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
06/04/2022
EUROFINS EATON ANALYTICAL, LLC

DEB: Debbie L Frank
Project Manager

Report: 996776
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
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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 #: 996776
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 05, 2022 at 1231**. 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
202204050267	HALAWA WELLS 2 (331-024-WL064)	04/04/2022 0935

@ICPMS	@504MOD C	@505_EAL
@525PLUS C PLUS TICS	@625A_Physis C	@625BN_Physis C
@625PAH_Physis_TICS_C	@8015 Ethanol_Subbed	@ML505
@VOASDWA C plus plus TICs C	@VOA-TBA C	(SUB)Gas Fraction Hydrocarbons
Acetone by 624.1_Subbed	Alkalinity in CaCO3 units	Bicarb.Alkalinity as HCO3,calc
Bromide by 300.0	Calcium Total ICAP	Carbonate as CO3, Calculated
Chloride	Fluoride	Magnesium Total ICAP
Mercury ICPMS	Nitrate as Nitrogen by IC	Nitrite Nitrogen by IC
PH (H3=past HT not compliant)	Potassium Total ICAP	Sodium Total ICAP
Specific Conductance	Sulfate	Miscellaneous Charges
Total Dissolved Solid (TDS)	TPH 8015 Diesel and Motor Oil	TPH 8015 Jet Fuel 5
TPH 8015 Jef Fuel 8		

Sample #	Sample ID	Sample Date
202204050270	Travel Blanks	04/04/2022 0935

@504MOD TB C	@VOASDWA C plus plus TICs C	@VOA-TBA C
(SUB)Gas Fraction Hydrocarbons	Acetone by 624.1_Subbed	

Test Description

@ICPMS -- ICPMS Metals

@504MOD C -- EPA Method 504.1

@504MOD TB C -- EPA Method 504.1

@505 EAL Organochlorine Pe ticide

@525PLUS C PLUS TICS -- Semivolatiles by GCMS

@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

@8015 Ethanol_Subbed -- Ethanol

@ML505 -- Organochlorine Pesticides/PCBs

@VOASDWA C plus plus TICs C -- Volatile Organics by GCMS

@VOA-TBA C -- TBA by EPA 524.2 Modified

996776

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CHAIN OF CUSTODY RECORD

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

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS: _____ SAMPLES CHECKED AGAINST COC BY: GR

SAMPLES LOGGED IN BY: MD

SAMPLE TEMP RECEIVED AT:

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

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

☑ Monrovia 3.2 °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: _____

TO BE COMPLETED BY SAMPLER:

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

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

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

TAT requested: rush by adv notice only STD X 1 wk ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE	SAMPLE TIME	SAMPLE ID	CLIENT LAB ID	MATRIX *	FIELD DATA	FIELD DATA	Red Hill 2Q 2022	SAMPLER COMMENTS
04/04/22	0935	Halawa Wells P2	HI0000331-024	CFW			X	
								Temp Blank: ___ °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

	PRINT NAME	COMPANY/TITLE	DATE	TIME
SAMPLED BY: [redacted]	L. Bailey	Honolulu Board of Water Supply	April 4, 2022	
RELINQUISHED BY:	L. Bailey	Honolulu Board of Water Supply	4 April 2022	1400
RECEIVED BY:	G. REITNER	EEA	4.5.22	12:31
RELINQUISHED BY:				
RECEIVED BY:				

eurofins Eaton Analytical

Kit Order for BOARD OF WATER SUPPLY, CITY AND COUNTY OF

Debbie L Frank is your Eurofins Eaton Analytical, LLC Service Manager

750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
(626) 386-1100 FAX (866) 988-3757

Created Date & Time: 3/24/2022 11:39:40AM

Note: Sampler Please return this paper with your samples

Kit #: 315988

Created By: Davis Haley - [B6AN]
Deliver By: 03/31/2022
STG: Bottle Orders
Ice Type: W

Client ID: HONOLULU
Project Code: RED-HILL Bottle Orders
Group Name: Quarterly Red-Hill Expanded List (Albuquerque+)
PO#/JOB#: C20525101 exp 05312023
Description: Red Hill Q2 2022

Ship Sample Kits to
Honolulu Board of Water Supply
630 South Beretania Street
Chemistry Lab
Honolulu, HI 96843

Attn: Ron Fenstemacher
Phone: 808-748-5841
Fax: 808-550-5572

Send Report to
Honolulu Board of Water Supply
630 South Beretania Street
Public Service Bldg." Room 308
Honolulu, HI 96843

Attn: Erwin Kawata
Phone: 808-748-5091
Fax: 808-550-5018

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

Attn: Erwin Kawata
Phone: 808-748-5091
Fax: 808-550-5018

# of Sample	Tests	Bottle Qty - Type [preservative information]	Total	UN DOT #
6	Chloride, Nitrate as Nitrogen by IC, Nitrite Nitrogen by IC, Sulfate	1 - 125ml poly [no preservative]	6	
6	@625A_Physis C, @625BN_Physis C, @625PAH_Physis_TICS_C	4 - 1L amber glass [1 ml Thio 8%]	24	
6	TPH 8015 Diesel and Motor Oil_C, TPH 8015 Jet Fuel 5_C, TPH 8015 Jet Fuel 8_C	3 - 1L amber glass [1 ml Thio 8%]	18	
6	@525PLUS C PLUS TICS	2 - 1L amber glass [45mg Sulfite xls+1 vial 2 ml 6N HCl]	12	UN1789
6	Fluoride	1 - 250 ml poly [no preservative]	6	
6	Alkalinity in CaCO3 units, PH (H3=past HT not compliant), Specific Conductance	1 - 250ml poly [no preservative]	6	
6	@VOA-TBA C	4 - 40 ml VOA vial [25 mg AA + drop 2ml 1:1 HCL]	24	UN1789
6	Acetone by 624_Subbed C	4 - 40ml amber glass vial [1 drop 8% thio+2ml BOT 1:1 HCL]	24	UN1789
7	Acetone by 624_Subbed C TB	2 - 40ml amber glass vial [1 drop 8% thio+2mlBOT HCL+H2O]	14	UN1789
6	@504MOD C	3 - 40ml amber glass vial [1 drop Thio (8%)]	18	
6	@505_EAL, @ML505	4 - 40ml amber glass vial [1 drop Thio (8%)]	24	
6	8015 Gas_C	3 - 40ml amber glass vial [1 drop Thio (8%)]	18	
6	@504MOD TB C, 8015 Gas_C TB	2 - 40ml amber glass vial [1 drop Thio (8%) + H20]	12	
6	@VOASDWA C plus plus TICs TBC	3 - 40ml amber glass vial [25mg AA+ H20+10 drop 1:1 HCL]	18	UN1789
6	@VOASDWA C plus plus TICs C	3 - 40ml amber glass vial [25mg Ascorbic+drop 2ml 1:1 HCL]	18	UN1789
6	@8015 Ethanol_Subbed	4 - 40ml amber glass vial [no preservative]	24	
6	@VOA-TBA TB C	2 - 40ml amber glass vial [TBA_25mg AA+ H20+10 drop 1:1 HCL]	12	
1	@ICPMS, @ICPMS, Calcium Total ICAP, Magnesium Total ICAP, Mercury ICPMS, Potassium Total ICAP, Sodium Total ICAP	1 - 500ml acid poly [2ml HNO3 (18%)]	1	UN2031
5	@ICPMS, Calcium Total ICAP, Magnesium Total ICAP, Mercury ICPMS, Potassium Total ICAP, Sodium Total ICAP	1 - 500ml acid poly [2ml HNO3 (18%)]	5	UN2031
6	Total Dissolved Solid (TDS)	1 - 500ml poly [no preservative]	6	
6	Bromide by 300.0	1 - 60mL poly [0.3 mL 1% EDA solution]	6	

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INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: 996776

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= 4.0 °C) (Corr.Factor -0.3 °C) (Final = 3.7 °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: [X] 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, 538, 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	04-05-2022	12:31
SAMPLES CHECKED AGAINST COC BY:			Eurofins Eaton Analytical		

Page 1 of 2

QA FO-FRM5504 (9.28.21) Ver 9

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INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number: 996776

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= 3.5 °C) (Corr.Factor -0.3 °C) (Final = 3.2 °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: [X] 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(6251,652), 505, SPME, @CH, 532LCMS, 558, 538, 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	04-05-2022	12:31
SAMPLES CHECKED AGAINST COC BY:			Eurofins Eaton Analytical		

Page 2 of 2

QA FO-FRM5504 (9.28.21) Ver 9

Page 6 of 151 pages

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

SHIP DATE: 04APR22
ACTWGT: 78.00 LB
CAD: 100205419/INET4460

BILL RECIPIENT

TO

EUROFINS EATON ANALYTICAL, INC
750 ROYAL OAKS DR
SUITE 100
MONROVIA CA 91016
(626) 386-1178

INV:
PO:
REF:
DEPT:

56DJ2/BDF9/FE4A

J2210220105901uv

FedEx Express

TUE - 05 APR 10:30A
PRIORITY OVERNIGHT

1 of 2

TRK# 0201 7764 8792 7214

MASTER

WZ WHPA

91016
CA-US BUR

After printing this label:
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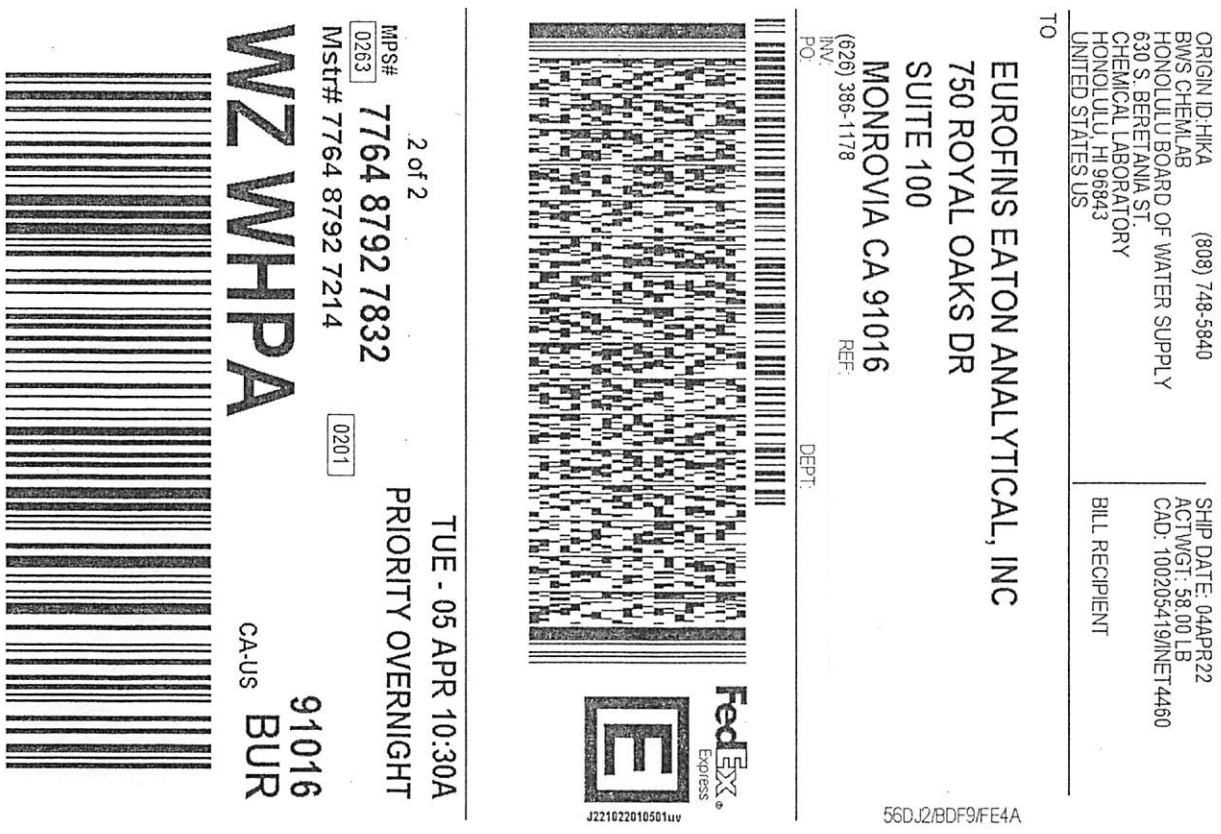
3. Place label in shipping pouch and affix it to your shipment so that the barcode portion of the label can be read and scanned.

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



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.

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Laboratory Comments

Report: 996776
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

Results for Acetone are submitted by Eurofins Calscience, Tustin, CA
Results for Ethanol by 8015, Jet Fuel, TPH 8015 Gas, Diesel and Motor Oil are submitted by Emax Laboratories, Inc. Torrance, CA
Results for 625 PAHs, Acids and BNA are submitted by Physis Environmental Laboratoires, 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.

@524.2 (VOC by GCMS)

202204050267	524.2	TICs
Compound Name	Estimated Retention Time	Estimated Concentration
Unknown compound	1.426 minutes	0.66 ug/L
202204050270	524.2	TICs
Compound Name	Estimated Retention Time	Estimated Concentration
Unknown compound	1.431 minutes	1.65 ug/L
Furfural	9.773 minutes	1.84 ug/L

@525.2 (SVOC by GCMS)

202204050267:	525.2	TICs
Compound Name	Retention Time	Estimated Concentration
Unknown	3.77 minutes	0.5 ug/L
Octadecane	5.23 minutes	0.5 ug/L

(E504.1 - EDB,DBCP,TCP) NA, N1
Travel Blank (TB) analysis could not be completed due to insufficient volume to retest needed due to run QC related issue.
Associated Field Sample (FS) is ND. TB is not needed for detection verification since FS is

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

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Not Detected. Proceed to report associated FS.

Flags Legend:

BM - Target analyte detected in method blank above the MDL, but below the minimum reporting limit (MRL) and anayte not present in the sample, no impact on data.

FB - Target analyte detected in TB > MRL but sample is ND.

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

N1 - See case narrative.

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

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

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Laboratory Hits

Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply
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Samples Received on:
04/05/2022 1231

Analyzed	Analyte	Sample ID	Result	HI Limit	Units	MRL
	202204050267	**HALAWA WELLS 2 (331-024-WL064)**				
04/14/2022 00:29	Alkalinity in CaCO3 units		79		mg/L	2.0
04/21/2022 19:59	alpha-Chlordane		0.055		ug/L	0.050
04/15/2022 11:17	Bicarb.Alkalinity as HCO3calc		97		mg/L	2.0
04/21/2022 19:59	Bromacil		0.10		ug/L	0.10
04/07/2022 11:45	Bromide		610		ug/L	10
04/06/2022 21:08	Calcium Total ICAP		27		mg/L	1.0
04/08/2022 02:48	Chlordane		0.45	2	ug/L	0.10
04/05/2022 22:08	Chloride		150	250	mg/L	5.0
04/08/2022 13:23	Chromium Total ICAP/MS		2.1	100	ug/L	1.0
04/08/2022 02:48	Dieldrin		0.124	0.2	ug/L	0.0100
04/08/2022 02:48	Dieldrin		0.12	0.2	ug/L	0.0020
04/18/2022 21:57	Fluoride		0.070	4	mg/L	0.050
04/21/2022 19:59	gamma-Chlordane		0.062		ug/L	0.050
04/08/2022 02:48	Heptachlor Epoxide		0.038	0.2	ug/L	0.010
04/06/2022 21:08	Magnesium Total ICAP		26		mg/L	0.10
04/05/2022 22:08	Nitrate as Nitrogen by IC		2.6	10	mg/L	0.12
04/14/2022 00:29	PH (H3=past HT not compliant)		7.8	8.5	Units	0.10
04/06/2022 21:08	Potassium Total ICAP		4.1		mg/L	1.0
04/06/2022 21:08	Sodium Total ICAP		81		mg/L	1.0
04/14/2022 00:29	Specific Conductance, 25 C		780	--	umho/cm	2.0
04/05/2022 22:08	Sulfate		41	250	mg/L	5.0
04/10/2022 00:12	Total Dissolved Solids (TDS)		440	500	mg/L	10
04/08/2022 13:23	Zinc Total ICAP/MS		20	5000	ug/L	20

SUMMARY OF POSITIVE DATA ONLY

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Laboratory Data

Report: 996776
Project: RED-HILL
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Samples Received on:
04/05/2022 1231

HALAWA WELLS 2 (331-024-WL064) (202204050267) — **Sampled on 04/04/2022 0935**

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
		EPA 200.8 - ICPMS Metals							
04/06/22	04/08/22 13:23	1398507	1398771	(EPA 200.8)	Antimony Total ICAP/MS	ND	ug/L	1.0	1
04/06/22	04/08/22 13:23	1398507	1398771	(EPA 200.8)	Arsenic Total ICAP/MS	ND	ug/L	1.0	1
04/06/22	04/08/22 13:23	1398507	1398771	(EPA 200.8)	Beryllium Total ICAP/MS	ND	ug/L	1.0	1
04/06/22	04/08/22 13:23	1398507	1398771	(EPA 200.8)	Cadmium Total ICAP/MS	ND	ug/L	0.50	1
04/06/22	04/08/22 13:23	1398507	1398771	(EPA 200.8)	Chromium Total ICAP/MS	2.1	ug/L	1.0	1
04/06/22	04/08/22 13:23	1398507	1398771	(EPA 200.8)	Copper Total ICAP/MS	ND	ug/L	2.0	1
04/06/22	04/08/22 13:23	1398507	1398771	(EPA 200.8)	Lead Total ICAP/MS	ND	ug/L	0.50	1
04/06/22	04/08/22 13:23	1398507	1398771	(EPA 200.8)	Nickel Total ICAP/MS	ND	ug/L	5.0	1
04/06/22	04/08/22 13:23	1398507	1398771	(EPA 200.8)	Selenium Total ICAP/MS	ND	ug/L	5.0	1
04/06/22	04/08/22 13:23	1398507	1398771	(EPA 200.8)	Silver Total ICAP/MS	ND	ug/L	0.50	1
04/06/22	04/08/22 13:23	1398507	1398771	(EPA 200.8)	Thallium Total ICAP/MS	ND	ug/L	1.0	1
04/06/22	04/08/22 13:23	1398507	1398771	(EPA 200.8)	Zinc Total ICAP/MS	20	ug/L	20	1
		EPA 200.7 - ICP Metals							
04/06/22	04/06/22 21:08	1398507	1398648	(EPA 200.7)	Calcium Total ICAP	27	mg/L	1.0	1
04/06/22	04/06/22 21:08	1398507	1398648	(EPA 200.7)	Magnesium Total ICAP	26	mg/L	0.10	1
04/06/22	04/06/22 21:08	1398507	1398648	(EPA 200.7)	Potassium Total ICAP	4.1	mg/L	1.0	1
04/06/22	04/06/22 21:08	1398507	1398648	(EPA 200.7)	Sodium Total ICAP	81	mg/L	1.0	1
		EPA 200.8 - Mercury ICPMS							
04/06/22	04/08/22 13:23	1398507	1398773	(EPA 200.8)	Mercury ICPMS	ND	ug/L	0.20	1
		SM2330B - Carbonate as CO3, Calculated							
	04/15/22 22:36			(SM2330B)	Carbonate as CO3, Calculated	ND (c)	mg/L	2.0	1
		SM2330B - Bicarb.Alkalinity as HCO3,calc							
	04/15/22 11:17			(SM2330B)	Bicarb.Alkalinity as HCO3calc	97 (c)	mg/L	2.0	1
		EPA 505 - Organochlorine Pesticides/PCBs							
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	Alachlor (Alanex)	ND	ug/L	0.10	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	Aldrin	ND	ug/L	0.010	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	Chlordane	0.45	ug/L	0.10	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	Dieldrin	0.124	ug/L	0.0100	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	Endrin	ND	ug/L	0.010	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	Heptachlor	ND	ug/L	0.010	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	Heptachlor Epoxide	0.038	ug/L	0.010	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	Lindane (gamma-BHC)	ND	ug/L	0.010	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	Methoxychlor	ND	ug/L	0.050	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	PCB 1016 Aroclor	ND	ug/L	0.080	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

