Batch ID: O-35138	Prepared: 07-Apr-22					Analyzed: 13-May-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: 96418-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
		Method: EPA 625.1				Batch ID: O-35138		Prepared: 07-Apr-22				Analyzed: 13-May-22	
2-Chloronaphthalene	Total	0.966	1	0.05	0.1	µg/L	1	0	97	53 - 130%	PASS		
2-Nitroaniline	Total	0.931	1	0.05	0.1	µg/L	1	0	93	69 - 114%	PASS		
3-Nitroaniline	Total	0.842	1	0.05	0.1	µg/L	1	0	84	23 - 137%	PASS		
4-Bromophenylphenyl ether	Total	1.01	1	0.05	0.1	µg/L	1	0	101	61 - 132%	PASS		
4-Chloroaniline	Total	0.755	1	0.05	0.1	µg/L	1	0	75	50 - 150%	PASS		
4-Chlorophenylphenyl ether	Total	0.992	1	0.05	0.1	µg/L	1	0	99	63 - 130%	PASS		
4-Nitroaniline	Total	0.956	1	0.05	0.1	µg/L	1	0	96	10 - 159%	PASS		
Aniline	Total	0.591	1	0.05	0.1	µg/L	1	0	59	50 - 150%	PASS		
Benzidine	Total	0.00726	1	0.05	0.1	µg/L	1	0	1	0 - 125%	PASS		
Bis(2-Chloroethoxy) methane	Total	0.938	1	0.05	0.1	µg/L	1	0	94	66 - 122%	PASS		
Bis(2-Chloroethyl) ether	Total	0.908	1	0.05	0.1	µg/L	1	0	91	43 - 127%	PASS		
Bis(2-Chloroisopropyl) ether	Total	1.09	1	0.05	0.1	µg/L	1	0	109	49 - 128%	PASS		
Dibenzofuran	Total	0.987	1	0.05	0.1	µg/L	1	0	99	50 - 150%	PASS		
Disalicylidenepropanediamin	Total	26.7	1	0.05	0.1	µg/L	50	0	53	50 - 150%	PASS		
Hexachloroethane	Total	0.889	1	0.05	0.1	µg/L	1	0	89	27 - 130%	PASS		
Nitrobenzene	Total	0.922	1	0.05	0.1	µg/L	1	0	92	54 - 111%	PASS		
N-Nitrosodi-n-propylamine	Total	0.95	1	0.05	0.1	µg/L	1	0	95	61 - 152%	PASS		
N-Nitrosodiphenylamine	Total	0.934	1	0.05	0.1	µg/L	1	0	93	49 - 142%	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: 96418-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**					**Received:**		
		Method: EPA 625.1				Batch ID: O-35138		Prepared: 07-Apr-22					Analyzed: 13-May-22		
2-Chloronaphthalene	Total	0.975	1	0.05	0.1	µg/L	1	0	98	53 - 130%	PASS	1	30	PASS	
2-Nitroaniline	Total	0.96	1	0.05	0.1	µg/L	1	0	96	69 - 114%	PASS	3	30	PASS	
3-Nitroaniline	Total	0.858	1	0.05	0.1	µg/L	1	0	86	23 - 137%	PASS	2	30	PASS	
4-Bromophenylphenyl ether	Total	1.03	1	0.05	0.1	µg/L	1	0	103	61 - 132%	PASS	2	30	PASS	
4-Chloroaniline	Total	0.732	1	0.05	0.1	µg/L	1	0	73	50 - 150%	PASS	4	30	PASS	
4-Chlorophenylphenyl ether	Total	1.02	1	0.05	0.1	µg/L	1	0	102	63 - 130%	PASS	3	30	PASS	
4-Nitroaniline	Total	1.02	1	0.05	0.1	µg/L	1	0	102	10 - 159%	PASS	6	30	PASS	
Aniline	Total	0.584	1	0.05	0.1	µg/L	1	0	58	50 - 150%	PASS	2	30	PASS	
Benzidine	Total	0.00858	1	0.05	0.1	µg/L	1	0	1	0 - 125%	PASS	0	30	PASS	
Bis(2-Chloroethoxy) methane	Total	0.966	1	0.05	0.1	µg/L	1	0	97	66 - 122%	PASS	3	30	PASS	
Bis(2-Chloroethyl) ether	Total	0.908	1	0.05	0.1	µg/L	1	0	91	43 - 127%	PASS	0	30	PASS	
Bis(2-Chloroisopropyl) ether	Total	1.03	1	0.05	0.1	µg/L	1	0	103	49 - 128%	PASS	6	30	PASS	
Dibenzofuran	Total	1.01	1	0.05	0.1	µg/L	1	0	101	50 - 150%	PASS	2	30	PASS	
Disalicylidenepropanediamin	Total	31	1	0.05	0.1	µg/L	50	0	62	50 - 150%	PASS	16	30	PASS	
Hexachloroethane	Total	0.892	1	0.05	0.1	µg/L	1	0	89	27 - 130%	PASS	0	30	PASS	
Nitrobenzene	Total	0.921	1	0.05	0.1	µg/L	1	0	92	54 - 111%	PASS	0	30	PASS	
N-Nitrosodi-n-propylamine	Total	0.96	1	0.05	0.1	µg/L	1	0	96	61 - 152%	PASS	1	30	PASS	
N-Nitrosodiphenylamine	Total	0.944	1	0.05	0.1	µg/L	1	0	94	49 - 142%	PASS	1	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: 96418-B1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**	**Sampled:**					**Received:**	
		Method: EPA 625.1				Batch ID: O-35138		Prepared: 07-Apr-22				Analyzed: 13-May-22	
(d10-Acenaphthene)	Total	90	1			% Recovery	100	90		65 - 113%		PASS	
(d10-Phenanthrene)	Total	94	1			% Recovery	100	94		80 - 111%		PASS	
(d12-Chrysene)	Total	93	1			% Recovery	100	93		60 - 139%		PASS	
(d12-Perylene)	Total	87	1			% Recovery	100	87		36 - 161%		PASS	
(d8-Naphthalene)	Total	83	1			% Recovery	100	83		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							

