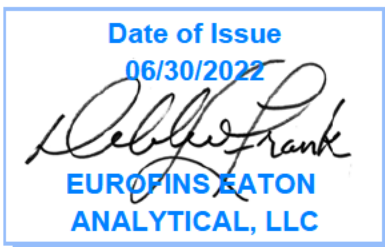


750 Royal Oaks Drive, Suite 100  
Monrovia, California 91016-3629  
Tel: (626) 386-1100  
Fax: (866) 988-3757  
1 800 566 LABS (1 800 566 5227)

## 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



Utah ELCP CA00006

DEB: Debbie L Frank  
Project Manager

Report: 1003047  
Project: RED-HILL  
Group: Weekly TPH-8015\_RED-HILL (2022) - EMAX

\* 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

ISO/IEC 17025:2017 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	Test(s)	Method(s)	Potable Water *	Waste Water
Enterococci	Enterolert	x	x	Gross Alpha coprecipitation	SM 7110 C	x	x
<i>Escherichia coli</i> (Enumeration)	SM 9221 B.1 SM 9221 F	x		Hardness	SM 2340 B	x	x
Fecal Coliform (P/A and Enumeration)	SM 9221 C (MTF/EC), SM 9221 E (MTF/EC)	x	x	Hexavalent Chromium	EPA 218.6,	x	x
Fecal Streptococci and Enterococci	SM 9230 B	x	x	Hexavalent Chromium	EPA 218.7,	x	
Heterotrophic Bacteria	SM 9215 B	x		Hexavalent Chromium	SM 3500-Cr B		x
Legionella	Legiolert®	x		Inorganic Anions and DBPs	EPA 300.0	x	x
<i>Pseudomonas aeruginosa</i>	Idexx Pseudalert	x		Norganic Anions and DBPs	EPA 300.1	x	
Total Coliform (P/A and Enumeration)	SM 9221A, SM 9221B, SM 9221 C	x	x	Kjeldahl Nitrogen	EPA 351.2		x
Total Coliform, Total Coliform with Chlorine Present	SM 9221 B	x	x	Metals	EPA 200.7, EPA200.8	x	x
Total Coliform/E. coli (P/A and Enumeration, Idexx Colilert, Idexx Colilert 18, Colisure)	SM 9223	x		Nitrosamines	EEA-Agilent 521.1 (GCMS-24250)	x	
Total Microcystins and Nodularins	EPA 546	x		Nitrate/Nitrite Nitrogen	EPA 353.2	x	x
Yeast and Mold	SM 9610	x		Odor	SM2150B	x	
1,2,3-Trichloropropane (TCP) at 5 PPT	CA SRL 524M-TCP	x		Organohalide Pesticides and PCB	EPA 505	x	
1,4-Dioxane	EPA 522	x		Ortho Phosphate	SM 4500P E	x	
2,3,7,8-TCDD	Modified EPA 1613 B	x		Oxyhalides Disinfect ion Byproducts	EPA 317.0	x	
Acrylamide	+ LCMS 2440)	x		Perchlorate	EPA 331.0	x	
Algal Toxins/Microcys in	+ LCMS 3570	x		Perchlorate (Low and High Levels)	EPA 314.0	x	
Alkalinity	SM 2320B	x	x	Perfluorinated Alkyl Acids	EPA 533, EPA 537, EPA 537.1	x	
Ammonia	EPA 350.1, SM 4500-NH3 H		x	PPCP and EDC	+ LCMS-2443	x	
Asbestos	EPA 100.2	x	x	pH	EPA 150.1 SM 4500-H+ B	x	x
Bicarbonate Alkalinity as HCO3	SM 2330 B	x	x	Phenolics – Low Level	+WC 2493 (EPA 420.2 and EPA 420.4 MOD)	x	x
BOD/CBOD	SM 5210 B		x	Phenylurea Pesticides/Herbicides	+ LCMS-2448	x	
Bromate	+ LCMS- 2447	x		Radium-226, Radium-228	GA Tech (Rad-2374)	x	
Carbonate as CO3	SM 2330 B	x	x	Radon-222	SM 7500RN	x	
Carbonyls	EPA 556	x	x	Residue (Filterable)	SM 2540C	x	x
Chemical Oxygen Demand	EPA 410.4, SM 5220D		x	Residue (Non-Filterable)	SM 2540D		x
Chlorinated Acids	EPA 515.4	x		Residue (Total)	SM 2540B		x
Chlorine Dioxide	Palin Test Chlordio X Plus, SM 4500-CLO2 D	x		Residue (Volatile)	EPA 160.4		x
Chlorine, Free, Combined, Total Residual, Chloramines	SM 4500-Cl G	x		Semi-Volatile Compounds	EPA 525.2	x	
Color	SM2120B	x		Silica	SM 4500-SiO2 C	x	x
Conductivity	EPA 120.1, SM 2510B	x	x	Sulfide	SM 4500-S D		x
Corrosivity (Langelier Index), Carbonate as CO3, Hydroxide as OH Calculated	SM 2330 B	x		Sulfite	SM 4500-SO3 B	x	x
Cyanide (Amenable)	SM 4500-CN G	x	x	Surfactants	SM 5540C	x	x
Cyanide (Free)	SM 4500CN F	x	x	Taste and Odor	SM 6040 E	x	
Cyanide (Total)	EPA 335.4	x	x	Total Organic Carbon	SM 5310 C	x	x
Cyanogen Chloride (Screen)	+ 335 Mod (WC-24467)	x		Total Phenols	EPA 420.1		x
Diquat and Paraquat	EPA 549.2	x		Total Phenols	EPA 420.4	x	x
DBP and HAA	SM 6251 B	x		Triazine Pesticides and their Degradates	+ LCMS-3617	x	
Dissolved Organic Carbon	SM 5310 C	x		Turbidity	EPA 180.1	x	x
Dissolved Oxygen	SM 4500-O G		x	Uranium by ICP/MS	EPA 200.8	x	
EDB/DCBP/TCP	EPA 504.1	x		UV 254 Organic Constituents	SM 5910B	x	
EDB/DBCP and Disinfection Byproducts	EPA 551.1	x		VOCs	EPA 524.2	x	
EDTA and NTA	+ WC-2454	x		VOCs	+ (GCMS 2412) by EPA 524.2 modified	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				

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

(+) In-House Method

**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 #: 1003047  
Project: RED-HILL  
Sample Group: Weekly TPH-8015\_RED-HILL (2022)  
- EMAX  
Project Manager: Debbie L Frank  
Phone: (626) 386-1149  
PO #: C20525101 exp 05312023

The following samples were received from you on **May 11, 2022 at 1100**. 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
<u>202205120289</u>	HALAWA SHAFT VIEWING POOL	05/09/2022 0930
	@525PLUS C PLUS TICS (SUB)Gas Fraction Hydrocarbons TPH 8015 Diesel and Motor Oil	
<u>202205120290</u>	TB:HALAWA SHAFT VIEWING POOL	05/09/2022 0930
	( UB)Gas Fraction Hydrocarbons	

**Test Description**

@525PLUS C PLUS TICS -- Semivolatiles by GCMS



Eaton Analytical

750 Royal Oaks Drive, Suite 100  
Monrovia, CA 91016-3629  
Phone: 626 386 1100  
Fax: 626 386 1101  
800 566 LABS (800 566 5227)

# CHAIN OF CUSTODY RECORD

100 3047

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS:

SAMPLES CHECKED AGAINST COC BY: MD

SAMPLES LOGGED IN BY: MD

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

SAMPLE TEMP RECEIVED AT:

Colton / No. California / Arizona  
 Monrovia

41.2 °C (Compliance: 4 ± 2 °C)  
41.2 °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: FedEx

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: BWS HONOLULU		PROJECT CODE: Red Hill	COMPLIANCE SAMPLES - Requires state forms	NON-COMPLIANCE SAMPLES <input checked="" type="checkbox"/>	(check for yes)
EEA CLIENT CODE: Honolulu	COC ID:	SAMPLE GROUP:	Type of samples (circle one): ROUTINE <input checked="" type="checkbox"/> SPECIAL <input type="checkbox"/> CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA,...)		(check for yes)
TAT requested: rush by adv notice only		STD <input type="checkbox"/> 1 wk <input checked="" type="checkbox"/> X <input type="checkbox"/> 3 day <input type="checkbox"/> 2 day <input type="checkbox"/> 1 day <input type="checkbox"/>	SEE ATTACHED BOTTLE ORDER FOR ANALYSES list ANALYSES REQUIRED (enter number of bottles sent for each test for each sample)		

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX	FIELD DATA	FIELD DATA	SAMPLER COMMENTS
5-9-22	0930	Halawa Shaft Viewing Pool	RGW			525	
		Travel Blank	CFW				
		Temperature Blank					
							Temp Blank: 15.5 °C

\* MATRIX TYPES: RSW = Raw Surface Water CFW = Chlor(am)inated Finished Water SO = Soil  
 RGW = Raw Ground Water FW = Other Finished Water WW = Waste Water SW = Storm Water SL = Sludge

SAMPLED BY:	RELINQUISHED BY:	RECEIVED BY:	RECEIVED BY:	COMPANY/TITLE	DATE	TIME
[Redacted]	Derek Dotson	Derek Dotson	[Redacted]	Honolulu Board of Water Supply	5-9-2022	
[Redacted]	[Redacted]	[Redacted]	[Redacted]	Honolulu Board of Water Supply	5-10-2022	1200
[Redacted]	[Redacted]	[Redacted]	[Redacted]	[Redacted]	5-11-22	1100



Eaton Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

IEA Folder Number: 100 3047

### 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 = 401 (Observation = 4.4 °C) (Corr. Factor = 0.2 °C) (Final = 4.2 °C)