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Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	PCB 1221 Aroclor	ND	ug/L	0.10	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	PCB 1232 Aroclor	ND	ug/L	0.10	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	PCB 1242 Aroclor	ND	ug/L	0.10	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	PCB 1248 Aroclor	ND	ug/L	0.10	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	PCB 1254 Aroclor	ND	ug/L	0.10	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	PCB 1260 Aroclor	ND	ug/L	0.10	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	Total PCBs	ND	ug/L	0.10	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	Toxaphene	ND	ug/L	0.50	1
04/07/22	04/08/22 02:48	1398866	1399372	(EPA 505)	Tetrachlorometaxylene	101	%		1
EPA 505 - Organochlorine Pesticides									
04/07/22	04/08/22 02:48	1399386	1405881	(EPA 505)	Aldrin	ND	ug/L	0.0020	1
04/07/22	04/08/22 02:48	1399386	1405881	(EPA 505)	Dieldrin	0.12	ug/L	0.0020	1
04/07/22	04/08/22 02:48	1399386	1405881	(EPA 505)	Toxaphene	ND	ug/L	0.10	1
04/07/22	04/08/22 02:48	1399386	1405881	(EPA 505)	Tetrachloro-m-xylene	101	%		1
EPA 504.1 - EPA Method 504.1									
04/09/22	04/09/22 20:25	1399650	1399691	(EPA 504.1)	1,2,3-Trichloropropane (TCP)	ND	ug/L	0.040	1
04/09/22	04/09/22 20:25	1399650	1399691	(EPA 504.1)	Dibromochloropropane (DBCP)	ND	ug/L	0.010	1
04/09/22	04/09/22 20:25	1399650	1399691	(EPA 504.1)	Ethylene Dibromide (EDB)	ND	ug/L	0.010	1
04/09/22	04/09/22 20:25	1399650	1399691	(EPA 504.1)	1,2-Dibromopropane	101	%		1
EPA 525.2 - Semivolatiles by GCMS									
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	1-Methylnaphthalene	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	2,4-DDD	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	2,4-DDE	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	2,4-DDT	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	2-methylnaphthalene	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	4,4-DDD	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	4,4-DDE	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	4,4-DDT	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Acenaphthene	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Acetochlor	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Alachlor	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	alpha-Chlordane	0.055	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Anthracene	ND	ug/L	0.020	1

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Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Atrazine	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.020	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.020	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.020	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Beta-BHC	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Bromacil	0.10	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Butachlor	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.50	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Caffeine by method 525mod	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Chloroneb	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Chrysene	ND	ug/L	0.020	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Delta-BHC	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.60	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.60	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Dieldrin	ND	ug/L	0.20	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.50	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Dimethoate	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.50	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1.0	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Endrin	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	EPTC	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Fluoranthene	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Fluorene	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	gamma-Chlordane	0.062	ug/L	0.050	1

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1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 996776
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:
04/05/2022 1231

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Heptachlor	ND	ug/L	0.040	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Isophorone	ND	ug/L	0.50	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Lindane	ND	ug/L	0.040	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Malathion	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Methoxychlor	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Metolachlor	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Metribuzin	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Molinate	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Naphthalene	ND	ug/L	0.30	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Parathion	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Pendimethalin	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.20	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Phenanthrene	ND	ug/L	0.040	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Propachlor	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Pyrene	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Simazine	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Terbacil	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Terbuthylazine	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Thiobencarb (ELAP)	ND	ug/L	0.20	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.050	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Trifluralin	ND	ug/L	0.10	1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	101	%		1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Acenaphthene-d10	101	%		1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Chrysene-d12	101	%		1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Perylene-d12	85	%		1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Phenanthrene-d10	106	%		1
04/15/22	04/21/22 19:59	1401158	1403114	(EPA 525.2)	Triphenylphosphate	109	%		1
	EPA 300.0 - Nitrate, Nitrite by EPA 300.0								
	04/05/22 22:08		1398500	(EPA 300.0)	Nitrate as Nitrogen by IC	2.6	mg/L	0.12	10
	04/05/22 22:08		1398500	(EPA 300.0)	Nitrite Nitrogen by IC	ND	mg/L	0.12	10
	EPA 300.0 - Disinfection ByProducts by 300.0								
	04/07/22 11:45		1399011	(EPA 300.0)	Bromide	610	ug/L	10	2
	EPA 300.0 - Chloride, Sulfate by EPA 300.0								

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	04/05/22 22:08		1398512	(EPA 300.0)	Chloride	150	mg/L	5.0	10
	04/05/22 22:08		1398512	(EPA 300.0)	Sulfate	41	mg/L	5.0	10
	SW 8015B - (SUB)Gas Fraction Hydrocarbons								
04/06/22	04/06/22 17:57			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.020	1
	SW 8015B - TPH 8015 Diesel and Motor Oil								
04/06/22	04/07/22 19:01			(SW 8015B)	TPH Diesel	ND	ug/L	0.025	1
04/06/22	04/07/22 19:01			(SW 8015B)	TPH Motor Oil	ND	ug/L	0.049	1
	EPA 8015 - Jet Fuel 5 C8-C18								
04/06/22	04/07/22 19:01			(EPA 8015)	Jet Fuel 5	ND	mg/L	0.049	1
	EPA 625 - 625PAH in ug/L								
04/07/22	05/13/22 00:00			(EPA 625)	1-Methylnaphthalene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	1-Methylphenanthrene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	2,3,5-Trimethylnaphthalene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	2,4,6-Trichlorophenol	NA	ug/L	0.1	1
04/07/22	05/13/22 00:00			(EPA 625)	2,6-Dimethylnaphthalene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	2-Methylnaphthalene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Acenaphthene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Acenaphthylene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Anthracene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Benz(a)Anthracene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Benzo(a)pyrene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Benzo(b)fluoranthene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Benzo(e)pyrene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Benzo(g,h,i)perylene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Benzo(k)fluoranthene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Biphenyl	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Chrysene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Dibenz(a,h)Anthracene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Dibenzo(a,l)pyrene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Dibenzothiophene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Fluoranthene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Fluorene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Naphthalene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Pentachlorophenol	NA	ug/L	0.1	1
04/07/22	05/13/22 00:00			(EPA 625)	Perylene	ND	ug/L	0.005	1
04/07/22	05/13/22 00:00			(EPA 625)	Phenanthrene	ND	ug/L	0.005	1