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: 96418-BS1	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**	
		Method: EPA 625.1				Batch ID: O-35138		Prepared: 07-Apr-22				Analyzed: 13-May-22	
(d10-Acenaphthene)	Total	93	1			% Recovery	100	0	93	65 - 113%	PASS		
(d10-Phenanthrene)	Total	94	1			% Recovery	100	0	94	80 - 111%	PASS		
(d12-Chrysene)	Total	93	1			% Recovery	100	0	93	60 - 139%	PASS		
(d12-Perylene)	Total	93	1			% Recovery	100	0	93	36 - 161%	PASS		
(d8-Naphthalene)	Total	86	1			% Recovery	100	0	86	44 - 119%	PASS		
1-Methylnaphthalene	Total	0.433	1	0.001	0.005	µg/L	0.5	0	87	49 - 117%	PASS		
1-Methylphenanthrene	Total	0.452	1	0.001	0.005	µg/L	0.5	0	90	66 - 127%	PASS		
2,3,5-Trimethylnaphthalene	Total	0.442	1	0.001	0.005	µg/L	0.5	0	88	57 - 120%	PASS		
2,6-Dimethylnaphthalene	Total	0.443	1	0.001	0.005	µg/L	0.5	0	89	54 - 117%	PASS		
2-Methylnaphthalene	Total	1.34	1	0.001	0.005	µg/L	1.5	0	89	47 - 130%	PASS		
Acenaphthene	Total	1.32	1	0.001	0.005	µg/L	1.5	0	88	53 - 131%	PASS		
Acenaphthylene	Total	1.38	1	0.001	0.005	µg/L	1.5	0	92	43 - 140%	PASS		
Anthracene	Total	1.36	1	0.001	0.005	µg/L	1.5	0	91	58 - 135%	PASS		
Benz[a]anthracene	Total	1.36	1	0.001	0.005	µg/L	1.5	0	91	55 - 145%	PASS		
Benzo[a]pyrene	Total	1.33	1	0.001	0.005	µg/L	1.5	0	89	51 - 143%	PASS		
Benzo[b]fluoranthene	Total	1.42	1	0.001	0.005	µg/L	1.5	0	95	46 - 165%	PASS		
Benzo[e]pyrene	Total	0.419	1	0.001	0.005	µg/L	0.5	0	84	42 - 152%	PASS		
Benzo[g,h,i]perylene	Total	1.45	1	0.001	0.005	µg/L	1.5	0	97	63 - 133%	PASS		
Benzo[k]fluoranthene	Total	1.36	1	0.001	0.005	µg/L	1.5	0	91	56 - 145%	PASS		
Biphenyl	Total	0.443	1	0.001	0.005	µg/L	0.5	0	89	56 - 119%	PASS		
Chrysene	Total	1.29	1	0.001	0.005	µg/L	1.5	0	86	56 - 141%	PASS		
Dibenz[a,h]anthracene	Total	1.52	1	0.001	0.005	µg/L	1.5	0	101	55 - 150%	PASS		
Dibenzo[a,l]pyrene	Total	0.397	1	0.001	0.005	µg/L	0.5	0	79	50 - 150%	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
Dibenzothiophene	Total	0.451	1	0.001	0.005	µg/L	0.5	0	90	75 - 113%	PASS			
Fluoranthene	Total	1.43	1	0.001	0.005	µg/L	1.5	0	95	60 - 146%	PASS			
Fluorene	Total	1.4	1	0.001	0.005	µg/L	1.5	0	93	58 - 131%	PASS			
Indeno[1,2,3-cd]pyrene	Total	1.53	1	0.001	0.005	µg/L	1.5	0	102	50 - 151%	PASS			
Naphthalene	Total	1.25	1	0.001	0.005	µg/L	1.5	0	83	41 - 126%	PASS			
Perylene	Total	0.42	1	0.001	0.005	µg/L	0.5	0	84	48 - 141%	PASS			
Phenanthrene	Total	1.37	1	0.001	0.005	µg/L	1.5	0	91	67 - 127%	PASS			
Pyrene	Total	1.43	1	0.001	0.005	µg/L	1.5	0	95	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: 96418-BS2	**QAQC Procedural Blank**					**Matrix: BlankMatrix**		**Sampled:**				**Received:**		