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

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

### 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: \_\_\_\_\_

VOA and Radon:  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 610-4, HAA(9251,652), 505, SPME, @CH, 532LCMS, 656, 658, Anatoxin, LCMS methods using 40 ml vials, International clients: None/<6

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

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

RECEIVED BY: Chris Brock SIGNATURE: Chris Brock PRINT NAME: Chris Brock COMPANY/TITLE: Eurofins Eaton Analytical DATE: 5-11-22 TIME: 1100

SAMPLES CHECKED AGAINST COC BY: \_\_\_\_\_ SIGNATURE: \_\_\_\_\_ PRINT NAME: Eurofins Eaton Analytical COMPANY/TITLE: Eurofins Eaton Analytical DATE: \_\_\_\_\_ TIME: \_\_\_\_\_

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

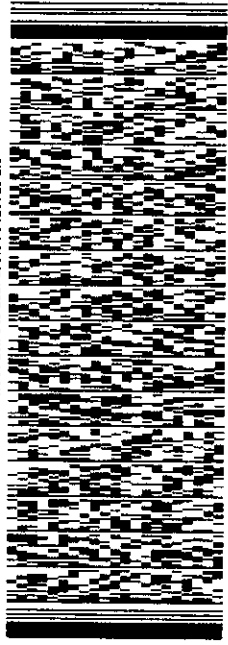
SHIP DATE: 10MAY22  
ACT WGT: 69.00 LB  
CAD: 100205419/NET14490

BILL RECIPIENT

TO

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

577J51B06FE4A



WED - 11 MAY 10:30A  
PRIORITY OVERNIGHT

MPS# 7768 2111 4390  
Mstr# 7768 2111 4209

0201

**WZ WHPA** 91016  
CA-US BUR



**After printing this label:**  
1. Use the 'Print' button on this page to print your label to your laser or inkjet printer.  
2. Fold the printed page along the horizontal line.  
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.  
**Warning:** Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.  
Use of this system constitutes your agreement to the service conditions in the current FedEx Service Guide, available on fedex.com. FedEx will not be responsible for any claim in excess of \$100 per package, whether the result of loss, damage, delay, non-delivery, misdelivery, or misinformation. 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 Service Guide. Written claims must be filed within strict time limits, see current FedEx Service Guide.

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1 800 566 LABS (1 800 566 5227)

**Laboratory Comments**

**Report:** 1003047  
**Project:** RED-HILL  
**Group:** Weekly TPH-8015\_RED-HILL (2022)  
- EMAX

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

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**Folder Comments**

Results for TPH Gas, Diesel, Motor Oil are submitted by Emax Laboratories

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.

@525.2 (SVOC by GCMS)

202205120289 @525.2 TICs None Detected.

**Flags Legend:**

LE - MRL Check recovery was above laboratory acceptance limits.

LK - The associated blank spike recovery was above method acceptance limits. This target analyte was not detected in the sample.

VC - CCV is high biased, ND data are reportable as per TNI V1M4 1.7.2.e).i.





Eaton Analytical

Tel: (626) 386-1100  
Fax: (866) 988-3757  
1 800 566 LABS (1 800 566 5227)

**Laboratory Hits**

**Report:** 1003047  
**Project:** RED-HILL  
**Group:** Weekly TPH-8015\_RED-HILL (2022)  
- EMAX

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

Samples Received on:  
05/11/2022 1100

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Analyzed	Analyte	Sample ID	Result	HI Limit	Units	MRL
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**SUMMARY OF POSITIVE DATA ONLY**

Tel: (626) 386-1100  
 Fax: (866) 988-3757  
 1 800 566 LABS (1 800 566 5227)

Report: 1003047  
 Project: RED-HILL  
 Group: Weekly TPH-8015\_RED-HILL (2022)  
 - EMAX

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

Samples Received on:  
 05/11/2022 1100

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
---------	----------	------------	------------------	--------	---------	--------	-------	-----	----------

**HALAWA SHAFT VIEWING POOL (202205120289)**

Sampled on 05/09/2022 0930

**EPA 525.2 - Semivolatiles by GCMS**

05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	1-Methylnaphthalene	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	2,4-DDD	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	2,4-DDE	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	2,4-DDT	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	2-methylnaphthalene	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	4,4-DDD	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	4,4-DDE	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	4,4-DDT	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Acenaphthene	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Acetochlor	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Alachlor	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Anthracene	ND	ug/L	0.020	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Atrazine	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.020	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.020	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.020	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Beta-BHC	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Bromacil	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Butachlor	ND (LK)	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.50	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Chlorobenzilate	ND (VC,LK)	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Chloroneb	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Chrysene	ND	ug/L	0.020	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Delta-BHC	ND	ug/L	0.10	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.

Tel: (626) 386-1100  
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 1 800 566 LABS (1 800 566 5227)

Report: 1003047  
 Project: RED-HILL  
 Group: Weekly TPH-8015\_RED-HILL (2022)  
 - EMAX

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

Samples Received on:  
 05/11/2022 1100

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.60	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.60	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Dieldrin	ND	ug/L	0.20	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Diethylphthalate	ND (LE)	ug/L	0.50	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Dimethoate	ND (LE,LK)	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.50	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1.0	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Endrin	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	EPTC	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Fluoranthene	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Fluorene	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Heptachlor	ND	ug/L	0.040	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Isophorone	ND	ug/L	0.50	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Lindane	ND	ug/L	0.040	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Malathion	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Methoxychlor	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Metolachlor	ND (LK)	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Metribuzin	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Molinate	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Naphthalene	ND	ug/L	0.30	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Parathion	ND (LK)	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Pendimethalin	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.20	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Phenanthrene	ND	ug/L	0.040	1

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Laboratory Data

**Report:** 1003047  
**Project:** RED-HILL  
**Group:** Weekly TPH-8015\_RED-HILL (2022)  
 - EMAX

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

Samples Received on:  
 05/11/2022 1100

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Propachlor	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Pyrene	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Simazine	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Terbacil	ND (LK)	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Terbutylazine	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Thiobencarb (ELAP)	ND	ug/L	0.20	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.050	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Trifluralin	ND	ug/L	0.10	1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	105	%		1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Acenaphthene-d10	81	%		1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Chrysene-d12	82	%		1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Perylene-d12	94	%		1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Phenanthrene-d10	83	%		1
05/13/22	05/17/22 15:18	1406479	1407749	(EPA 525.2)	Triphenylphosphate	99	%		1
<b>SW 8015B - (SUB)Gas Fraction Hydrocarbons</b>									
05/14/22	05/14/22 20:29			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.02	1
<b>SW 8015B - TPH 8015 Diesel and Motor Oil</b>									
05/14/22	05/16/22 16:40			(SW 8015B)	TPH Diesel	ND	mg/L	0.024	1
05/14/22	05/16/22 16:40			(SW 8015B)	TPH Motor Oil	ND	mg/L	0.048	1
<b><u>TB:HALAWA SHAFT VIEWING POOL (202205120290)</u></b>						<b>Sampled on 05/09/2022 0930</b>			
<b>SW 8015B - (SUB)Gas Fraction Hydrocarbons</b>									
05/14/22	05/14/22 21:06			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.02	1

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Eaton Analytical

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**Laboratory QC Summary**

**Report:** 1003047  
**Project:** RED-HILL  
**Group:** Weekly TPH-8015\_RED-HILL (2022)  
- EMAX

Honolulu Board of Water Supply

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**Semivolatiles by GCMS**

**Prep Batch: 1406479 Analytical Batch: 1407749**

202205120289

HALAWA SHAFT VIEWING POOL

**Analysis Date: 05/17/2022**

Analyzed by: PAC

Tel: (626) 386-1100  
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Report: 1003047  
 Project: RED-HILL  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
<b>Semivolatiles by GCMS by EPA 525.2</b>									
<b>Prep Batch: 1406479 Analytical Batch: 1407749</b>					<b>Analysis Date: 05/17/2022</b>				
DUP_202205120002	1,3-Dimethyl-2-nitrobenzene (S)			109	%	109	(70-130)		
LCS1	1,3-Dimethyl-2-nitrobenzene (S)		5	108	%	108	(70-130)		
LC 2	1,3 Dimethyl 2 nitrobenzene ( )		5	104	%	104	(70 130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)			106	%	106	(70-130)		
MRL_CHK	1,3-Dimethyl-2-nitrobenzene (S)		5	108	%	108	(70-130)		
MS_202205110925	1,3-Dimethyl-2-nitrobenzene (S)		5	103	%	103	(70-130)		
DUP_202205120002	1-Methylnaphthalene			ND	ug/L		(0-20)		
LCS1	1-Methylnaphthalene		2	2.15	ug/L	108	(70-130)		
LCS2	1-Methylnaphthalene		2	2.14	ug/L	107	(70-130)	20	0.47
MBLK	1-Methylnaphthalene			<0.1	ug/L				
MRL_CHK	1-Methylnaphthalene		0.1	0.112	ug/L	112	(50-150)		
MS_202205110925	1-Methylnaphthalene		2	2.06	ug/L	103	(70-130)		
DUP_202205120002	2,4-DDD			ND	ug/L		(0-20)		
LCS1	2,4-DDD		2	2.16	ug/L	108	(70-130)		
LCS2	2,4-DDD		2	2.20	ug/L	110	(70-130)	20	1.8
MBLK	2,4-DDD			<0.1	ug/L				
MRL_CHK	2,4-DDD		0.1	0.129	ug/L	129	(50-150)		
MS_202205110925	2,4-DDD		2	2.24	ug/L	112	(70-130)		
DUP_202205120002	2,4-DDE			ND	ug/L		(0-20)		
LCS1	2,4-DDE		2	2.14	ug/L	107	(70-130)		
LCS2	2,4-DDE		2	2.20	ug/L	110	(70-130)	20	2.8
MBLK	2,4-DDE			<0.1	ug/L				
MRL_CHK	2,4-DDE		0.1	0.103	ug/L	103	(50-150)		
MS_202205110925	2,4-DDE		2	2.19	ug/L	109	(70-130)		
DUP_202205120002	2,4-DDT			ND	ug/L		(0-20)		
LCS1	2,4-DDT		2	2.10	ug/L	105	(70-130)		
LCS2	2,4-DDT		2	2.25	ug/L	112	(70-130)	20	6.9
MBLK	2,4-DDT			<0.1	ug/L				
MRL_CHK	2,4-DDT		0.1	0.113	ug/L	113	(50-150)		
MS_202205110925	2,4-DDT		2	2.25	ug/L	113	(70-130)		
DUP_202205120002	2,4-Dinitrotoluene	ND		ND	ug/L		(0-20)		
LCS1	2,4-Dinitrotoluene		2	2.30	ug/L	115	(70-130)		
LCS2	2,4-Dinitrotoluene		2	2.39	ug/L	120	(70-130)	20	3.8
MBLK	2,4-Dinitrotoluene			<0.1	ug/L				
MRL_CHK	2,4-Dinitrotoluene		0.1	0.129	ug/L	129	(50-150)		