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04/07/22	05/13/22 00:00			(EPA 625)	Pyrene	ND	ug/L	0.005	1
		EPA 8015 - Jet Fuel 8 C8-C18							
	04/07/22 19:01			(EPA 8015)	Jet Fuel 8	ND	mg/L	0.049	1
		EPA 625 - 625 Acid Extractable in ug/L							
04/07/22	05/13/22 00:00			(EPA 625)	2,4,5-Trichlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 00:00			(EPA 625)	2,4,6-Trichlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 00:00			(EPA 625)	2,4-Dichlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 00:00			(EPA 625)	2,4-Dinitrophenol	ND	ug/L	0.2	1
04/07/22	05/13/22 00:00			(EPA 625)	2,6-Dichlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 00:00			(EPA 625)	2,6-Di-tert-butyl-4-methylphenol	ND	ug/L	0.1	1
04/07/22	05/13/22 00:00			(EPA 625)	2,6-Di-tert-butylphenol	ND	ug/L	0.1	1
04/07/22	05/13/22 00:00			(EPA 625)	2-Chlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 00:00			(EPA 625)	2-Methylphenol	ND	ug/L	0.2	1
04/07/22	05/13/22 00:00			(EPA 625)	2-Nitrophenol	ND	ug/L	0.2	1
04/07/22	05/13/22 00:00			(EPA 625)	4,6-Dinitro-2-methylphenol	ND	ug/L	0.2	1
04/07/22	05/13/22 00:00			(EPA 625)	4-Chloro-3-methyl phenol	ND	ug/L	0.2	1
04/07/22	05/13/22 00:00			(EPA 625)	4-Methylphenol	ND	ug/L	0.2	1
04/07/22	05/13/22 00:00			(EPA 625)	4-Nitrophenol	ND	ug/L	0.2	1
04/07/22	05/13/22 00:00			(EPA 625)	6-tert-Butyl-2,4-dimethylphenol	ND	ug/L	0.1	1
04/07/22	05/13/22 00:00			(EPA 625)	Benzoic acid	ND	ug/L	0.2	1
04/07/22	05/13/22 00:00			(EPA 625)	Benzyl alcohol	ND	ug/L	0.2	1
04/07/22	05/13/22 00:00			(EPA 625)	pentachlorophenol	ND	ug/L	0.1	1
04/07/22	05/13/22 00:00			(EPA 625)	Phenol	ND	ug/L	0.2	1
04/07/22	05/13/22 00:00			(EPA 625)	p-tert-Butylphenol	ND	ug/L	0.1	1
		EPA 625 - 625 Base Neutral Extractable in ug/L							
	05/13/22 00:00			(EPA 625)	2-Chloronaphthalene	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	2-Nitroaniline	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	3-Nitroaniline	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	4-Bromophenylphenyl Ether	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	4-Chlorophenylphenyl Ether	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	4-Nitroaniline	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	Aniline	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	Benzidine	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	bis(2-Chloroethoxy)methane	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	bis(2-Chloroethyl)ether	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	bis(2-Chloroisopropyl) ether	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	Dibenzofuran	ND	ug/L	0.1	1

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	05/13/22 00:00			(EPA 625)	Disalicylidenepropanediamine	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	Hexachloroethane	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	Nitrobenzene	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	N-Nitrosodi-N-propylamine	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	N-Nitrosodiphenylamine	ND	ug/L	0.1	1
	05/13/22 00:00			(EPA 625)	p-Chloroaniline	ND	ug/L	0.1	1
		EPA 624.1 - Acetone by 624.1							
	04/18/22 18:36			(EPA 624.1)	Acetone	ND	ug/L	50	1
		SW8015C - Ethanol							
	04/06/22 17:06			(SW8015C)	Ethanol	ND		2000	1
		EPA 524.2 - Volatile Organics by GCMS							
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	2-Butanone (MEK)	ND (LK)	ug/L	5.0	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	2-Hexanone	ND (VC,LK)	ug/L	10	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND (LK)	ug/L	5.0	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Acetone	ND (FB)	ug/L	500	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Benzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Bromobenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Bromoethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Bromoform	ND	ug/L	0.50	1

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04/05/2022 1231

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Chloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Chloroform (Trichloromethane)	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Dibromomethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Dichloromethane	ND (BM)	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3.0	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Naphthalene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	o-Xylene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Styrene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3.0	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3.0	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Toluene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.50	1

Rounding on totals after summation.
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Tel: (626) 386-1100
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1 800 566 LABS (1 800 566 5227)

Laboratory Data

Report: 996776
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:
04/05/2022 1231

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Total THM	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Total xylenes	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.50	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.30	1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	1,2-Dichloroethane-d4	107	%		1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	4-Bromofluorobenzene	100	%		1
04/12/22	04/12/22 17:51	1400434	1400438	(EPA 524.2)	Toluene-d8	100	%		1
			EPA 524.2 SIM - TBA by EPA 524.2 Modified						
04/13/22	04/13/22 20:11	1400866	1400476	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2.0	1
04/13/22	04/13/22 20:11	1400866	1400476	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	122	%		1
04/13/22	04/13/22 20:11	1400866	1400476	(EPA 524.2 SIM)	4-Bromofluorobenzene	90	%		1
04/13/22	04/13/22 20:11	1400866	1400476	(EPA 524.2 SIM)	Toluene-d8	98	%		1
			SM 4500F-C - Fluoride						
	04/18/22 21:57		1401745	(SM 4500F-C)	Fluoride	0.070	mg/L	0.050	1
			SM 2320B - Alkalinity in CaCO3 units						
	04/14/22 00:29		1401219	(SM 2320B)	Alkalinity in CaCO3 units	79	mg/L	2.0	1
			E160.1/SM2540C - Total Dissolved Solids (TDS)						
04/09/22	04/10/22 00:12	1399738	1399743	(E160.1/SM2540C)	Total Dissolved Solids (TDS)	440	mg/L	10	1
			SM4500-HB - PH (H3=past HT not compliant)						
	04/14/22 00:29		1401222	(SM4500-HB)	PH (H3=past HT not compliant)	7.8	Units	0.10	1
			SM2510B - Specific Conductance						
	04/14/22 00:29		1401231	(SM2510B)	Specific Conductance, 25 C	780	umho/cm	2.0	1
Travel Blanks (202204050270)							**Sampled on 04/04/2022 0935**		
			EPA 504.1 - EPA Method 504.1						
04/08/22	04/08/22 14:37	1396884	1397328	(EPA 504.1)	1,2,3-Trichloropropane (TCP)	NA (N1)	ug/L	0.040	1
04/08/22	04/08/22 14:37	1396884	1397328	(EPA 504.1)	Dibromochloropropane (DBCP)	NA (N1)	ug/L	0.010	1
04/08/22	04/08/22 14:37	1396884	1397328	(EPA 504.1)	Ethylene Dibromide (EDB)	NA (N1)	ug/L	0.010	1
04/08/22	04/08/22 14:37	1396884	1397328	(EPA 504.1)	1,2-Dibromopropane	NA (N1)	%		1
			SW 8015B - (SUB)Gas Fraction Hydrocarbons						
04/06/22	04/06/22 18:33			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.020	1
			EPA 624.1 - Acetone by 624.1						
	04/18/22 19:02			(EPA 624.1)	Acetone	ND	ug/L	50	1
			EPA 524.2 - Volatile Organics by GCMS						

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Group: Quarterly Red-Hill Expanded List (Albuquerque+)

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Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	2-Butanone (MEK)	ND (LK)	ug/L	5.0	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	2-Hexanone	ND (VC,LK)	ug/L	10	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND (LK)	ug/L	5.0	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Acetone	ND (FB)	ug/L	500	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Benzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Bromobenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Bromoethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Bromoform	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Chloroethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Chloroform (Trichloromethane)	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Dibromomethane	ND	ug/L	0.50	1

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Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Dichloromethane	ND (BM)	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3.0	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Naphthalene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	o-Xylene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Styrene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3.0	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3.0	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Toluene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Total THM	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Total xylenes	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.50	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.30	1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	1,2-Dichloroethane-d4	107	%		1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	4-Bromofluorobenzene	101	%		1
04/12/22	04/12/22 18:12	1400434	1400438	(EPA 524.2)	Toluene-d8	103	%		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: 996776
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:
04/05/2022 1231

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
EPA 524.2 SIM - TBA by EPA 524.2 Modified									
04/13/22	04/13/22 20:34	1400866	1400476	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2.0	1
04/13/22	04/13/22 20:34	1400866	1400476	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	122	%		1
04/13/22	04/13/22 20:34	1400866	1400476	(EPA 524.2 SIM)	4-Bromofluorobenzene	92	%		1
04/13/22	04/13/22 20:34	1400866	1400476	(EPA 524.2 SIM)	Toluene-d8	96	%		1

Rounding on totals after summation.
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Laboratory QC Summary

Report: 996776
Project: RED-HILL
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Honolulu Board of Water Supply

EPA Method 504.1
Prep Batch: 1396884 **Analytical Batch: 1397328** **Analysis Date: 04/08/2022**
202204050270 Travel Blanks Analyzed by: K9GY

Nitrate, Nitrite by EPA 300.0
Analytical Batch: 1398500 **Analysis Date: 04/05/2022**
202204050267 HALAWA WELLS 2 (331-024-WL064) Analyzed by: P6LW

Chloride, Sulfate by EPA 300.0
Analytical Batch: 1398512 **Analysis Date: 04/05/2022**
202204050267 HALAWA WELLS 2 (331-024-WL064) Analyzed by: P6LW

ICP Metals
Prep Batch: 1398507 **Analytical Batch: 1398648** **Analysis Date: 04/06/2022**
202204050267 HALAWA WELLS 2 (331-024-WL064) Analyzed by: LK6J

ICPMS Metals
Prep Batch: 1398507 **Analytical Batch: 1398771** **Analysis Date: 04/08/2022**
202204050267 HALAWA WELLS 2 (331-024-WL064) Analyzed by: DHX7

Mercury ICPMS
Prep Batch: 1398507 **Analytical Batch: 1398773** **Analysis Date: 04/08/2022**
202204050267 HALAWA WELLS 2 (331-024-WL064) Analyzed by: DHX7

Disinfection ByProducts by 300.0
Analytical Batch: 1399011 **Analysis Date: 04/07/2022**
202204050267 HALAWA WELLS 2 (331-024-WL064) Analyzed by: NJR

Organochlorine Pesticides/PCBs
Prep Batch: 1398866 **Analytical Batch: 1399372** **Analysis Date: 04/08/2022**
202204050267 HALAWA WELLS 2 (331-024-WL064) Analyzed by: LRL