		Method: EPA 625.1				Batch ID: O-35138		Prepared: 07-Apr-22				Analyzed: 13-May-22		
(d10-Acenaphthene)	Total	97	1			% Recovery	100	0	97	65 - 113%	PASS	4	30	PASS
(d10-Phenanthrene)	Total	99	1			% Recovery	100	0	99	80 - 111%	PASS	5	30	PASS
(d12-Chrysene)	Total	97	1			% Recovery	100	0	97	60 - 139%	PASS	4	30	PASS
(d12-Perylene)	Total	98	1			% Recovery	100	0	98	36 - 161%	PASS	5	30	PASS
(d8-Naphthalene)	Total	89	1			% Recovery	100	0	89	44 - 119%	PASS	3	30	PASS
1-Methylnaphthalene	Total	0.438	1	0.001	0.005	µg/L	0.5	0	88	49 - 117%	PASS	1	30	PASS
1-Methylphenanthrene	Total	0.469	1	0.001	0.005	µg/L	0.5	0	94	66 - 127%	PASS	4	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.456	1	0.001	0.005	µg/L	0.5	0	91	57 - 120%	PASS	3	30	PASS
2,6-Dimethylnaphthalene	Total	0.448	1	0.001	0.005	µg/L	0.5	0	90	54 - 117%	PASS	1	30	PASS
2-Methylnaphthalene	Total	1.37	1	0.001	0.005	µg/L	1.5	0	91	47 - 130%	PASS	2	30	PASS
Acenaphthene	Total	1.35	1	0.001	0.005	µg/L	1.5	0	90	53 - 131%	PASS	2	30	PASS
Acenaphthylene	Total	1.42	1	0.001	0.005	µg/L	1.5	0	95	43 - 140%	PASS	3	30	PASS
Anthracene	Total	1.41	1	0.001	0.005	µg/L	1.5	0	94	58 - 135%	PASS	3	30	PASS
Benz[a]anthracene	Total	1.4	1	0.001	0.005	µg/L	1.5	0	93	55 - 145%	PASS	2	30	PASS
Benzo[a]pyrene	Total	1.4	1	0.001	0.005	µg/L	1.5	0	93	51 - 143%	PASS	4	30	PASS
Benzo[b]fluoranthene	Total	1.46	1	0.001	0.005	µg/L	1.5	0	97	46 - 165%	PASS	2	30	PASS
Benzo[e]pyrene	Total	0.426	1	0.001	0.005	µg/L	0.5	0	85	42 - 152%	PASS	1	30	PASS
Benzo[g,h,i]perylene	Total	1.5	1	0.001	0.005	µg/L	1.5	0	100	63 - 133%	PASS	3	30	PASS
Benzo[k]fluoranthene	Total	1.39	1	0.001	0.005	µg/L	1.5	0	93	56 - 145%	PASS	2	30	PASS
Biphenyl	Total	0.449	1	0.001	0.005	µg/L	0.5	0	90	56 - 119%	PASS	1	30	PASS
Chrysene	Total	1.32	1	0.001	0.005	µg/L	1.5	0	88	56 - 141%	PASS	2	30	PASS
Dibenz[a,h]anthracene	Total	1.6	1	0.001	0.005	µg/L	1.5	0	107	55 - 150%	PASS	6	30	PASS
Dibenzo[a,l]pyrene	Total	0.412	1	0.001	0.005	µg/L	0.5	0	82	50 - 150%	PASS	4	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
Dibenzothiophene	Total	0.467	1	0.001	0.005	µg/L	0.5	0	93	75 - 113%	PASS	3	30	PASS	
Fluoranthene	Total	1.47	1	0.001	0.005	µg/L	1.5	0	98	60 - 146%	PASS	3	30	PASS	
Fluorene	Total	1.45	1	0.001	0.005	µg/L	1.5	0	97	58 - 131%	PASS	4	30	PASS	
Indeno[1,2,3-cd]pyrene	Total	1.6	1	0.001	0.005	µg/L	1.5	0	107	50 - 151%	PASS	5	30	PASS	
Naphthalene	Total	1.27	1	0.001	0.005	µg/L	1.5	0	85	41 - 126%	PASS	2	30	PASS	
Perylene	Total	0.424	1	0.001	0.005	µg/L	0.5	0	85	48 - 141%	PASS	1	30	PASS	
Phenanthrene	Total	1.41	1	0.001	0.005	µg/L	1.5	0	94	67 - 127%	PASS	3	30	PASS	
Pyrene	Total	1.48	1	0.001	0.005	µg/L	1.5	0	99	54 - 156%	PASS	4	30	PASS	