Spike recovery is already corrected for native results.  
 Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.  
 Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.  
 RPD not calculated for LCS2 when different a concentration than LCS1 is used.  
 RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).  
 (S) - Indicates surrogate compound.  
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Report: 1003047  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202205110925	2,4-Dinitrotoluene	ND	2	2.24	ug/L	112	(70-130)		
DUP_202205120002	2,6-Dinitrotoluene	ND		ND	ug/L		(0-20)		
LCS1	2,6-Dinitrotoluene		2	2.31	ug/L	115	(70-130)		
LCS2	2,6-Dinitrotoluene		2	2.38	ug/L	119	(70-130)	20	3.0
MBLK	2,6-Dinitrotoluene			<0.1	ug/L				
MRL_CHK	2,6-Dinitrotoluene		0.1	0.107	ug/L	107	(50-150)		
MS_202205110925	2,6-Dinitrotoluene		2	2.20	ug/L	110	(70-130)		
DUP_202205120002	2-methylnaphthalene			ND	ug/L		(0-20)		
LCS1	2-methylnaphthalene		2	2.17	ug/L	108	(70-130)		
LCS2	2-methylnaphthalene		2	2.17	ug/L	108	(70-130)	20	0.0
MBLK	2-methylnaphthalene			<0.1	ug/L				
MRL_CHK	2-methylnaphthalene		0.1	0.113	ug/L	113	(50-150)		
MS_202205110925	2-methylnaphthalene		2	2.10	ug/L	105	(70-130)		
DUP_202205120002	4,4-DDD	ND		ND	ug/L		(0-20)		
LCS1	4,4-DDD		2	2.21	ug/L	111	(70-130)		
LCS2	4,4-DDD		2	2.36	ug/L	118	(70-130)	20	6.6
MBLK	4,4-DDD			<0.1	ug/L				
MRL_CHK	4,4-DDD		0.1	0.0980	ug/L	98	(50-150)		
MS_202205110925	4,4-DDD		2	2.35	ug/L	118	(70-130)		
DUP_202205120002	4,4-DDE	ND		ND	ug/L		(0-20)		
LCS1	4,4-DDE		2	1.98	ug/L	99	(70-130)		
LCS2	4,4-DDE		2	2.08	ug/L	104	(70-130)	20	4.9
MBLK	4,4-DDE			<0.1	ug/L				
MRL_CHK	4,4-DDE		0.1	0.0980	ug/L	98	(50-150)		
MS_202205110925	4,4-DDE		2	2.14	ug/L	107	(70-130)		
DUP_202205120002	4,4-DDT	ND		ND	ug/L		(0-20)		
LCS1	4,4-DDT		2	2.09	ug/L	104	(70-130)		
LCS2	4,4-DDT		2	2.29	ug/L	114	(70-130)	20	9.1
MBLK	4,4-DDT			<0.1	ug/L				
MRL_CHK	4,4-DDT		0.1	0.105	ug/L	105	(50-150)		
MS_202205110925	4,4-DDT		2	2.32	ug/L	116	(70-130)		
DUP_202205120002	Acenaphthene	ND		ND	ug/L		(0-20)		
LCS1	Acenaphthene		2	2.08	ug/L	104	(70-130)		
LCS2	Acenaphthene		2	2.08	ug/L	104	(70-130)	20	0.0
MBLK	Acenaphthene			<0.1	ug/L				
MRL_CHK	Acenaphthene		0.1	0.107	ug/L	107	(50-150)		
MS_202205110925	Acenaphthene		2	2.07	ug/L	103	(70-130)		
DUP_202205120002	Acenaphthene-d10 (I)			81.7	%	82	(50-150)		

Spike recovery is already corrected for native results.

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

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Report: 1003047  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Acenaphthene-d10 (I)		5	75.2	%	75	(50-150)		
LCS2	Acenaphthene-d10 (I)		5	83.5	%	84	(50-150)		
MBLK	Acenaphthene-d10 (I)			80.7	%	81	(50-150)		
MRL_CHK	Acenaphthene-d10 (I)		5	77.9	%	78	(50-150)		
MS_202205110925	Acenaphthene-d10 (I)		5	72.8	%	73	(50-150)		
DUP_202205120002	Acenaphthylene	ND		ND	ug/L		(0-20)		
LCS1	Acenaphthylene		2	2.13	ug/L	106	(70-130)		
LCS2	Acenaphthylene		2	2.15	ug/L	108	(70-130)	20	0.94
MBLK	Acenaphthylene			<0.1	ug/L				
MRL_CHK	Acenaphthylene		0.1	0.0900	ug/L	90	(50-150)		
MS_202205110925	Acenaphthylene	ND	2	2.17	ug/L	108	(70-130)		
DUP_202205120002	Acetochlor	ND		ND	ug/L		(0-20)		
LCS1	Acetochlor		2	2.50	ug/L	125	(70-130)		
LCS2	Acetochlor		2	2.57	ug/L	129	(70-130)	20	2.4
MBLK	Acetochlor			<0.1	ug/L				
MRL_CHK	Acetochlor		0.05	0.0540	ug/L	108	(50-150)		
MS_202205110925	Acetochlor		2	2.44	ug/L	122	(70-130)		
DUP_202205120002	Alachlor	ND		ND	ug/L		(0-20)		
LCS1	Alachlor		2	2.39	ug/L	119	(70-130)		
LCS2	Alachlor		2	2.44	ug/L	122	(70-130)	20	2.5
MBLK	Alachlor			<0.05	ug/L				
MRL_CHK	Alachlor		0.05	0.0620	ug/L	124	(50-150)		
MS_202205110925	Alachlor	ND	2	2.33	ug/L	117	(70-130)		
DUP_202205120002	Alpha-BHC	ND		ND	ug/L		(0-20)		
LCS1	Alpha-BHC		2	2.18	ug/L	109	(70-130)		
LCS2	Alpha-BHC		2	2.20	ug/L	110	(70-130)	20	0.91
MBLK	Alpha-BHC			<0.1	ug/L				
MRL_CHK	Alpha-BHC		0.1	0.116	ug/L	116	(50-150)		
MS_202205110925	Alpha-BHC		2	2.31	ug/L	116	(70-130)		
DUP_202205120002	alpha-Chlordane	ND		ND	ug/L		(0-20)		
LCS1	alpha-Chlordane		2	2.01	ug/L	101	(70-130)		
LCS2	alpha-Chlordane		2	2.07	ug/L	103	(70-130)	20	2.9
MBLK	alpha-Chlordane			<0.05	ug/L				
MRL_CHK	alpha-Chlordane		0.05	0.0470	ug/L	94	(50-150)		
MS_202205110925	alpha-Chlordane	ND	2	2.05	ug/L	102	(70-130)		
DUP_202205120002	Anthracene	ND		ND	ug/L		(0-20)		
LCS1	Anthracene		2	2.09	ug/L	105	(70-130)		
LCS2	Anthracene		2	2.14	ug/L	107	(70-130)	20	2.4

Spike recovery is already corrected for native results.