EPA Method 504.1
Prep Batch: 1399650 **Analytical Batch: 1399691** **Analysis Date: 04/09/2022**
202204050267 HALAWA WELLS 2 (331-024-WL064) Analyzed by: K9GY

Total Dissolved Solids (TDS)
Prep Batch: 1399738 **Analytical Batch: 1399743** **Analysis Date: 04/10/2022**
202204050267 HALAWA WELLS 2 (331-024-WL064) Analyzed by: VXLG4

Volatile Organics by GCMS
Prep Batch: 1400434 **Analytical Batch: 1400438** **Analysis Date: 04/12/2022**
202204050267 HALAWA WELLS 2 (331-024-WL064) Analyzed by: TG9W
202204050270 Travel Blanks Analyzed by: TG9W

TBA by EPA 524.2 Modified
Prep Batch: 1400866 **Analytical Batch: 1400476** **Analysis Date: 04/13/2022**
202204050267 HALAWA WELLS 2 (331-024-WL064) Analyzed by: TG9W
202204050270 Travel Blanks Analyzed by: TG9W

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Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

Alkalinity in CaCO3 units

Analytical Batch: 1401219 **Analysis Date: 04/14/2022**

202204050267	HALAWA WELLS 2 (331-024-WL064)	Analyzed by: D5MQ

PH (H3=past HT not compliant)

Analytical Batch: 1401222 **Analysis Date: 04/14/2022**

202204050267	HALAWA WELLS 2 (331-024-WL064)	Analyzed by: D5MQ

Specific Conductance

Analytical Batch: 1401231 **Analysis Date: 04/14/2022**

202204050267	HALAWA WELLS 2 (331-024-WL064)	Analyzed by: D5MQ

Fluoride

Analytical Batch: 1401745 **Analysis Date: 04/18/2022**

202204050267	HALAWA WELLS 2 (331-024-WL064)	Analyzed by: D5MQ

Semivolatiles by GCMS

Prep Batch: 1401158 **Analytical Batch: 1403114** **Analysis Date: 04/21/2022**

202204050267	HALAWA WELLS 2 (331-024-WL064)	Analyzed by: JWC

Organochlorine Pesticides

Prep Batch: 1399386 **Analytical Batch: 1405881** **Analysis Date: 04/08/2022**

202204050267	HALAWA WELLS 2 (331-024-WL064)	Analyzed by: LRL

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Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
Nitrate, Nitrite by EPA 300.0 by EPA 300.0									
Analytical Batch: 1398500						**Analysis Date: 04/05/2022**			
LCS1	Nitrate as Nitrogen by IC		2.5	2.37	mg/L	95	(90-110)		
LCS2	Nitrate as Nitrogen by IC		2.5	2.38	mg/L	95	(90-110)	20	0.42
MBLK	Nitrate as Nitrogen by IC			0 0042	mg/L				
MRL_CHK	Nitrate as Nitrogen by IC		0.05	0.0454	mg/L	91	(50-150)		
MRLLW	Nitrate as Nitrogen by IC		0.013	0.0131	mg/L	105	(50-150)		
MS_202204050840	Nitrate as Nitrogen by IC	0.050	1.3	1.25	mg/L	96	(80-120)		
MS_202204060802	Nitrate as Nitrogen by IC	0.62	1.3	1.84	mg/L	97	(80-120)		
MSD_202204050840	Nitrate as Nitrogen by IC	0.050	1.3	1.26	mg/L	97	(80-120)	20	0.61
MSD_202204060802	Nitrate as Nitrogen by IC	0.62	1.3	1.84	mg/L	97	(80-120)	20	0.092
LCS1	Nitrite Nitrogen by IC		1	0.962	mg/L	96	(90-110)		
LCS2	Nitrite Nitrogen by IC		1	0.968	mg/L	97	(90-110)	20	0.62
MBLK	Nitrite Nitrogen by IC			<0.0050	mg/L				
MRL_CHK	Nitrite Nitrogen by IC		0.05	0.0434	mg/L	87	(50-150)		
MRLLW	Nitrite Nitrogen by IC		0.013	0.0118	mg/L	94	(50-150)		
MS_202204050840	Nitrite Nitrogen by IC	ND	0.5	0.470	mg/L	94	(80-120)		
MS_202204060802	Nitrite Nitrogen by IC	ND	0.5	0.474	mg/L	95	(80-120)		
MSD_202204050840	Nitrite Nitrogen by IC	ND	0.5	0.472	mg/L	94	(80-120)	20	0.38
MSD_202204060802	Nitrite Nitrogen by IC	ND	0.5	0.472	mg/L	94	(80-120)	20	0.47
Chloride, Sulfate by EPA 300.0 by EPA 300.0									
Analytical Batch: 1398512						**Analysis Date: 04/05/2022**			
LCS1	Chloride		25	24.2	mg/L	97	(90-110)		
LCS2	Chloride		25	24.3	mg/L	97	(90-110)	20	0.0
MBLK	Chloride			<0.1397	mg/L				
MRL_CHK	Chloride		0.5	0.461	mg/L	92	(50-150)		
MS_202204050840	Chloride	8.1	13	20.6	mg/L	100	(80-120)		
MS_202204060802	Chloride	6	13	18.6	mg/L	101	(80-120)		
MSD_202204050840	Chloride	8.1	13	20.7	mg/L	101	(80-120)	20	0.25
MSD_202204060802	Chloride	6	13	18.5	mg/L	101	(80-120)	20	0.28
LCS1	Sulfate		50	48.2	mg/L	96	(90-110)		
LCS2	Sulfate		50	48.4	mg/L	97	(90-110)	20	0.62
MBLK	Sulfate			<0.0614	mg/L				
MRL_CHK	Sulfate		1	0.886	mg/L	89	(50-150)		
MRLLW	Sulfate		0.25	0.226	mg/L	90	(50-150)		
MS_202204050840	Sulfate	48	25	73.2	mg/L	101	(80-120)		
MS_202204060802	Sulfate	4.7	25	29.4	mg/L	99	(80-120)		

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.
(I) - Indicates internal standard compound.

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Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MSD_202204050840	Sulfate	48	25	73.4	mg/L	102	(80-120)	20	0.34
MSD_202204060802	Sulfate	4.7	25	29.4	mg/L	99	(80-120)	20	0.15
ICP Metals by EPA 200.7									
Analytical Batch: 1398648						**Analysis Date: 04/06/2022**			
LCS1	Calcium Total ICAP		50	50.0	mg/L	100	(85-115)		
LCS2	Calcium Total ICAP		50	50.1	mg/L	100	(85-115)	20	0.20
MBLK	Calcium Total ICAP			<0.043087	mg/L				
MRL_CHK	Calcium Total ICAP		1	1.04	mg/L	104	(50-150)		
M 202204050425	Calcium Total ICAP	13	50	64 0	mg/L	103	(70 130)		
MS2_202204050329	Calcium Total ICAP	8.6	50	60.3	mg/L	103	(70-130)		
MSD_202204050425	Calcium Total ICAP	13	50	63.8	mg/L	102	(70-130)	20	0.30
MSD2_202204050329	Calcium Total ICAP	8.6	50	60.6	mg/L	104	(70-130)	20	0.49
LCS1	Magnesium Total ICAP		20	19.3	mg/L	97	(85-115)		
LCS2	Magnesium Total ICAP		20	19.3	mg/L	97	(85-115)	20	0.0
MBLK	Magnesium Total ICAP			<0.009606	mg/L				
MRL_CHK	Magnesium Total ICAP		0.1	0.0967	mg/L	97	(50-150)		
MS_202204050425	Magnesium Total ICAP	5.0	20	25.3	mg/L	102	(70-130)		
MS2_202204050329	Magnesium Total ICAP	3.2	20	23.5	mg/L	101	(70-130)		
MSD_202204050425	Magnesium Total ICAP	5.0	20	25.4	mg/L	102	(70-130)	20	0.34
MSD2_202204050329	Magnesium Total ICAP	3.2	20	23.6	mg/L	102	(70-130)	20	0.51
LCS1	Potassium Total ICAP		20	19.6	mg/L	98	(85-115)		
LCS2	Potassium Total ICAP		20	19.6	mg/L	98	(85-115)	20	0.0
MBLK	Potassium Total ICAP			<0.233312	mg/L				
MRL_CHK	Potassium Total ICAP		1	0.708	mg/L	71	(50-150)		
MS_202204050425	Potassium Total ICAP	2.3	20	23.7	mg/L	107	(70-130)		
MS2_202204050329	Potassium Total ICAP	1.1	20	22.2	mg/L	105	(70-130)		
MSD_202204050425	Potassium Total ICAP	2.3	20	23.9	mg/L	108	(70-130)	20	0.83
MSD2_202204050329	Potassium Total ICAP	1.1	20	22.3	mg/L	106	(70-130)	20	0.54
LCS1	Sodium Total ICAP		50	48.8	mg/L	98	(85-115)		
LCS2	Sodium Total ICAP		50	48.7	mg/L	98	(85-115)	20	0.21
MBLK	Sodium Total ICAP			<0.4255	mg/L				
MRL_CHK	Sodium Total ICAP		1	1.27	mg/L	127	(50-150)		
MS_202204050425	Sodium Total ICAP	38	50	86.0	mg/L	95	(70-130)		
MS2_202204050329	Sodium Total ICAP	8.2	50	57.6	mg/L	99	(70-130)		
MSD_202204050425	Sodium Total ICAP	38	50	87.4	mg/L	98	(70-130)	20	1.6
MSD2_202204050329	Sodium Total ICAP	8.2	50	57.7	mg/L	99	(70-130)	20	0.19