TENTATIVELY IDENTIFIED COMPOUNDS

Sample ID: 96419

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Qual
30.68	6.0950	1111	Anthracene-D10-	1719-06-8	96
			No TICs were identified		

Concentration estimated using the response for Anthracene-d10

Sample ID: Lab Blank Batch O-35138

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Qual
30.68	5.7228	1111	Anthracene-D10-	1719-06-8	96
13.90	0.4983	97	Cyclohexane, 1,2,4,5-tetraethyl-, (1.alpha.,2.alpha.,4.alpha.,5.alpha.)-	61142-24-3	83
13.90	0.4962	96	1,7-Dimethyl-4-(1-methylethyl)cyclodecane	645-10-3	83

Concentration estimated using the response for Anthracene-d10

CHAIN OF CUSTODY

eurofins | Eaton Analytical

Submittal Form

Date: 4/14/2022

Ship To:
`Physis Environmental Laboratories, Inc
1904 East Wright Circle

Anaheim, CA 92806-6028

Phone: 714-602-5320 Fax:

Folder #: 998864
Report Due: 04/18/2022

*REPORTING REQUIRMENTS: *Do Not Combine Reports with any other samples submitted under different Folder Numbers!*
Report & Invoice must have the Folder # 998864 Job # 1000014

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: Eaton-MonroviaSubContract@eurofinset.com
Eurofins Eaton Analytical, LLC 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical, LLC
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified StateCertification # and Exp Date for requested tests + matrix.

Samples from: HAWAII

8 containers per sample for MS/MSD batch QC. Only report to RL and place a comment in the report stating RL reporting only

Sample ID	*Client Sample ID for reference onl*	Sample Date & Time	Matrix	Clip Code	PWSID
202204130686	Halawa Shaft Viewing Pool	04/11/22 0930	DW		JLS

Sample type: | Sample Event: | Facility ID: | Sample Point ID: | Static ID:

Method	Prep Method	Analysis Requested
EPA 625	EPA 625m	625PAH in ug/L
EPA 625	EPA 625	625 Acid Extractable in ug/L
EPA 625	EPA 625	625 Base Neutral Extractable in ug/L

Relinquished by: Sample Control Date 4/14/22 Time 1256

Received by: Date 4/14/22 Time 1256

Relinquished by: Sample Control Date _____ Time _____

Received by: _____ Date _____ Time _____

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.
Innovative Solutions for Nature

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.

Project Iteration ID: 1407003-236
Client Name: Eurofins Eaton Analytical
Project Name: Folder # 998864 Job # 1000014
COC Page Number: 2 of 2
Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: KS
2. Date Received: 4/14/22
3. Time Received: 1256
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): 5.1 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: KS

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:

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

Date: 04-26-2022
EMAX Batch No.: 22D144

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 998864

Enclosed is the Laboratory report for samples received on 04/14/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
202204130686	D144-01	04/11/22	WATER	TPH GASOLINE TPH
202204130687	D144-02	04/11/22	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 CA002912021-19
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing
California ELAP Accredited Certificate Number 2672

eurofins | Eaton Analytical

Ship To:
`EMAX Laboratories, Inc.
3051 Fujita St.

Torrance, CA 90505

Phone: 310-618-8889 Fax: 310-618-0818

Folder #: 998864 **Report Due:** 04/18/2022

Submittal Form 22D144

Date: 4/14/2022

REPORTING REQUIRMENTS:** ***Do Not Combine Reports with any other samples submitted under different Folder Numbers!
Report & Invoice must have the Folder # **998864** Job # **1000014**

Report all quality control data according to Method. Include dates analyzed. Date extracted (if extracted) and Method reference on the report.
Results must have Complete data & QC with Approval Signature.