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 1 800 566 LABS (1 800 566 5227)

Report: 1003047  
 Project: RED-HILL  
 Group: Weekly TPH-8015\_RED-HILL (2022)  
 - EMAX

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Anthracene			<0.02	ug/L				
MRL_CHK	Anthracene		0.02	0.0200	ug/L	100	(50-150)		
MS_202205110925	Anthracene	ND	2	1.60	ug/L	80	(70-130)		
DUP_202205120002	Atrazine	ND		ND	ug/L		(0-20)		
LCS1	Atrazine		2	2.32	ug/L	116	(70-130)		
LCS2	Atrazine		2	2.49	ug/L	125	(70-130)	20	7.1
MBLK	Atrazine			<0.05	ug/L				
MRL_CHK	Atrazine		0.05	0.0530	ug/L	106	(50-150)		
MS_202205110925	Atrazine	ND	2	2.50	ug/L	125	(70-130)		
DUP_202205120002	Benz(a)Anthracene	ND		ND	ug/L		(0-20)		
LCS1	Benz(a)Anthracene		2	2.12	ug/L	106	(70-130)		
LCS2	Benz(a)Anthracene		2	2.33	ug/L	116	(70-130)	20	9.4
MBLK	Benz(a)Anthracene			<0.05	ug/L				
MRL_CHK	Benz(a)Anthracene		0.05	0.0460	ug/L	92	(50-150)		
MS_202205110925	Benz(a)Anthracene	ND	2	2.24	ug/L	112	(70-130)		
DUP_202205120002	Benzo(a)pyrene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(a)pyrene		2	2.19	ug/L	110	(70-130)		
LCS2	Benzo(a)pyrene		2	2.24	ug/L	112	(70-130)	20	2.3
MBLK	Benzo(a)pyrene			<0.02	ug/L				
MRL_CHK	Benzo(a)pyrene		0.02	0.0170	ug/L	85	(50-150)		
MS_202205110925	Benzo(a)pyrene	ND	2	2.00	ug/L	100	(70-130)		
DUP_202205120002	Benzo(b)Fluoranthene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(b)Fluoranthene		2	2.16	ug/L	108	(70-130)		
LCS2	Benzo(b)Fluoranthene		2	2.18	ug/L	109	(70-130)	20	0.92
MBLK	Benzo(b)Fluoranthene			<0.02	ug/L				
MRL_CHK	Benzo(b)Fluoranthene		0.02	0.0200	ug/L	100	(50-150)		
MS_202205110925	Benzo(b)Fluoranthene	ND	2	2.13	ug/L	106	(70-130)		
DUP_202205120002	Benzo(g,h,i)Perylene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(g,h,i)Perylene		2	2.24	ug/L	112	(70-130)		
LCS2	Benzo(g,h,i)Perylene		2	2.19	ug/L	110	(70-130)	20	2.3
MBLK	Benzo(g,h,i)Perylene			<0.05	ug/L				
MRL_CHK	Benzo(g,h,i)Perylene		0.05	0.0470	ug/L	94	(50-150)		
MS_202205110925	Benzo(g,h,i)Perylene	ND	2	2.10	ug/L	105	(70-130)		
DUP_202205120002	Benzo(k)Fluoranthene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(k)Fluoranthene		2	2.27	ug/L	114	(70-130)		
LCS2	Benzo(k)Fluoranthene		2	2.34	ug/L	117	(70-130)	20	3.0
MBLK	Benzo(k)Fluoranthene			<0.02	ug/L				
MRL_CHK	Benzo(k)Fluoranthene		0.02	0.0180	ug/L	90	(50-150)		

Spike recovery is already corrected for native results.  
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 RPD not calculated for LCS2 when different a concentration than LCS1 is used.  
 RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).  
 (S) - Indicates surrogate compound.  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202205110925	Benzo(k)Fluoranthene	ND	2	2.30	ug/L	115	(70-130)		
DUP_202205120002	Beta-BHC	ND		ND	ug/L		(0-20)		
LCS1	Beta-BHC		2	2.08	ug/L	104	(70-130)		
LCS2	Beta-BHC		2	2.22	ug/L	111	(70-130)	20	6.5
MBLK	Beta-BHC			<0.1	ug/L				
MRL_CHK	Beta-BHC		0.1	0.104	ug/L	104	(50-150)		
MS_202205110925	Beta-BHC		2	2.32	ug/L	116	(70-130)		
DUP_202205120002	Bromacil	ND		ND	ug/L		(0-20)		
LCS1	Bromacil		2	2.32	ug/L	116	(70-130)		
LCS2	Bromacil		2	2.55	ug/L	128	(70-130)	20	9.4
MBLK	Bromacil			<0.2	ug/L				
MRL_CHK	Bromacil		0.1	0.137	ug/L	137	(50-150)		
MS_202205110925	Bromacil	ND	2	2.02	ug/L	101	(70-130)		
DUP_202205120002	Butachlor	ND		ND	ug/L		(0-20)		
LCS1	Butachlor		2	2.60	ug/L	130	(70-130)		
LCS2	Butachlor		2	2.68	ug/L	<b>134</b>	(70-130)	20	3.0
MBLK	Butachlor			<0.05	ug/L				
MRL_CHK	Butachlor		0.05	0.0610	ug/L	122	(50-150)		
MS_202205110925	Butachlor	ND	2	2.59	ug/L	129	(70-130)		
DUP_202205120002	Butylbenzylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Butylbenzylphthalate		2	2.43	ug/L	121	(70-130)		
LCS2	Butylbenzylphthalate		2	2.54	ug/L	127	(70-130)	20	4.4
MBLK	Butylbenzylphthalate			<0.5	ug/L				
MRL_CHK	Butylbenzylphthalate		0.15	0.178	ug/L	119	(50-150)		
MS_202205110925	Butylbenzylphthalate	ND	2	2.52	ug/L	126	(70-130)		
DUP_202205120002	Caffeine by method 525mod	ND		ND	ug/L		(0-20)		
LCS1	Caffeine by method 525mod		2	1.90	ug/L	95	(45-137)		
LCS2	Caffeine by method 525mod		2	2.04	ug/L	102	(45-137)	20	7.1
MBLK	Caffeine by method 525mod			<0.05	ug/L				
MRL_CHK	Caffeine by method 525mod		0.05	0.0330	ug/L	66	(50-150)		
MS_202205110925	Caffeine by method 525mod	ND	2	1.00	ug/L	50	(46-144)		
DUP_202205120002	Chlorobenzilate	ND		ND	ug/L		(0-20)		
LCS1	Chlorobenzilate		2	2.96	ug/L	<b>148</b>	(70-130)		
LC 2	Chlorobenzilate		2	3.06	ug/L	<b>153</b>	(70 130)	20	3.3
MBLK	Chlorobenzilate			<0.1	ug/L				
MRL_CHK	Chlorobenzilate		0.1	0.133	ug/L	133	(50-150)		
MS_202205110925	Chlorobenzilate		2	3.09	ug/L	<b>154</b>	(70-130)		
DUP_202205120002	Chloroneb	ND		ND	ug/L		(0-20)		

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 RPD not calculated for LCS2 when different a concentration than LCS1 is used.  
 RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).  
 (S) - Indicates surrogate compound.  
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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Chloroneb		2	2.14	ug/L	107	(70-130)		
LCS2	Chloroneb		2	2.15	ug/L	108	(70-130)	20	0.47
MBLK	Chloroneb			<0.1	ug/L				
MRL_CHK	Chloroneb		0.1	0.101	ug/L	101	(50-150)		
MS_202205110925	Chloroneb		2	2.23	ug/L	112	(70-130)		
DUP_202205120002	Chlorothalonil(Draconil,Bravo)	ND		ND	ug/L		(0-20)		
LCS1	Chlorothalonil(Draconil,Bravo)		2	2.21	ug/L	110	(70-130)		
LCS2	Chlorothalonil(Draconil,Bravo)		2	2.32	ug/L	116	(70-130)	20	4.9
MBLK	Chlorothalonil(Draconil,Bravo)			<0.1	ug/L				
MRL_CHK	Chlorothalonil(Draconil,Bravo)		0.1	0.126	ug/L	126	(50-150)		
MS_202205110925	Chlorothalonil(Draconil,Bravo)		2	2.25	ug/L	113	(70-130)		
DUP_202205120002	Chlorpyrifos (Dursban)	ND		ND	ug/L		(0-20)		
LCS1	Chlorpyrifos (Dursban)		2	2.18	ug/L	109	(70-130)		
LCS2	Chlorpyrifos (Dursban)		2	2.29	ug/L	114	(70-130)	20	4.9
MBLK	Chlorpyrifos (Dursban)			<0.05	ug/L				
MRL_CHK	Chlorpyrifos (Dursban)		0.05	0.0530	ug/L	106	(50-150)		
MS_202205110925	Chlorpyrifos (Dursban)		2	2.24	ug/L	112	(70-130)		
DUP_202205120002	Chrysene	ND		ND	ug/L		(0-20)		
LCS1	Chrysene		2	2.08	ug/L	104	(70-130)		
LCS2	Chrysene		2	2.11	ug/L	106	(70-130)	20	1.4
MBLK	Chrysene			<0.02	ug/L				
MRL_CHK	Chrysene		0.02	0.0200	ug/L	100	(50-150)		
MS_202205110925	Chrysene	ND	2	2.06	ug/L	103	(70-130)		
DUP_202205120002	Chrysene-d12 (I)			80.4	%	80	(50-150)		
LCS1	Chrysene-d12 (I)		5	72.3	%	72	(50-150)		
LCS2	Chrysene-d12 (I)		5	87.7	%	88	(50-150)		
MBLK	Chrysene-d12 (I)			83.4	%	83	(50-150)		
MRL_CHK	Chrysene-d12 (I)		5	72.5	%	73	(50-150)		
MS_202205110925	Chrysene-d12 (I)		5	80.3	%	80	(50-150)		
DUP_202205120002	Delta-BHC	ND		ND	ug/L		(0-20)		
LCS1	Delta-BHC		2	2.12	ug/L	106	(70-130)		
LCS2	Delta-BHC		2	2.17	ug/L	108	(70-130)	20	2.3
MBLK	Delta-BHC			<0.1	ug/L				
MRL_CHK	Delta-BHC		0.1	0.113	ug/L	113	(50-150)		
MS_202205110925	Delta-BHC		2	2.17	ug/L	109	(70-130)		
DUP_202205120002	Di-(2-Ethylhexyl)adipate	ND		ND	ug/L		(0-20)		
LCS1	Di-(2-Ethylhexyl)adipate		2	2.36	ug/L	118	(70-130)		
LCS2	Di-(2-Ethylhexyl)adipate		2	2.49	ug/L	124	(70-130)	20	5.4