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

Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
ICPMS Metals by EPA 200.8									
Analytical Batch: 1398771						**Analysis Date: 04/08/2022**			
LCS1	Antimony Total ICAP/MS		50	50.8	ug/L	102	(85-115)		
LCS2	Antimony Total ICAP/MS		50	50.0	ug/L	100	(85-115)	20	1.6
MBLK	Antimony Total ICAP/MS			<0.2437	ug/L				
MRL CHK	Antimony Total ICAP/M		1	0 991	ug/L	99	(50 150)		
MS_202204010165	Antimony Total ICAP/MS	ND	50	50.8	ug/L	101	(70-130)		
MS2_202204050267	Antimony Total ICAP/MS	ND	50	51.7	ug/L	103	(70-130)		
MSD_202204010165	Antimony Total ICAP/MS	ND	50	51.1	ug/L	102	(70-130)	20	0.58
MSD2_202204050267	Antimony Total ICAP/MS	ND	50	52.3	ug/L	104	(70-130)	20	1.1
LCS1	Arsenic Total ICAP/MS		50	50.7	ug/L	101	(85-115)		
LCS2	Arsenic Total ICAP/MS		50	50.7	ug/L	101	(85-115)	20	0.0
MBLK	Arsenic Total ICAP/MS			<0.4134	ug/L				
MRL_CHK	Arsenic Total ICAP/MS		1	0.997	ug/L	100	(50-150)		
MS_202204010165	Arsenic Total ICAP/MS	ND	50	51.0	ug/L	102	(70-130)		
MS2_202204050267	Arsenic Total ICAP/MS	ND	50	49.9	ug/L	100	(70-130)		
MSD_202204010165	Arsenic Total ICAP/MS	ND	50	51.2	ug/L	102	(70-130)	20	0.44
MSD2_202204050267	Arsenic Total ICAP/MS	ND	50	51.4	ug/L	102	(70-130)	20	3.1
LCS1	Beryllium Total ICAP/MS		25	25.3	ug/L	101	(85-115)		
LCS2	Beryllium Total ICAP/MS		25	25.3	ug/L	101	(85-115)	20	0.0
MBLK	Beryllium Total ICAP/MS			<0.1106	ug/L				
MRL_CHK	Beryllium Total ICAP/MS		1	0.979	ug/L	98	(50-150)		
MS_202204010165	Beryllium Total ICAP/MS	ND	25	24.7	ug/L	99	(70-130)		
MS2_202204050267	Beryllium Total ICAP/MS	ND	25	25.8	ug/L	103	(70-130)		
MSD_202204010165	Beryllium Total ICAP/MS	ND	25	25.6	ug/L	103	(70-130)	20	3.5
MSD2_202204050267	Beryllium Total ICAP/MS	ND	25	25.8	ug/L	103	(70-130)	20	0.12
LCS1	Cadmium Total ICAP/MS		25	24.9	ug/L	100	(85-115)		
LCS2	Cadmium Total ICAP/MS		25	24.7	ug/L	99	(85-115)	20	0.81
MBLK	Cadmium Total ICAP/MS			<0.0546	ug/L				
MRL_CHK	Cadmium Total ICAP/MS		0.5	0.512	ug/L	102	(50-150)		
MS_202204010165	Cadmium Total ICAP/MS	ND	25	24.6	ug/L	98	(70-130)		
MS2_202204050267	Cadmium Total ICAP/MS	ND	25	24.3	ug/L	97	(70-130)		
MSD_202204010165	Cadmium Total ICAP/MS	ND	25	24.7	ug/L	99	(70-130)	20	0.31
MSD2_202204050267	Cadmium Total ICAP/MS	ND	25	24.6	ug/L	98	(70-130)	20	1.2
LCS1	Chromium Total ICAP/MS		50	49.5	ug/L	99	(85-115)		
LCS2	Chromium Total ICAP/MS		50	49.2	ug/L	98	(85-115)	20	0.61
MBLK	Chromium Total ICAP/MS			<0.580	ug/L				

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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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Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Chromium Total ICAP/MS		1	0.991	ug/L	99	(50-150)		
MS_202204010165	Chromium Total ICAP/MS	ND	50	50.2	ug/L	100	(70-130)		
MS2_202204050267	Chromium Total ICAP/MS	2.1	50	49.3	ug/L	95	(70-130)		
MSD_202204010165	Chromium Total ICAP/MS	ND	50	50.4	ug/L	101	(70-130)	20	0.45
MSD2_202204050267	Chromium Total ICAP/MS	2.1	50	50.6	ug/L	97	(70-130)	20	2.5
LCS1	Copper Total ICAP/MS		50	50.9	ug/L	102	(85-115)		
LCS2	Copper Total ICAP/MS		50	50.7	ug/L	101	(85-115)	20	0.39
MBLK	Copper Total ICAP/MS			<1.343	ug/L				
MRL_CHK	Copper Total ICAP/MS		2	2.13	ug/L	107	(50-150)		
MS_202204010165	Copper Total ICAP/MS	ND	50	50.2	ug/L	100	(70-130)		
MS2_202204050267	Copper Total ICAP/MS	ND	50	47.4	ug/L	91	(70-130)		
MSD_202204010165	Copper Total ICAP/MS	ND	50	50.1	ug/L	100	(70-130)	20	0.30
MSD2_202204050267	Copper Total ICAP/MS	ND	50	48.9	ug/L	94	(70-130)	20	3.2
LCS1	Lead Total ICAP/MS		50	49.9	ug/L	100	(85-115)		
LCS2	Lead Total ICAP/MS		50	50.1	ug/L	100	(85-115)	20	0.40
MBLK	Lead Total ICAP/MS			<0.0608	ug/L				
MRL_CHK	Lead Total ICAP/MS		0.5	0.494	ug/L	99	(50-150)		
MS_202204010165	Lead Total ICAP/MS	ND	50	49.6	ug/L	99	(70-130)		
MS2_202204050267	Lead Total ICAP/MS	ND	50	47.0	ug/L	94	(70-130)		
MSD_202204010165	Lead Total ICAP/MS	ND	50	49.2	ug/L	98	(70-130)	20	0.81
MSD2_202204050267	Lead Total ICAP/MS	ND	50	47.5	ug/L	95	(70-130)	20	0.99
LCS1	Nickel Total ICAP/MS		50	49.6	ug/L	99	(85-115)		
LCS2	Nickel Total ICAP/MS		50	49.5	ug/L	99	(85-115)	20	0.20
MBLK	Nickel Total ICAP/MS			<0.4959	ug/L				
MRL_CHK	Nickel Total ICAP/MS		5	4.89	ug/L	98	(50-150)		
MS_202204010165	Nickel Total ICAP/MS	ND	50	50.2	ug/L	99	(70-130)		
MS2_202204050267	Nickel Total ICAP/MS	ND	50	46.3	ug/L	92	(70-130)		
MSD_202204010165	Nickel Total ICAP/MS	ND	50	50.3	ug/L	99	(70-130)	20	0.27
MSD2_202204050267	Nickel Total ICAP/MS	ND	50	47.5	ug/L	94	(70-130)	20	2.5
LCS1	Selenium Total ICAP/MS		50	51.6	ug/L	103	(85-115)		
LCS2	Selenium Total ICAP/MS		50	51.2	ug/L	102	(85-115)	20	0.78
MBLK	Selenium Total ICAP/MS			<0.6224	ug/L				
MRL_CHK	Selenium Total ICAP/MS		5	4.88	ug/L	98	(50-150)		
MS_202204010165	Selenium Total ICAP/MS	ND	50	51.2	ug/L	102	(70-130)		
MS2_202204050267	Selenium Total ICAP/MS	ND	50	50.8	ug/L	96	(70-130)		
MSD_202204010165	Selenium Total ICAP/MS	ND	50	51.7	ug/L	103	(70-130)	20	0.90
MSD2_202204050267	Selenium Total ICAP/MS	ND	50	52.4	ug/L	99	(70-130)	20	3.1
LCS1	Silver Total ICAP/MS		25	26.3	ug/L	105	(85-115)		