Reports: Jackie Contreras Sub-Contracting Administrator
EMAIL TO: Eaton-MonroviaSubContract@eurofinset.com
Eurofins Eaton Analytical, LLC 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016
Phone (626) 386-1165 Fax (626) 386-1122
Invoices to: Eurofins Eaton Analytical, LLC
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

Provide in each Report the Specified StateCertification # and Exp Date for requested tests + matrix.
Samples from: **HAWAII**

4 or 3 containers per sample for MS/MSD batch QC. Low level RL reporting only

Sample ID	Client Sample ID for reference onl	Sample Date & Time	Matrix	Clip Code	PWSID	
1 202204130686	Halawa Shaft Viewing Pool	04/11/22 0930	DW			JLS
Sample type:	**Sample Event:**	**Facility ID:**	**Sample Point ID:**		**Static ID:**	

Method	Prep Method	Analysis Requested
SW8015C		Ethanol
SW 8015B	EPA 3550B	TPH 8015 Diesel and Motor Oil
EPA 8015	EPA 8015	Jet Fuel 5 C8-C18
EPA 8015		Jet Fuel 8 C8-C18

Sample ID	Client Sample ID for reference onl	Sample Date & Time	Matrix	Clip Code	PWSID	
2 202204130687	Travel Blank	04/11/22 0930	DW			JLS
Sample type:	**Sample Event:**	**Facility ID:**	**Sample Point ID:**		**Static ID:**	

Method	Prep Method	Analysis Requested
SW 8015B	EPA 5030C	(SUB)Gas Fraction Hydrocarbons

Relinquished by: [signature] Sample Control Date 4/14/22 Time 1200

Received by: [signature] Date 4-14-22 Time 1200

Relinquished by: Sample Control Date _____ Time _____

Received by: _____ Date _____ Time _____

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

Temp. 4.3/3.8 (3)
3.1/2.6 (4)

EMAX LABORATORIES, INC.

REFERENCE: EMAX-SM02 Rev. 12

SAMPLE RECEIPT FORM 1

Type of Delivery	Airbill / Tracking Number	ECN 22D144
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Dereck Shell
☐ EMAX Courier ☒ Client Delivery		Date 04/14/22 Time 12:00

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 -0.5 (Cool, ≤6 °C but not frozen)	☐ Cooler 1_____ °C	☐ Cooler 2_____ °C	☒ Cooler 3 4.3/3.8 °C	☒ Cooler 4 3.1/2.6 °C	☐ Cooler 5_____ °C
	☐ Cooler 6_____ °C	☐ Cooler 7_____ °C	☐ Cooler 8_____ °C	☐ Cooler 9_____ °C	☐ Cooler 10_____ °C
Thermometer:	*A - S/N* _____	*B - S/N* _____	(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		D8	Ethanol requested on COC, did not receive unpreserved vials	R8
1,2	1-11	D10		R8
1	5,6,8,9	D22		R8
1	4,7	D24		R8, R9
1	1-3	D9	gas	

4/14/22 AB 4/17/22

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

Code	Description-Sample Management
D13	Out of Holding Time
D14	Bubble is >6mm
D15	No trip blank in cooler
D16	Preservation not indicated in _____
D17	Preservation mismatch COC vs label
D18	Insufficient chemical preservative
D19	Insufficient Sample
D20	No filtration info for dissolved analysis
D21	No sample for moisture determination
(D22)	Jet fuel 8 Analysis not indicated on label
D23	
(D24)	Jet fuel 5,8 Analysis not indicated

Code	Description-Sample Management
R1	Proceed as indicated in ☐ COC ☐ Label
R2	Refer to attached instruction
R3	Cancel the analysis
R4	Use vial with smallest bubble first
R5	Log-in with latest sampling date and time+1 min
R6	Adjust pH as necessary
R7	Filter and preserved as necessary
R8	Informed Client
R9	Ethanol not needed
R10	
R11	
R12	

REVIEWS:

Sample Labeling maria Rivera Date 04/14/22 4/14/22

SRF Date 4/14/22

PM Date 4/17/22

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

998864

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

SDG#: 22D144

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 998864

SDG : 22D144

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

A total of two(2) water samples were received on 04/14/22 to be analyzed for Total Petroleum Hydrocarbons by Purge and Trap in accordance with Method 5030B/8015B and project specific requirements.

Holding Time
Samples were analyzed within the prescribed holding time.