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Di-(2-Ethylhexyl)adipate			<0.6	ug/L				
MRL_CHK	Di-(2-Ethylhexyl)adipate		0.3	0.337	ug/L	112	(50-150)		
MS_202205110925	Di-(2-Ethylhexyl)adipate	ND	2	2.57	ug/L	129	(70-130)		
DUP_202205120002	Di(2-E hylhexyl)phthalate	ND		ND	ug/L		(0-20)		
LCS1	Di(2-E hylhexyl)phthalate		2	2.15	ug/L	107	(70-130)		
LCS2	Di(2-E hylhexyl)phthalate		2	2.12	ug/L	106	(70-130)	20	1.4
MBLK	Di(2-E hylhexyl)phthalate			<0.6	ug/L				
MRL_CHK	Di(2-E hylhexyl)phthalate		0.6	0.753	ug/L	126	(50-150)		
MS_202205110925	Di(2-E hylhexyl)phthalate	ND	2	2.24	ug/L	112	(70-130)		
DUP_202205120002	Diazinon (Qualitative)	ND		ND	ug/L		(0-20)		
LCS1	Diazinon (Qualitative)		2	2.36	ug/L	118	(15-132)		
LCS2	Diazinon (Qualitative)		2	2.39	ug/L	119	(15-132)	20	1.3
MBLK	Diazinon (Qualitative)			<0.10	ug/L				
MRL_CHK	Diazinon (Qualitative)		0.1	0.102	ug/L	102	(15-132)		
MS_202205110925	Diazinon (Qualitative)	ND	2	2.41	ug/L	121	(15-132)		
DUP_202205120002	Dibenz(a,h)Anthracene	ND		ND	ug/L		(0-20)		
LCS1	Dibenz(a,h)Anthracene		2	2.22	ug/L	111	(70-130)		
LCS2	Dibenz(a,h)Anthracene		2	2.18	ug/L	109	(70-130)	20	1.8
MBLK	Dibenz(a,h)Anthracene			<0.05	ug/L				
MRL_CHK	Dibenz(a,h)Anthracene		0.05	0.0460	ug/L	92	(50-150)		
MS_202205110925	Dibenz(a,h)Anthracene	ND	2	2.15	ug/L	107	(70-130)		
DUP_202205120002	Dichlorvos (DDVP)	ND		ND	ug/L		(0-20)		
LCS1	Dichlorvos (DDVP)		2	2.45	ug/L	123	(70-130)		
LCS2	Dichlorvos (DDVP)		2	2.49	ug/L	124	(70-130)	20	1.6
MBLK	Dichlorvos (DDVP)			<0.05	ug/L				
MRL_CHK	Dichlorvos (DDVP)		0.05	0.0590	ug/L	118	(50-150)		
MS_202205110925	Dichlorvos (DDVP)		2	2.48	ug/L	124	(70-130)		
DUP_202205120002	Dieldrin	ND		ND	ug/L		(0-20)		
LCS1	Dieldrin		2	2.15	ug/L	108	(70-130)		
LCS2	Dieldrin		2	2.21	ug/L	111	(70-130)	20	2.8
MBLK	Dieldrin			<0.2	ug/L				
MRL_CHK	Dieldrin		0.1	0.114	ug/L	114	(50-150)		
MS_202205110925	Dieldrin	ND	2	2.18	ug/L	109	(70-130)		
DUP_202205120002	Diethylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Diethylphthalate		2	2.31	ug/L	115	(70-130)		
LCS2	Diethylphthalate		2	2.34	ug/L	117	(70-130)	20	1.3
MBLK	Diethylphthalate			<0.5	ug/L				
MRL_CHK	Diethylphthalate		0.15	0.226	ug/L	<b>151</b>	(50-150)		

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 RPD not calculated for LCS2 when different a concentration than LCS1 is used.  
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MS_202205110925	Diethylphthalate	ND	2	2.45	ug/L	123	(70-130)		
DUP_202205120002	Dimethoate	ND		ND	ug/L		(0-20)		
LCS1	Dimethoate		2	2.02	ug/L	<u>101</u>	(35-100)		
LC 2	Dimethoate		2	2.18	ug/L	<u>109</u>	(35-100)	20	7.6
MBLK	Dimethoate			<0.1	ug/L				
MRL_CHK	Dimethoate		0.1	0.103	ug/L	<u>103</u>	(35-100)		
MS_202205110925	Dimethoate	ND	2	1.13	ug/L	56	(34-111)		
DUP_202205120002	Dimethylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Dimethylphthalate		2	2.29	ug/L	115	(70-130)		
LCS2	Dimethylphthalate		2	2.28	ug/L	114	(70-130)	20	0.44
MBLK	Dimethylphthalate			<0.5	ug/L				
MRL_CHK	Dimethylphthalate		0.3	0.330	ug/L	110	(50-150)		
MS_202205110925	Dimethylphthalate	ND	2	2.34	ug/L	117	(70-130)		
DUP_202205120002	Di-n-Butylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Di-n-Butylphthalate		4	4.25	ug/L	106	(70-130)		
LCS2	Di-n-Butylphthalate		4	4.43	ug/L	111	(70-130)	20	4.2
MBLK	Di-n-Butylphthalate			<1	ug/L				
MRL_CHK	Di-n-Butylphthalate		0.3	0.359	ug/L	120	(50-150)		
MS_202205110925	Di-n-Butylphthalate	ND	4	4.45	ug/L	111	(70-130)		
DUP_202205120002	Di-N-octylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Di-N-octylphthalate		2	2.04	ug/L	102	(70-130)		
LCS2	Di-N-octylphthalate		2	2.03	ug/L	102	(70-130)	20	0.49
MBLK	Di-N-octylphthalate			<0.1	ug/L				
MRL_CHK	Di-N-octylphthalate		0.1	0.122	ug/L	122	(50-150)		
MS_202205110925	Di-N-octylphthalate		2	2.14	ug/L	107	(70-130)		
DUP_202205120002	Endosulfan I (Alpha)	ND		ND	ug/L		(0-20)		
LCS1	Endosulfan I (Alpha)		2	2.23	ug/L	112	(70-130)		
LCS2	Endosulfan I (Alpha)		2	2.23	ug/L	112	(70-130)	20	0.0
MBLK	Endosulfan I (Alpha)			<0.1	ug/L				
MRL_CHK	Endosulfan I (Alpha)		0.1	0.0830	ug/L	83	(50-150)		
MS_202205110925	Endosulfan I (Alpha)		2	2.20	ug/L	110	(70-130)		
DUP_202205120002	Endosulfan II (Beta)	ND		ND	ug/L		(0-20)		
LCS1	Endosulfan II (Beta)		2	2.20	ug/L	110	(70-130)		
LCS2	Endosulfan II (Beta)		2	2.33	ug/L	117	(70-130)	20	5.7
MBLK	Endosulfan II (Beta)			<0.1	ug/L				
MRL_CHK	Endosulfan II (Beta)		0.1	0.112	ug/L	112	(50-150)		
MS_202205110925	Endosulfan II (Beta)		2	2.36	ug/L	118	(70-130)		
DUP_202205120002	Endosulfan Sulfate	ND		ND	ug/L		(0-20)		

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LCS1	Endosulfan Sulfate		2	2.27	ug/L	114	(70-130)		
LCS2	Endosulfan Sulfate		2	2.40	ug/L	120	(70-130)	20	5.6
MBLK	Endosulfan Sulfate			<0.1	ug/L				
MRL_CHK	Endosulfan Sulfate		0.1	0.100	ug/L	100	(50-150)		
MS_202205110925	Endosulfan Sulfate		2	2.26	ug/L	113	(70-130)		
DUP_202205120002	Endrin	ND		ND	ug/L		(0-20)		
LCS1	Endrin		2	2.43	ug/L	122	(70-130)		
LCS2	Endrin		2	2.59	ug/L	130	(70-130)	20	6.4
MBLK	Endrin			<0.1	ug/L				
MRL_CHK	Endrin		0.1	0.123	ug/L	123	(50-150)		
MS_202205110925	Endrin	ND	2	2.26	ug/L	113	(70-130)		
DUP_202205120002	Endrin Aldehyde	ND		ND	ug/L		(0-20)		
LCS1	Endrin Aldehyde		2	2.04	ug/L	102	(70-130)		
LCS2	Endrin Aldehyde		2	2.14	ug/L	107	(70-130)	20	4.3
MBLK	Endrin Aldehyde			<0.1	ug/L				
MRL_CHK	Endrin Aldehyde		0.1	0.0780	ug/L	78	(50-150)		
MS_202205110925	Endrin Aldehyde		2	1.76	ug/L	88	(70-130)		
DUP_202205120002	EPTC	ND		ND	ug/L		(0-20)		
LCS1	EPTC		2	2.31	ug/L	115	(70-130)		
LCS2	EPTC		2	2.31	ug/L	116	(70-130)	20	0.0
MBLK	EPTC			<0.1	ug/L				
MRL_CHK	EPTC		0.1	0.114	ug/L	114	(50-150)		
MS_202205110925	EPTC		2	2.28	ug/L	114	(70-130)		
DUP_202205120002	Fluoranthene	ND		ND	ug/L		(0-20)		
LCS1	Fluoranthene		2	2.02	ug/L	101	(70-130)		
LCS2	Fluoranthene		2	2.18	ug/L	109	(70-130)	20	7.1
MBLK	Fluoranthene			<0.1	ug/L				
MRL_CHK	Fluoranthene		0.05	0.0490	ug/L	98	(50-150)		
MS_202205110925	Fluoranthene	ND	2	2.18	ug/L	109	(70-130)		
DUP_202205120002	Fluorene	ND		ND	ug/L		(0-20)		
LCS1	Fluorene		2	2.15	ug/L	108	(70-130)		
LCS2	Fluorene		2	2.14	ug/L	107	(70-130)	20	0.47
MBLK	Fluorene			<0.05	ug/L				
MRL_CHK	Fluorene		0.05	0.0540	ug/L	108	(50-150)		
MS_202205110925	Fluorene	ND	2	2.18	ug/L	109	(70-130)		
DUP_202205120002	gamma-Chlordane	ND		ND	ug/L		(0-20)		
LCS1	gamma-Chlordane		2	2.02	ug/L	101	(70-130)		
LCS2	gamma-Chlordane		2	2.14	ug/L	107	(70-130)	20	5.3