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Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	Silver Total ICAP/MS		25	26.1	ug/L	104	(85-115)	20	0.76
MBLK	Silver Total ICAP/MS			<0.1929	ug/L				
MRL_CHK	Silver Total ICAP/MS		0.5	0.469	ug/L	94	(50-150)		
MS_202204010165	Silver Total ICAP/MS	ND	25	25.8	ug/L	103	(70-130)		
MS2_202204050267	Silver Total ICAP/MS	ND	25	24.8	ug/L	99	(70-130)		
MSD_202204010165	Silver Total ICAP/MS	ND	25	26.2	ug/L	104	(70-130)	20	1.6
MSD2_202204050267	Silver Total ICAP/MS	ND	25	25.1	ug/L	100	(70-130)	20	1.1
LCS1	Thallium Total ICAP/MS		50	49.3	ug/L	99	(85-115)		
LCS2	Thallium Total ICAP/MS		50	49.1	ug/L	98	(85-115)	20	0.41
MBLK	Thallium Total ICAP/MS			<0.1449	ug/L				
MRL_CHK	Thallium Total ICAP/MS		1	0.981	ug/L	98	(50-150)		
MS_202204010165	Thallium Total ICAP/MS	ND	50	49.7	ug/L	99	(70-130)		
MS2_202204050267	Thallium Total ICAP/MS	ND	50	46.5	ug/L	93	(70-130)		
MSD_202204010165	Thallium Total ICAP/MS	ND	50	49.0	ug/L	98	(70-130)	20	1.5
MSD2_202204050267	Thallium Total ICAP/MS	ND	50	47.1	ug/L	94	(70-130)	20	1.3
LCS1	Zinc Total ICAP/MS		50	50.4	ug/L	101	(85-115)		
LCS2	Zinc Total ICAP/MS		50	53.7	ug/L	107	(85-115)	20	6.3
MBLK	Zinc Total ICAP/MS			<10.62	ug/L				
MRL_CHK	Zinc Total ICAP/MS		20	20.6	ug/L	103	(50-150)		
MS_202204010165	Zinc Total ICAP/MS	ND	50	51.0	ug/L	89	(70-130)		
MS2_202204050267	Zinc Total ICAP/MS	20	50	65.9	ug/L	91	(70-130)		
MSD_202204010165	Zinc Total ICAP/MS	ND	50	54.6	ug/L	96	(70-130)	20	6.9
MSD2_202204050267	Zinc Total ICAP/MS	20	50	68.0	ug/L	95	(70-130)	20	3.3
Mercury ICPMS by EPA 200.8									
Analytical Batch: 1398773						**Analysis Date: 04/08/2022**			
LCS1	Mercury ICPMS		0.75	0.767	ug/L	102	(85-115)		
LCS2	Mercury ICPMS		0.75	0.789	ug/L	105	(85-115)	20	2.8
MBLK	Mercury ICPMS			<0.1	ug/L				
MRL_CHK	Mercury ICPMS		0.2	0.213	ug/L	107	(50-150)		
MS2_202204050267	Mercury ICPMS	ND	0.75	0.759	ug/L	101	(70-130)		
MSD2_202204050267	Mercury ICPMS	ND	0.75	0.774	ug/L	103	(70-130)	20	2.0
Disinfection ByProducts by 300.0 by EPA 300.0									
Analytical Batch: 1399011						**Analysis Date: 04/07/2022**			
LCS1	Bromide		100	102	ug/L	103	(90-110)		
LCS2	Bromide		100	99.4	ug/L	99	(90-110)	10	3.6
MBLK	Bromide			<2.12	ug/L				
MRL_CHK	Bromide		5	5.63	ug/L	113	(50-150)		

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Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202203030147	Bromide	11	50	66.2	ug/L	110	(80-120)		
MS_202203310041	Bromide	ND	50	49.1	ug/L	98	(80-120)		
MSD_202203030147	Bromide	11	50	67.4	ug/L	112	(80-120)	15	1.7
MSD_202203310041	Bromide	ND	50	49.6	ug/L	99	(80-120)	15	1.0
Organochlorine Pesticides/PCBs by EPA 505									
Prep Batch: 1398866 Analytical Batch: 1399372						**Analysis Date: 04/07/2022**			
CCCH	Alachlor (Alanex)		1	0.917	ug/L	92	(70-130)		
CCCH	Alachlor (Alanex)		1	0.910	ug/L	91	(70-130)		
MBLK	Alachlor (Alanex)			<0.1	ug/L				
MRL_CHK	Alachlor (Alanex)		0.1	0.108	ug/L	108	(50-150)		
MS1_202203300162	Alachlor (Alanex)		0.2	0.200	ug/L	100	(65-135)		
MS2_202204040058	Alachlor (Alanex)	ND	1	0.923	ug/L	92	(65-135)		
CCCH	Aldrin		0.1	0.0949	ug/L	95	(70-130)		
CCCH	Aldrin		0.1	0.0949	ug/L	95	(70-130)		
MBLK	Aldrin			<0.01	ug/L				
MRL_CHK	Aldrin		0.01	0.0107	ug/L	107	(50-150)		
MS1_202203300162	Aldrin		0.02	0.0201	ug/L	100	(65-135)		
MS2_202204040058	Aldrin	ND	0.1	0.0973	ug/L	97	(65-135)		
CCCH	Chlordane		0.5	0.477	ug/L	95	(70-130)		
MBLK	Chlordane			<0.1	ug/L				
MRL_CHK	Chlordane		0.1	0.0972	ug/L	97	(50-150)		
MS2_202204040058	Chlordane	ND	0.5	0.470	ug/L	94	(65-135)		
CCCH	Dieldrin		0.1	0.101	ug/L	101	(70-130)		
CCCH	Dieldrin		0.1	0.102	ug/L	102	(70-130)		
MBLK	Dieldrin			<0.01	ug/L				
MRL_CHK	Dieldrin		0.01	0.0122	ug/L	122	(50-150)		
MS1_202203300162	Dieldrin		0.02	0.0237	ug/L	118	(65-135)		
MS2_202204040058	Dieldrin	ND	0.1	0.102	ug/L	102	(65-135)		
CCCH	Endrin		0.1	0.0965	ug/L	97	(70-130)		
CCCH	Endrin		0.1	0.0957	ug/L	96	(70-130)		
MBLK	Endrin			<0.01	ug/L				
MRL_CHK	Endrin		0.01	0.0126	ug/L	126	(50-150)		
MS1_202203300162	Endrin	ND	0.02	0.0227	ug/L	105	(65-135)		
MS2_202204040058	Endrin	ND	0.1	0.0972	ug/L	95	(65-135)		
CCCH	Heptachlor		0.1	0.0808	ug/L	81	(70-130)		
CCCH	Heptachlor		0.1	0.0789	ug/L	79	(70-130)		
MBLK	Heptachlor			<0.01	ug/L				

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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Heptachlor		0.01	0.00980	ug/L	98	(50-150)		
MS1_202203300162	Heptachlor		0.02	0.0183	ug/L	92	(65-135)		
MS2_202204040058	Heptachlor	ND	0.1	0.0796	ug/L	80	(65-135)		
CCCH	Heptachlor Epoxide		0.1	0.103	ug/L	103	(70-130)		
CCCH	Heptachlor Epoxide		0.1	0.102	ug/L	102	(70-130)		
MBLK	Heptachlor Epoxide			<0.01	ug/L				
MRL_CHK	Heptachlor Epoxide		0.01	0.0102	ug/L	102	(50-150)		
MS1_202203300162	Heptachlor Epoxide		0.02	0.0221	ug/L	111	(65-135)		
MS2_202204040058	Heptachlor Epoxide	ND	0.1	0.104	ug/L	104	(65-135)		
CCCH	Lindane (gamma-BHC)		0.1	0.0915	ug/L	92	(70-130)		
CCCH	Lindane (gamma-BHC)		0.1	0.0914	ug/L	91	(70-130)		
MBLK	Lindane (gamma-BHC)			<0.01	ug/L				
MRL_CHK	Lindane (gamma-BHC)		0.01	0.0102	ug/L	102	(50-150)		
MS1_202203300162	Lindane (gamma-BHC)	ND	0.02	0.0196	ug/L	98	(65-135)		
MS2_202204040058	Lindane (gamma-BHC)	ND	0.1	0.0920	ug/L	92	(65-135)		
CCCH	Methoxychlor		0.5	0.401	ug/L	80	(70-130)		
CCCH	Methoxychlor		0.5	0.379	ug/L	76	(70-130)		
MBLK	Methoxychlor			<0.05	ug/L				
MRL_CHK	Methoxychlor		0.05	0.0461	ug/L	92	(50-150)		
MS1_202203300162	Methoxychlor	ND	0.1	0.0760	ug/L	76	(65-135)		
MS2_202204040058	Methoxychlor	ND	0.5	0.428	ug/L	86	(65-135)		
MBLK	PCB 1016 Aroclor			<0.08	ug/L				
CCCH	PCB 1221 Aroclor		0.5	0.516	ug/L	103	(70-130)		
MBLK	PCB 1221 Aroclor			<0.1	ug/L				
MRL_CHK	PCB 1221 Aroclor		0.1	0.0998	ug/L	100	(50-150)		
MBLK	PCB 1232 Aroclor			<0.1	ug/L				
MS2_202204040058	PCB 1232 Aroclor	ND	0.5	0.519	ug/L	104	(65-135)		
MBLK	PCB 1242 Aroclor			<0.1	ug/L				
MBLK	PCB 1248 Aroclor			<0.1	ug/L				
MBLK	PCB 1254 Aroclor			<0.1	ug/L				
MBLK	PCB 1260 Aroclor			<0.1	ug/L				
CCCH	Tetrachlorometaxylene (S)			99.9	%	100	(70-130)		
CCCH	Tetrachlorometaxylene (S)			103	%	103	(70-130)		
MBLK	Tetrachlorometaxylene (S)			108	%	108	(70-130)		
MRL_CHK	Tetrachlorometaxylene (S)			98.9	%	99	(70-130)		
MS1_202203300162	Tetrachlorometaxylene (S)			103	%	103	(70-130)		
MS2_202204040058	Tetrachlorometaxylene (S)			98.2	%	98	(70-130)		
CCCH	Toxaphene		2.5	2.02	ug/L	81	(70-130)		