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

Method Blank
Method blank was prepared and analyzed at the frequency required by the project. For this SDG, one(1) method blank was analyzed. VG39D04B - 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. VG39D04L/VG39D04C 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 D140-01M/D140-01S. 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 : 998864

SDG NO. : 22D144
Instrument ID : GCT039

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VG39D04B	1	NA	04/14/2212:30	04/14/2212:30	ED14004A	ED14003A	22VG39D04	Method Blank
LCS1W	VG39D04L	1	NA	04/14/2213:07	04/14/2213:07	ED14005A	ED14003A	22VG39D04	Lab Control Sample (LCS)
LCD1W	VG39D04C	1	NA	04/14/2213:44	04/14/2213:44	ED14006A	ED14003A	22VG39D04	LCS Duplicate
202204130686	D144-01	1	NA	04/14/2223:31	04/14/2223:31	ED14022A	ED14012A	22VG39D04	Field Sample
202204130687	D144-02	1	NA	04/15/2200:44	04/15/2200:44	ED14024A	ED14023A	22VG39D04	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:	04/11/22 09:30
Project	: 998864	Date Received:	04/14/22
Batch No.	: 22D144	Date Extracted:	04/14/22 23:31
Sample ID	: 202204130686	Date Analyzed:	04/14/22 23:31
Lab Samp ID:	D144-01	Dilution Factor:	1
Lab File ID:	ED14022A	Matrix:	WATER
Ext Btch ID:	22VG39D04	% Moisture:	NA
Calib. Ref.:	ED14012A	Instrument ID:	39

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0349	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:	04/11/22 09:30
Project	: 998864	Date Received:	04/14/22
Batch No.	: 22D144	Date Extracted:	04/15/22 00:44
Sample ID	: 202204130687	Date Analyzed:	04/15/22 00:44
Lab Samp ID:	D144-02	Dilution Factor:	1
Lab File ID:	ED14024A	Matrix:	WATER
Ext Btch ID:	22VG39D04	% Moisture:	NA
Calib. Ref.:	ED14023A	Instrument ID:	39

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0348	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

QC SUMMARIES

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/14/22 12:30
Project	: 998864	Date Received:	04/14/22
Batch No.	: 22D144	Date Extracted:	04/14/22 12:30
Sample ID	: MBLK1W	Date Analyzed:	04/14/22 12:30
Lab Samp ID:	VG39D04B	Dilution Factor:	1
Lab File ID:	ED14004A	Matrix:	WATER
Ext Btch ID:	22VG39D04	% Moisture:	NA
Calib. Ref.:	ED14003A	Instrument ID:	39

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0363	0.0400	91	60-140

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

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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 998864
BATCH NO. : 22D144
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VG39D04B	VG39D04L	VG39D04C
LAB FILE ID	: ED14004A	ED14005A	ED14006A
DATE PREPARED	: 04/14/22 12:30	04/14/22 13:07	04/14/22 13:44
DATE ANALYZED	: 04/14/22 12:30	04/14/22 13:07	04/14/22 13:44
PREP BATCH	: 22VG39D04	22VG39D04	22VG39D04
CALIBRATION REF	: ED14003A	ED14003A	ED14003A

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	0.491	98	0.500	0.484	97	1	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0462	116	0.0400	0.0463	116	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 : 998896
BATCH NO. : 22D140
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 202204130762	202204130762MS	202204130762MSD
LAB SAMPLE ID	: D140-01	D140-01M	D140-01S
LAB FILE ID	: ED14013A	ED14014A	ED14015A
DATE PREPARED	: 04/14/22 18:01	04/14/22 18:38	04/14/22 19:15
DATE ANALYZED	: 04/14/22 18:01	04/14/22 18:38	04/14/22 19:15
PREP BATCH	: 22VG39D04	22VG39D04	22VG39D04
CALIBRATION REF:	ED14012A	ED14012A	ED14012A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.445	89	0.500	0.473	95	6	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0441	110	0.0400	0.0453	113	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

998864

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22D144

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 998864

SDG : 22D144

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 04/14/22 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. DSD017WB - 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 DSD017WL. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. One(1) set of MS/MSD was analyzed. Diesel was within MS QC limits in 22D122-01M/22D122-01S. 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: 998864

SDG : 22D144

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 04/14/22 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. DSD017WB - 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 J5D017WL. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. One(1) set of MS/MSD was analyzed. JP5 was within MS QC limits in 22D123-01M/22D123-01S. 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: 998864

SDG : 22D144

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 04/14/22 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. DSD017WB - 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 J8D017WL. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. one(1) set of MS/MSD was analyzed. JP8 was within MS QC limits in 22D140-01M/22D140-01S. 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 : 998864