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 RPD not calculated for LCS2 when different a concentration than LCS1 is used.  
 RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).  
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Report: 1003047  
 Project: RED-HILL  
 Group: Weekly TPH-8015\_RED-HILL (2022)  
 - EMAX

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	gamma-Chlordane			<0.05	ug/L				
MRL_CHK	gamma-Chlordane		0.05	0.0470	ug/L	94	(50-150)		
MS_202205110925	gamma-Chlordane	ND	2	2.13	ug/L	106	(70-130)		
DUP_202205120002	Heptachlor	ND		ND	ug/L		(0-20)		
LCS1	Heptachlor		2	2.35	ug/L	118	(70-130)		
LCS2	Heptachlor		2	2.39	ug/L	120	(70-130)	20	1.7
MBLK	Heptachlor			<0.04	ug/L				
MRL_CHK	Heptachlor		0.04	0.0490	ug/L	123	(50-150)		
MS_202205110925	Heptachlor	ND	2	2.33	ug/L	117	(70-130)		
DUP_202205120002	Heptachlor Epoxide (isomer B)	ND		ND	ug/L		(0-20)		
LCS1	Heptachlor Epoxide (isomer B)		2	2.03	ug/L	101	(70-130)		
LCS2	Heptachlor Epoxide (isomer B)		2	2.15	ug/L	107	(70-130)	20	5.7
MBLK	Heptachlor Epoxide (isomer B)			<0.05	ug/L				
MRL_CHK	Heptachlor Epoxide (isomer B)		0.05	0.0450	ug/L	90	(50-150)		
MS_202205110925	Heptachlor Epoxide (isomer B)	ND	2	2.05	ug/L	103	(70-130)		
DUP_202205120002	Hexachlorobenzene	ND		ND	ug/L		(0-20)		
LCS1	Hexachlorobenzene		2	1.95	ug/L	97	(70-130)		
LCS2	Hexachlorobenzene		2	1.94	ug/L	97	(70-130)	20	0.0
MBLK	Hexachlorobenzene			<0.05	ug/L				
MRL_CHK	Hexachlorobenzene		0.05	0.0590	ug/L	118	(50-150)		
MS_202205110925	Hexachlorobenzene	ND	2	1.99	ug/L	99	(70-130)		
DUP_202205120002	Hexachlorocyclopentadiene	ND		ND	ug/L		(0-20)		
LCS1	Hexachlorocyclopentadiene		2	2.34	ug/L	117	(70-130)		
LCS2	Hexachlorocyclopentadiene		2	2.35	ug/L	118	(70-130)	20	0.43
MBLK	Hexachlorocyclopentadiene			<0.05	ug/L				
MRL_CHK	Hexachlorocyclopentadiene		0.05	0.0510	ug/L	102	(50-150)		
MS_202205110925	Hexachlorocyclopentadiene	ND	2	2.27	ug/L	112	(70-130)		
DUP_202205120002	Indeno(1,2,3,c,d)Pyrene	ND		ND	ug/L		(0-20)		
LCS1	Indeno(1,2,3,c,d)Pyrene		2	2.28	ug/L	114	(70-130)		
LCS2	Indeno(1,2,3,c,d)Pyrene		2	2.21	ug/L	110	(70-130)	20	3.1
MBLK	Indeno(1,2,3,c,d)Pyrene			<0.05	ug/L				
MRL_CHK	Indeno(1,2,3,c,d)Pyrene		0.05	0.0420	ug/L	84	(50-150)		
MS_202205110925	Indeno(1,2,3,c,d)Pyrene	ND	2	2.19	ug/L	110	(70-130)		
DUP_202205120002	Isophorone	ND		ND	ug/L		(0-20)		
LCS1	Isophorone		2	2.32	ug/L	116	(70-130)		
LCS2	Isophorone		2	2.33	ug/L	117	(70-130)	20	0.43
MBLK	Isophorone			<0.5	ug/L				
MRL_CHK	Isophorone		0.1	0.112	ug/L	112	(50-150)		

Spike recovery is already corrected for native results.  
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 Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.  
 RPD not calculated for LCS2 when different a concentration than LCS1 is used.  
 RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).  
 (S) - Indicates surrogate compound.  
 (I) - Indicates internal standard compound.

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202205110925	Isophorone	ND	2	2.24	ug/L	112	(70-130)		
DUP_202205120002	Lindane	ND		ND	ug/L		(0-20)		
LCS1	Lindane		2	2.14	ug/L	107	(70-130)		
LCS2	Lindane		2	2.18	ug/L	109	(70-130)	20	1.9
MBLK	Lindane			<0.04	ug/L				
MRL_CHK	Lindane		0.04	0.0460	ug/L	115	(50-150)		
MS_202205110925	Lindane	ND	2	2.27	ug/L	113	(70-130)		
DUP_202205120002	Malathion	ND		ND	ug/L		(0-20)		
LCS1	Malathion		2	2.31	ug/L	116	(70-130)		
LCS2	Malathion		2	2.41	ug/L	121	(70-130)	20	4.2
MBLK	Malathion			<0.1	ug/L				
MRL_CHK	Malathion		0.1	0.111	ug/L	111	(50-150)		
MS_202205110925	Malathion		2	2.45	ug/L	122	(70-130)		
DUP_202205120002	Methoxychlor	ND		ND	ug/L		(0-20)		
LCS1	Methoxychlor		2	2.29	ug/L	114	(70-130)		
LCS2	Methoxychlor		2	2.42	ug/L	121	(70-130)	20	5.5
MBLK	Methoxychlor			<0.1	ug/L				
MRL_CHK	Methoxychlor		0.1	0.0970	ug/L	97	(50-150)		
MS_202205110925	Methoxychlor	ND	2	2.38	ug/L	119	(70-130)		
DUP_202205120002	Metolachlor	ND		ND	ug/L		(0-20)		
LCS1	Metolachlor		2	2.37	ug/L	118	(70-130)		
LCS2	Metolachlor		2	2.66	ug/L	<b>133</b>	(70-130)	20	12
MBLK	Metolachlor			<0.05	ug/L				
MRL_CHK	Metolachlor		0.05	0.0610	ug/L	122	(50-150)		
MS_202205110925	Metolachlor	ND	2	2.51	ug/L	125	(70-130)		
DUP_202205120002	Metribuzin	ND		ND	ug/L		(0-20)		
LCS1	Metribuzin		2	2.38	ug/L	119	(70-130)		
LCS2	Metribuzin		2	2.52	ug/L	126	(70-130)	20	5.7
MBLK	Metribuzin			<0.05	ug/L				
MRL_CHK	Metribuzin		0.05	0.0480	ug/L	96	(50-150)		
MS_202205110925	Metribuzin	ND	2	1.85	ug/L	93	(70-130)		
DUP_202205120002	Molinate	ND		ND	ug/L		(0-20)		
LCS1	Molinate		2	2.38	ug/L	119	(70-130)		
LCS2	Molinate		2	2.41	ug/L	121	(70-130)	20	1.3
MBLK	Molinate			<0.1	ug/L				
MRL_CHK	Molinate		0.1	0.115	ug/L	115	(50-150)		
MS_202205110925	Molinate	ND	2	2.46	ug/L	123	(70-130)		
DUP_202205120002	Naphthalene	ND		ND	ug/L		(0-20)		

Spike recovery is already corrected for native results.

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

(S) - Indicates surrogate compound.

(I) - Indicates internal standard compound.



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Report: 1003047  
 Project: RED-HILL  
 Group: Weekly TPH-8015\_RED-HILL (2022)  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Naphthalene		2	2.14	ug/L	107	(70-130)		
LCS2	Naphthalene		2	2.12	ug/L	106	(70-130)	20	0.47
MBLK	Naphthalene			<0.3	ug/L				
MRL_CHK	Naphthalene		0.1	0.106	ug/L	106	(50-150)		
MS_202205110925	Naphthalene		2	2.03	ug/L	101	(70-130)		
DUP_202205120002	Parathion	ND		ND	ug/L		(0-20)		
LCS1	Parathion		2	2.60	ug/L	130	(70-130)		
LCS2	Parathion		2	2.70	ug/L	<b>135</b>	(70-130)	20	3.8
MBLK	Parathion			<0.1	ug/L				
MRL_CHK	Parathion		0.1	0.144	ug/L	144	(50-150)		
MS_202205110925	Parathion		2	2.74	ug/L	<b>137</b>	(70-130)		
DUP_202205120002	Pendimethalin	ND		ND	ug/L		(0-20)		
LCS1	Pendimethalin		2	2.19	ug/L	109	(70-130)		
LCS2	Pendimethalin		2	2.36	ug/L	118	(70-130)	20	7.5
MBLK	Pendimethalin			<0.1	ug/L				
MRL_CHK	Pendimethalin		0.1	0.127	ug/L	127	(50-150)		
MS_202205110925	Pendimethalin		2	2.40	ug/L	120	(70-130)		
DUP_202205120002	Permethrin (mixed isomers)	ND		ND	ug/L		(0-20)		
LCS1	Permethrin (mixed isomers)		4	4.17	ug/L	104	(70-130)		
LCS2	Permethrin (mixed isomers)		4	4.13	ug/L	103	(70-130)	20	0.96
MBLK	Permethrin (mixed isomers)			<0.2	ug/L				
MRL_CHK	Permethrin (mixed isomers)		0.2	0.253	ug/L	126	(50-150)		
MS_202205110925	Permethrin (mixed isomers)		4	4.26	ug/L	106	(70-130)		
DUP_202205120002	Perylene-d12 (S)			95.0	%	95	(70-130)		
LCS1	Perylene-d12 (S)		5	97.6	%	98	(70-130)		
LCS2	Perylene-d12 (S)		5	96.8	%	97	(70-130)		
MBLK	Perylene-d12 (S)			95.0	%	95	(70-130)		
MRL_CHK	Perylene-d12 (S)		5	94.8	%	95	(70-130)		
MS_202205110925	Perylene-d12 (S)		5	92.2	%	92	(70-130)		
DUP_202205120002	Phenanthrene	ND		ND	ug/L		(0-20)		
LCS1	Phenanthrene		2	2.06	ug/L	103	(70-130)		
LCS2	Phenanthrene		2	2.09	ug/L	104	(70-130)	20	1.5
MBLK	Phenanthrene			<0.04	ug/L				
MRL_CHK	Phenanthrene		0.02	0.0220	ug/L	110	(50-150)		
MS_202205110925	Phenanthrene	ND	2	2.02	ug/L	101	(70-130)		
DUP_202205120002	Phenanthrene-d10 (I)			84.8	%	85	(50-150)		
LCS1	Phenanthrene-d10 (I)		5	74.4	%	74	(50-150)		
LCS2	Phenanthrene-d10 (I)		5	84.5	%	85	(50-150)		

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 RPD not calculated for LCS2 when different a concentration than LCS1 is used.  
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Report: 1003047  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Phenanthrene-d10 (I)			81.2	%	81	(50-150)		
MRL_CHK	Phenanthrene-d10 (I)		5	77.6	%	78	(50-150)		
MS_202205110925	Phenanthrene-d10 (I)		5	78.8	%	79	(50-150)		
DUP_202205120002	Propachlor	ND		ND	ug/L		(0-20)		
LCS1	Propachlor		2	2.58	ug/L	129	(70-130)		
LCS2	Propachlor		2	2.58	ug/L	129	(70-130)	20	0.0
MBLK	Propachlor			<0.05	ug/L				
MRL_CHK	Propachlor		0.05	0.0610	ug/L	122	(50-150)		
MS_202205110925	Propachlor	ND	2	2.75	ug/L	<b>137</b>	(70-130)		
DUP_202205120002	Pyrene	ND		ND	ug/L		(0-20)		
LCS1	Pyrene		2	2.11	ug/L	106	(70-130)		
LCS2	Pyrene		2	2.24	ug/L	112	(70-130)	20	6.0
MBLK	Pyrene			<0.05	ug/L				
MRL_CHK	Pyrene		0.05	0.0500	ug/L	100	(50-150)		
MS_202205110925	Pyrene	ND	2	2.19	ug/L	110	(70-130)		
DUP_202205120002	Simazine	ND		ND	ug/L		(0-20)		
LCS1	Simazine		2	2.23	ug/L	111	(70-130)		
LCS2	Simazine		2	2.45	ug/L	123	(70-130)	20	9.4
MBLK	Simazine			<0.05	ug/L				
MRL_CHK	Simazine		0.05	0.0590	ug/L	118	(50-150)		
MS_202205110925	Simazine	ND	2	2.06	ug/L	103	(70-130)		
DUP_202205120002	Terbacil	ND		ND	ug/L		(0-20)		
LCS1	Terbacil		2	2.52	ug/L	126	(70-130)		
LCS2	Terbacil		2	2.71	ug/L	<b>135</b>	(70 130)	20	7.3
MBLK	Terbacil			<0.1	ug/L				
MRL_CHK	Terbacil		0.1	0.107	ug/L	107	(50-150)		
MS_202205110925	Terbacil		2	2.03	ug/L	102	(70-130)		
DUP_202205120002	Terbutylazine	ND		ND	ug/L		(0-20)		
LCS1	Terbutylazine		2	2.19	ug/L	109	(70-130)		
LCS2	Terbutylazine		2	2.35	ug/L	117	(70-130)	20	7.0
MBLK	Terbutylazine			<0.1	ug/L				
MRL_CHK	Terbutylazine		0.1	0.0970	ug/L	97	(50-150)		
MS_202205110925	Terbutylazine		2	2.34	ug/L	117	(70-130)		
DUP_202205120002	Thiobencarb	ND		ND	ug/L		(0 20)		
LCS1	Thiobencarb		2	2.42	ug/L	121	(70-130)		
LCS2	Thiobencarb		2	2.46	ug/L	123	(70-130)	20	1.6
MBLK	Thiobencarb			<0.2	ug/L				
MRL_CHK	Thiobencarb		0.1	0.122	ug/L	122	(50-150)		

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 RPD not calculated for LCS2 when different a concentration than LCS1 is used.  
 RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).  
 (S) - Indicates surrogate compound.  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202205110925	Thiobencarb	ND	2	2.46	ug/L	123	(70-130)		
DUP_202205120002	trans-Nonachlor	ND		ND	ug/L		(0-20)		
LCS1	trans-Nonachlor		2	2.02	ug/L	101	(70-130)		
LCS2	trans-Nonachlor		2	2.10	ug/L	105	(70-130)	20	3.9
MBLK	trans-Nonachlor			<0.05	ug/L				
MRL_CHK	trans-Nonachlor		0.05	0.0470	ug/L	94	(50-150)		
MS_202205110925	trans-Nonachlor	ND	2	2.16	ug/L	108	(70-130)		
DUP_202205120002	Trifluralin	ND		ND	ug/L		(0-20)		
LCS1	Trifluralin		2	2.10	ug/L	105	(70-130)		
LCS2	Trifluralin		2	2.20	ug/L	110	(70-130)	20	4.7
MBLK	Trifluralin			<0.1	ug/L				
MRL_CHK	Trifluralin		0.1	0.124	ug/L	124	(50-150)		
MS_202205110925	Trifluralin	ND	2	2.26	ug/L	113	(70-130)		
DUP_202205120002	Triphenylphosphate (S)			98.8	%	99	(70-130)		
LCS1	Triphenylphosphate (S)		5	97.0	%	97	(70-130)		
LCS2	Triphenylphosphate (S)		5	105	%	105	(70-130)		
MBLK	Triphenylphosphate (S)			104	%	104	(70-130)		
MRL_CHK	Triphenylphosphate (S)		5	95.4	%	95	(70-130)		
MS_202205110925	Triphenylphosphate (S)		5	104	%	104	(70-130)		

Spike recovery is already corrected for native results.

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.

RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).

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Eaton Analytical

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Laboratory Hits

Report: 1003047  
Project: RED-HILL  
Group: Weekly TPH-8015\_RED-HILL (2022)  
- EMAX

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

Samples Received on:  
05/11/2022 1100

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Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
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3051 Fujita Street  
Torrance, CA 90505  
Tel: (310)-618-8889

Date: 05-18-2022  
EMAX Batch No.: 22E169

Attn: Jackie Contreras

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

Subject: Laboratory Report  
Project: 1003047

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Enclosed is the Laboratory report for samples received on 05/13/22.  
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
202205120289	E169-01	05/09/22	WATER	TPH DIESEL & MOTOR OIL TPH GASOLINE
202205120290	E169-02	05/09/22	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

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

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

NELAP Accredited Certificate Number CA002912021-19  
ANAB Accredited DoD ELAP and ISO/IEC 17025 Certificate Number L2278 Testing  
California ELAP Accredited Certificate Number 2672



Eaton Analytical

Ship To:  
EMAX Laboratories, Inc.  
3051 Fujita St.  
Torrance, CA 90505

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

Folder #: 1003047 Report Due: 05/13/2022

Sample ID: 202205120289 Client Sample ID for reference on!  
HALAWA SHAFT VIEWING POOL

Sample type: Sample Event: Analysis Requested

Method: SW 8015B EPA 3550B TPH 8015 Diesel and Motor Oil  
SW 8015B EPA 5030C (SUB)Gas Fraction Hydrocarbons

Sample ID: 202205120290 Client Sample ID for reference on!  
TB:HALAWA SHAFT VIEWING POOL

Sample type: Sample Event: Analysis Requested

Method: SW 8015B EPA 5030C (SUB)Gas Fraction Hydrocarbons

Date: 5/13/2022

### Submittal Form

\*REPORTING REQUIREMENTS: Do Not Combine Reports with any other samples submitted under different Folder Numbers!  
Report & Invoice must have the Folder # 1003047 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@eurofins.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 State Certification # and  
Exp Date for requested tests + matrix.