SDG NO. : 22D144
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	DSD017WB	1	NA	04/19/2217:01	04/18/2210:45	LD19010A	LD19004A	22DSD017W	Method Blank
LCS1W	DSD017WL	1	NA	04/19/2217:20	04/18/2210:45	LD19011A	LD19004A	22DSD017W	Lab Control Sample (LCS)
202204130686	D144-01	1	NA	04/20/2200:07	04/18/2210:45	LD19033A	LD19022A	22DSD017W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 998864

SDG NO. : 22D144
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	DSD017WB	1	NA	04/19/2217:01	04/18/2210:45	LD19010A	LD19005A	22DSD017W	Method Blank
LCS1W	J5D017WL	1	NA	04/19/2217:38	04/18/2210:45	LD19012A	LD19005A	22DSD017W	Lab Control Sample (LCS)
202204130686	D144-01	1	NA	04/20/2200:07	04/18/2210:45	LD19033A	LD19023A	22DSD017W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 998864

SDG NO. : 22D144
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	DSD017WB	1	NA	04/19/2217:01	04/18/2210:45	LD19010A	LD19006A	22DSD017W	Method Blank
LCS1W	J8D017WL	1	NA	04/19/2217:57	04/18/2210:45	LD19013A	LD19006A	22DSD017W	Lab Control Sample (LCS)
202204130686	D144-01	1	NA	04/20/2200:07	04/18/2210:45	LD19033A	LD19023A	22DSD017W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/11/22 09:30
Project	: 998864	Date Received:	04/14/22
Batch No.	: 22D144	Date Extracted:	04/18/22 10:45
Sample ID	: 202204130686	Date Analyzed:	04/20/22 00:07
Lab Samp ID:	22D144-01	Dilution Factor:	1
Lab File ID:	LD19033A	Matrix:	WATER
Ext Btch ID:	22DSD017W	% Moisture:	NA
Calib. Ref.:	LD19022A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.026	0.013
Motor Oil	ND	0.052	0.026

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.527	0.515	102	60-130
Hexacosane	0.105	0.129	81	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	: 970ml	Final Volume :	5ml
Prepared by	: POreto	Analyzed by :	SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/11/22 09:30
Project	: 998864	Date Received:	04/14/22
Batch No.	: 22D144	Date Extracted:	04/18/22 10:45
Sample ID	: 202204130686	Date Analyzed:	04/20/22 00:07
Lab Samp ID:	22D144-01	Dilution Factor:	1
Lab File ID:	LD19033A	Matrix:	WATER
Ext Btch ID:	22DSD017W	% Moisture:	NA
Calib. Ref.:	LD19023A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.052	0.026

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.527	0.515	102	60-130
Hexacosane	0.105	0.129	81	60-130

Notes:
RL : Reporting Limit

Parameter	H-C Range
JP5	C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 970ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/11/22 09:30
Project	: 998864	Date Received:	04/14/22
Batch No.	: 22D144	Date Extracted:	04/18/22 10:45
Sample ID	: 202204130686	Date Analyzed:	04/20/22 00:07
Lab Samp ID:	22D144-01	Dilution Factor:	1
Lab File ID:	LD19033A	Matrix:	WATER
Ext Btch ID:	22DSD017W	% Moisture:	NA
Calib. Ref.:	LD19023A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.052	0.026

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.527	0.515	102	60-130
Hexacosane	0.105	0.129	81	60-130

Notes:
RL : Reporting Limit
Parameter H-C Range
JP8 C8-C18
Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 970ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

QC SUMMARIES

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/18/22 10:45
Project	: 998864	Date Received:	04/18/22
Batch No.	: 22D144	Date Extracted:	04/18/22 10:45
Sample ID	: MBLK1W	Date Analyzed:	04/19/22 17:01
Lab Samp ID	: DSD017WB	Dilution Factor:	1
Lab File ID	: LD19010A	Matrix:	WATER
Ext Btch ID	: 22DSD017W	% Moisture:	NA
Calib. Ref.	: LD19004A	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	0.466	0.500	93	60-130
Hexacosane	0.119	0.125	95	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 998864
BATCH NO. : 22D144
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSD017WB	DSD017WL
LAB FILE ID	: LD19010A	LD19011A
DATE PREPARED	: 04/18/22 10:45	04/18/22 10:45
DATE ANALYZED	: 04/19/22 17:01	04/19/22 17:20
PREP BATCH	: 22DSD017W	22DSD017W
CALIBRATION REF	: LD19004A	LD19004A

ACCESSION:

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

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.384	77	60-130
Hexacosane	0.125	0.118	94	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 998532
BATCH NO. : 22D122
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 202204120564	202204120564MS	202204120564MSD
LAB SAMPLE ID	: 22D122-01	22D122-01M	22D122-01S
LAB FILE ID	: LD19016A	LD19017A	LD19018A
DATE PREPARED	: 04/18/22 10:45	04/18/22 10:45	04/18/22 10:45
DATE ANALYZED	: 04/19/22 18:53	04/19/22 19:11	04/19/22 19:30
PREP BATCH	: 22DSD017W	22DSD017W	22DSD017W
CALIBRATION REF	: LD19004A	LD19004A	LD19004A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.62	3.34	127	2.62	2.94	112	13	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.525	0.522	99	0.525	0.440	84	60-130
Hexacosane	0.131	0.136	104	0.131	0.132	101	60-130

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

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/18/22 10:45
Project	: 998864	Date Received:	04/18/22
Batch No.	: 22D144	Date Extracted:	04/18/22 10:45
Sample ID	: MBLK1W	Date Analyzed:	04/19/22 17:01
Lab Samp ID:	DSD017WB	Dilution Factor:	1
Lab File ID:	LD19010A	Matrix:	WATER
Ext Btch ID:	22DSD017W	% Moisture:	NA
Calib. Ref.:	LD19005A	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	0.466	0.500	93	60-130
Hexacosane	0.119	0.125	95	60-130

Notes:
RL : Reporting Limit

Parameter	H-C Range
JP5	C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 998864
BATCH NO. : 22D144
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSD017WB	J5D017WL
LAB FILE ID	: LD19010A	LD19012A
DATE PREPARED	: 04/18/22 10:45	04/18/22 10:45
DATE ANALYZED	: 04/19/22 17:01	04/19/22 17:38
PREP BATCH	: 22DSD017W	22DSD017W
CALIBRATION REF	: LD19005A	LD19005A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP5	ND	2.50	2.49	100	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.501	100	60-130
Hexacosane	0.125	0.118	94	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 998548
BATCH NO. : 22D123
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 202204120630	202204120630MS	202204120630MSD
LAB SAMPLE ID	: 22D123-01	22D123-01M	22D123-01S
LAB FILE ID	: LD19019A	LD19020A	LD19021A
DATE PREPARED	: 04/18/22 10:45	04/18/22 10:45	04/18/22 10:45
DATE ANALYZED	: 04/19/22 19:48	04/19/22 20:07	04/19/22 20:25
PREP BATCH	: 22DSD017W	22DSD017W	22DSD017W
CALIBRATION REF:	LD19005A	LD19005A	LD19005A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.47	2.59	105	2.45	2.65	108	2	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.495	0.501	101	0.490	0.528	108	60-130
Hexacosane	0.124	0.116	94	0.123	0.127	104	60-130

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

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/18/22 10:45
Project	: 998864	Date Received:	04/18/22
Batch No.	: 22D144	Date Extracted:	04/18/22 10:45
Sample ID	: MBLK1W	Date Analyzed:	04/19/22 17:01
Lab Samp ID:	DSD017WB	Dilution Factor:	1
Lab File ID:	LD19010A	Matrix:	WATER
Ext Btch ID:	22DSD017W	% Moisture:	NA
Calib. Ref.:	LD19006A	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	0.466	0.500	93	60-130
Hexacosane	0.119	0.125	95	60-130

Notes:
RL : Reporting Limit

Parameter	H-C Range
JP8	C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.
Sample Amount : 1000ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 998864
BATCH NO. : 22D144
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSD017WB	J8D017WL
LAB FILE ID	: LD19010A	LD19013A
DATE PREPARED	: 04/18/22 10:45	04/18/22 10:45
DATE ANALYZED	: 04/19/22 17:01	04/19/22 17:57
PREP BATCH	: 22DSD017W	22DSD017W
CALIBRATION REF	: LD19006A	LD19006A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP8	ND	2.50	2.20	88	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.526	105	60-130
Hexacosane	0.125	0.118	94	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 998896
BATCH NO. : 22D140
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 202204130762	202204130762MS	202204130762MSD
LAB SAMPLE ID	: 22D140-01	22D140-01M	22D140-01S
LAB FILE ID	: LD19026A	LD19027A	LD19028A
DATE PREPARED	: 04/18/22 10:45	04/18/22 10:45	04/18/22 10:45
DATE ANALYZED	: 04/19/22 21:58	04/19/22 22:17	04/19/22 22:35
PREP BATCH	: 22DSD017W	22DSD017W	22DSD017W
CALIBRATION REF	: LD19023A	LD19023A	LD19023A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.70	2.39	89	2.65	2.26	85	6	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.540	0.561	104	0.530	0.547	103	60-130
Hexacosane	0.135	0.133	99	0.132	0.129	97	60-130

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