Samples from: HAWAII

2-3 day rush

Sample Date & Time Matrix: 05/09/22 0930 DW PWSID: JLS

Sample Point ID: Static ID:

Sample Date & Time Matrix: 05/09/22 0930 DW PWSID: JLS

Sample Point ID: Static ID:

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

TEMP 019/1.4 @ 1.4/0.9

Relinquished by: [Signature] Date: 5/13/22 Time: 12:40

Received by: [Signature] Date: 5/13/22 Time: 12:40

Relinquished by: Sample Control

Received by: Sample Control



Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input checked="" type="checkbox"/> EMAX Courier <input type="checkbox"/> Client Delivery	Airbill / Tracking Number	ECN <u>22E169</u> Recipient <u>Alan Ramos</u> Date <u>5/13/22</u> Time <u>1240</u>
---	---------------------------	--

**COC INSPECTION**

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

**PACKAGING INSPECTION**

Container <u>Correction factor -0.5</u>	<input type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 <u>11.9/1.4</u> °C	<input checked="" type="checkbox"/> Cooler 2 <u>12.9/0.9</u> °C	<input type="checkbox"/> Cooler 3 _____ °C
Thermometer: <u>A - S/N 210583479</u>	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Comments: <input type="checkbox"/> Temperature is out of range. PM was informed IMMEDIATELY.	<input type="checkbox"/> Cooler 9 _____ °C	<input type="checkbox"/> Cooler 10 _____ °C	<input checked="" type="checkbox"/> Sufficient <u>Bags</u>
Note:	<u>B - S/N _____</u>	<u>C - S/N 210271399</u>	<u>D - S/N _____</u>

**DISCREPANCIES**

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<u>12</u>	<u>1-9</u>	<u>D10</u>		<u>NS</u>

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time. NS 5/13/22

**NOTES/OBSERVATIONS:**  
 SAMPLE MATRIX IS DRINKING WATER?  YES  NO  
Preservation is covered by label in sample 1 12 container 1-4, 8, 9.

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

**REVIEWS:**

Sample Labeling <u>SHOWN</u>	SRF <u>Amelia</u>	PM <u>AB</u>
Date <u>5/13/22</u>	Date <u>5/13/22</u>	Date <u>5/13/22</u>

## REPORTING CONVENTIONS

### DATA QUALIFIERS:

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

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

### ACRONYMS AND ABBREVIATIONS:

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

### DATES

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



LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

1003047

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

SDG#: 22E169

## CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 1003047

SDG : 22E169

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

A total of two(2) water samples were received on 05/13/22 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. VG39E12B - 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. VG39E12L/VG39E12C 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 E165-01M/E165-01S. 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

SDG NO. : 22E169  
Instrument ID : GCT039

Client : EUROFINS EATON ANALYTICAL  
Project : 1003047

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Notes
MBLK1W	V639E12B	1	NA	05/14/2210:00	05/14/2210:00	EE13032A	EE13025A	22VG39E12 Method Blank
LCS1W	V639E12L	1	NA	05/14/2210:38	05/14/2210:38	EE13033A	EE13025A	22VG39E12 Lab Control Sample (LCS)
LCD1W	V639E12C	1	NA	05/14/2211:52	05/14/2211:52	EE13035A	EE13034A	22VG39E12 LCS Duplicate
202205120289	E169-01	1	NA	05/14/2220:29	05/14/2220:29	EE13049A	EE13046A	22VG39E12 Field Sample
202205120290	E169-02	1	NA	05/14/2221:06	05/14/2221:06	EE13050A	EE13046A	22VG39E12 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: 05/09/22 09:30
Project     : 1003047                     Date Received: 05/13/22
Batch No.   : 22E169                       Date Extracted: 05/14/22 21:06
Sample ID   : 202205120290                Date Analyzed: 05/14/22 21:06
Lab Samp ID : E169-02                      Dilution Factor: 1
Lab File ID : EE13050A                     Matrix: WATER
Ext Btch ID: 22VG39E12                    % Moisture: NA
Calib. Ref.: EE13046A                     Instrument ID: 39
=====
```

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0338	0.0400	84	60-140

```
=====
```

Notes:

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

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

# QC SUMMARIES

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

```
=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 05/14/22 10:00
Project     : 1003047                     Date Received: 05/14/22
Batch No.   : 22E169                      Date Extracted: 05/14/22 10:00
Sample ID   : MBLK1W                      Date Analyzed: 05/14/22 10:00
Lab Samp ID: VG39E12B                     Dilution Factor: 1
Lab File ID: EE13032A                     Matrix: WATER
Ext Btch ID: 22VG39E12                    % Moisture: NA
Calib. Ref.: EE13025A                     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	0.0329	0.0400	82	60-140

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

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



EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 1003047  
BATCH NO. : 22E169  
METHOD : 5030B/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : MBLK1W                             LCS1W         LCD1W
LAB SAMPLE ID : VG39E12B                         VG39E12L     VG39E12C
LAB FILE ID  : EE13032A                         EE13033A     EE13035A
DATE PREPARED : 05/14/22 10:00                 05/14/22 10:38 05/14/22 11:52
DATE ANALYZED : 05/14/22 10:00                 05/14/22 10:38 05/14/22 11:52
PREP BATCH   : 22VG39E12                       22VG39E12    22VG39E12
CALIBRATION REF: EE13025A                      EE13025A     EE13034A
=====
  
```

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QC Limit (%)	MaxRPD (%)
Gasoline	ND	0.500	0.429	86	0.500	0.484	97	12	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QC Limit (%)
Bromofluorobenzene	0.0400	0.0416	104	0.0400	0.0426	107	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 : 1003033  
BATCH NO. : 22E165  
METHOD : 5030B/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : 202205120240	202205120240MS	202205120240MSD
LAB SAMPLE ID : E165-01	E165-01M	E165-01S
LAB FILE ID : EE13036A	EE13037A	EE13038A
DATE PREPARED : 05/14/22 12:29	05/14/22 13:06	05/14/22 13:43
DATE ANALYZED : 05/14/22 12:29	05/14/22 13:06	05/14/22 13:43
PREP BATCH : 22VG39E12	22VG39E12	22VG39E12
CALIBRATION REF: EE13034A	EE13034A	EE13034A

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	0.558	112	0.500	0.566	113	1	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0469	117	0.0400	0.0473	118	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

1003047

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22E169

## CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 1003047

SDG : 22E169

### METHOD 3520C/8015B TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 05/13/22 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. DSE021WB - 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. DSE021WL/DSE021WC 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. Diesel was within MS QC limits in 22E165-01M/22E165-01S. 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

SDG NO. : 22E169  
Instrument ID : D5

Client : EUROFINS EATON ANALYTICAL  
Project : 1003047

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	WATER		Extraction Date/Time	Sample Data FN	Calibration Prep. Data FN	Notes
				Analysis Date/Time	Batch				
202205120289	MBLK1W	1	NA	05/16/2213:35	05/14/2210:15	LE16008A	LE16004A	22DSE021W	Method Blank
	LCS1W	1	NA	05/16/2213:53	05/14/2210:15	LE16009A	LE16004A	22DSE021W	Lab Control Sample (LCS)
	LCD1W	1	NA	05/16/2214:12	05/14/2210:15	LE16010A	LE16004A	22DSE021W	LCS Duplicate
	E169-01	1	NA	05/16/2216:40	05/14/2210:15	LE16018A	LE16004A	22DSE021W	Field Sample

FN - Filename  
% Moist - Percent Moisture

# **SAMPLE RESULTS**

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 05/09/22 09:30
Project    : 1003047                     Date Received: 05/13/22
Batch No.  : 22E169                       Date Extracted: 05/14/22 10:15
Sample ID  : 202205120289                Date Analyzed: 05/16/22 16:40
Lab Samp ID: 22E169-01                    Dilution Factor: 1
Lab File ID: LE16018A                     Matrix: WATER
Ext Btch ID: 22DSE021W                    % Moisture: NA
Calib. Ref.: LE16004A                     Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
Diesel	ND	0.024	0.012	
Motor Oil	ND	0.048	0.024	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.358	0.480	75	60-130
Hexacosane	0.0971	0.120	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 : 1040ml                      Final Volume : 5ml  
Prepared by : JMuert                              Analyzed by : SDeeso

# QC SUMMARIES



METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 05/14/22 10:15
Project    : 1003047                     Date Received: 05/14/22
Batch No.  : 22E169                       Date Extracted: 05/14/22 10:15
Sample ID  : MBLK1W                       Date Analyzed: 05/16/22 13:35
Lab Samp ID: DSE021WB                     Dilution Factor: 1
Lab File ID: LE16008A                     Matrix: WATER
Ext Btch ID: 22DSE021W                    % Moisture: NA
Calib. Ref.: LE16004A                     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	0.448	0.500	90	60-130
Hexacosane	0.105	0.125	84	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 1003047  
BATCH NO. : 22E169  
METHOD : 3520C/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : MBLK1W                             LCS1W         LCD1W
LAB SAMPLE ID : DSE021WB                         DSE021WL     DSE021WC
LAB FILE ID  : LE16008A                         LE16009A     LE16010A
DATE PREPARED : 05/14/22 10:15                 05/14/22 10:15 05/14/22 10:15
DATE ANALYZED : 05/16/22 13:35                 05/16/22 13:53 05/16/22 14:12
PREP BATCH   : 22DSE021W                       22DSE021W    22DSE021W
CALIBRATION REF: LE16004A                       LE16004A     LE16004A
  
```

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.50	2.49	100	2.50	2.51	100	1	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.447	89	0.500	0.528	106	60-130
Hexacosane	0.125	0.115	92	0.125	0.123	98	60-130

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 : 1003033  
BATCH NO. : 22E165  
METHOD : 3520C/8015B

```

=====
MATRIX      : WATER                                     % MOISTURE:NA
DILUTION FACTOR: 1                                     1
SAMPLE ID   : 202205120240                             202205120240MSD
LAB SAMPLE ID : 22E165-01                             22E165-01S
LAB FILE ID  : LE16011A                               LE16013A
DATE PREPARED : 05/14/22 10:15                       05/14/22 10:15
DATE ANALYZED : 05/16/22 14:30                       05/16/22 15:07
PREP BATCH   : 22DSE021W                             22DSE021W
CALIBRATION REF: LE16004A                             LE16004A
  
```

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.72	2.53	93	2.72	2.64	97	4	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.545	0.465	85	0.545	0.596	109	60-130
Hexacosane	0.136	0.118	87	0.136	0.115	84	60-130

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