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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Toxaphene			<0.5	ug/L				
MRL_CHK	Toxaphene		0.5	0.429	ug/L	86	(50-150)		
MS1_202203300162	Toxaphene		2.5	1.86	ug/L	74	(65-135)		
EPA Method 504.1 by EPA 504.1									
Prep Batch: 1399650 Analytical Batch: 1399691						**Analysis Date: 04/09/2022**			
CCCH	1,2,3-Trichloropropane		1.3	1.19	ug/L	95	(70-130)		
CCCM2	1,2,3-Trichloropropane		0.25	0.264	ug/L	106	(70-130)		
DUP_202203310044	1,2,3-Trichloropropane	ND		ND	ug/L		(0-20)		
LCS2	1,2,3-Trichloropropane		0.2	0.204	ug/L	102	(70-130)		
MBLK	1,2,3-Trichloropropane			<0.0133	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.05	0.0548	ug/L	110	(60-140)		
MRLLW	1,2,3-Trichloropropane		0.04	0.0416	ug/L	104	(60-140)		
MS_202203310044	1,2,3-Trichloropropane	ND	1.3	1.24	ug/L	100	(65-135)		
CCCH	1,2-Dibromo-3-chloropropane		0.25	0.237	ug/L	95	(70-130)		
CCCM2	1,2-Dibromo-3-chloropropane		0.05	0.0514	ug/L	103	(70-130)		
DUP_202203310044	1,2-Dibromo-3-chloropropane	ND		ND	ug/L		(0-20)		
LCS2	1,2-Dibromo-3-chloropropane		0.2	0.198	ug/L	99	(70-130)		
MBLK	1,2-Dibromo-3-chloropropane			<0.002	ug/L				
MRL_CHK	1,2-Dibromo-3-chloropropane		0.01	0.0103	ug/L	103	(60-140)		
MS_202203310044	1,2-Dibromo-3-chloropropane	ND	0.25	0.248	ug/L	99	(65-135)		
CCCH	1,2-Dibromoethane		0.25	0.234	ug/L	93	(70-130)		
CCCM2	1,2-Dibromoethane		0.05	0.0538	ug/L	108	(70-130)		
DUP_202203310044	1,2-Dibromoethane	ND		ND	ug/L		(0-20)		
LCS2	1,2-Dibromoethane		0.2	0.194	ug/L	97	(70-130)		
MBLK	1,2-Dibromoethane			<0.003	ug/L				
MRL_CHK	1,2-Dibromoethane		0.01	0.0115	ug/L	115	(60-140)		
MS_202203310044	1,2-Dibromoethane	ND	0.25	0.249	ug/L	100	(65-135)		
CCCH	1,2-Dibromopropane (S)		100	100	%	100	(60-140)		
CCCM2	1,2-Dibromopropane (S)		100	95.1	%	95	(60-140)		
DUP_202203310044	1,2-Dibromopropane (S)		100	96.6	%	97	(60-140)		
LCS2	1,2-Dibromopropane (S)		100	94.9	%	95	(60-140)		
MBLK	1,2-Dibromopropane (S)			97.1	%	97	(60-140)		
MRL_CHK	1,2-Dibromopropane (S)		100	96.6	%	97	(60-140)		
MRLLW	1,2-Dibromopropane (S)		100	96.1	%	96	(60-140)		
MS_202203310044	1,2-Dibromopropane (S)		100	100	%	100	(60-140)		
Total Dissolved Solids (TDS) by E160.1/SM2540C									
Analytical Batch: 1399743						**Analysis Date: 04/10/2022**			

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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
DUP_202204040145	Total Dissolved Solid (TDS)	470		484	mg/L		(0-10)	10	2.9
DUP_202204040195	Total Dissolved Solid (TDS)	470		472	mg/L		(0-10)	10	0.43
LCS1	Total Dissolved Solid (TDS)		175	168	mg/L	96	(80-114)		
LCS2	Total Dissolved Solid (TDS)		700	692	mg/L	99	(80-114)		
MBLK	Total Dissolved Solid (TDS)			<5	mg/L				
MRL_CHK	Total Dissolved Solid (TDS)		10	9.00	mg/L	90	(50-150)		
Volatile Organics by GCMS by EPA 524.2									
Analytical Batch: 1400438						**Analysis Date: 04/12/2022**			
LCS1	1,1,1,2-Tetrachloroethane		5	4.83	ug/L	97	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	4.81	ug/L	96	(70-130)	20	0.42
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,1,2-Tetrachloroethane		0.5	0.440	ug/L	88	(50-150)		
LCS1	1,1,1-Trichloroethane		5	4.94	ug/L	99	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.93	ug/L	99	(70-130)	20	0.20
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,1-Trichloroethane		0.5	0.460	ug/L	92	(50-150)		
LCS1	1,1,2,2-Tetrachloroethane		5	5.53	ug/L	111	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	5.40	ug/L	108	(70-130)	20	2.4
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,2,2-Tetrachloroethane		0.5	0.530	ug/L	106	(50-150)		
LCS1	1,1,2-Trichloroethane		5	5.20	ug/L	104	(70-130)		
LCS2	1,1,2-Trichloroethane		5	5.21	ug/L	104	(70-130)	20	0.19
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,2-Trichloroethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	1,1-Dichloroethane		5	4.45	ug/L	89	(70-130)		
LCS2	1,1-Dichloroethane		5	4.48	ug/L	90	(70-130)	20	0.67
MBLK	1,1-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethane		0.5	0.460	ug/L	92	(50-150)		
LCS1	1,1-Dichloroethylene		5	4.64	ug/L	93	(70-130)		
LCS2	1,1-Dichloroethylene		5	4.55	ug/L	91	(70-130)	20	2.0
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethylene		0.5	0.440	ug/L	88	(50-150)		
LCS1	1,1-Dichloropropene		5	5.32	ug/L	106	(70-130)		
LCS2	1,1-Dichloropropene		5	5.41	ug/L	108	(70-130)	20	1.7
MBLK	1,1-Dichloropropene			<0.5	ug/L				
MRL_CHK	1,1-Dichloropropene		0.5	0.460	ug/L	92	(50-150)		
LCS1	1,2,3-Trichlorobenzene		5	5.46	ug/L	109	(70-130)		

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	1,2,3-Trichlorobenzene		5	5.63	ug/L	113	(70-130)	20	3.1
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,3-Trichlorobenzene		0.5	0.560	ug/L	112	(50-150)		
LCS1	1,2,3-Trichloropropane		5	5.20	ug/L	104	(70-130)		
LCS2	1,2,3-Trichloropropane		5	5.15	ug/L	103	(70-130)	20	0.97
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.5	0.560	ug/L	112	(50-150)		
LCS1	1,2,4-Trichlorobenzene		5	4.82	ug/L	96	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	5.08	ug/L	102	(70-130)	20	5.3
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trichlorobenzene		0.5	0.530	ug/L	106	(50-150)		
LCS1	1,2,4-Trimethylbenzene		5	4.54	ug/L	91	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	4.42	ug/L	88	(70-130)	20	2.7
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trimethylbenzene		0.5	0.380	ug/L	76	(50-150)		
LCS1	1,2-Dichloroethane		5	5.18	ug/L	104	(70-130)		
LCS2	1,2-Dichloroethane		5	5.29	ug/L	106	(70-130)	20	2.1
MBLK	1,2-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,2-Dichloroethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	1,2-Dichloroethane-d4 (S)		5	102	%	102	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)		5	104	%	104	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			108	%	108	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)		5	105	%	105	(70-130)		
MRLLW	1,2-Dichloroethane-d4 (S)		5	108	%	108	(70-130)		
LCS1	1,2-Dichloropropane		5	4.90	ug/L	98	(70-130)		
LCS2	1,2-Dichloropropane		5	4.83	ug/L	97	(70-130)	20	1.4
MBLK	1,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,2-Dichloropropane		0.5	0.510	ug/L	102	(50-150)		
LCS1	1,3,5-Trimethylbenzene		5	4.52	ug/L	90	(70-130)		
LCS2	1,3,5-Trimethylbenzene		5	4.38	ug/L	88	(70-130)	20	3.1
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,3,5-Trimethylbenzene		0.5	0.370	ug/L	74	(50-150)		
LCS1	1,3-Dichloropropane		5	5.29	ug/L	106	(70-130)		
LCS2	1,3-Dichloropropane		5	5.22	ug/L	104	(70-130)	20	1.3
MBLK	1,3-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,3-Dichloropropane		0.5	0.540	ug/L	108	(50-150)		
LCS1	2,2-Dichloropropane		5	4.26	ug/L	85	(70-130)		
LCS2	2,2-Dichloropropane		5	4.43	ug/L	89	(70-130)	20	3.9

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
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Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	2,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	2,2-Dichloropropane		0.5	0.420	ug/L	84	(50-150)		
LCS1	2-Butanone (MEK)		50	64.0	ug/L	128	(70-130)		
LCS2	2-Butanone (MEK)		50	66.9	ug/L	**134**	(70 130)	20	4 4
MBLK	2-Butanone (MEK)			<5.0	ug/L				
MRL_CHK	2-Butanone (MEK)		5	6.76	ug/L	135	(50-150)		
LCS1	2-Hexanone		50	69.1	ug/L	**138**	(70-130)		
LCS2	2-Hexanone		50	71.6	ug/L	**143**	(70-130)	20	3.5
MBLK	2-Hexanone			<5.0	ug/L				
MRL_CHK	2-Hexanone		5	6.58	ug/L	132	(50-150)		
LCS1	4-Bromofluorobenzene (S)		5	91.8	%	92	(70-130)		
LCS2	4-Bromofluorobenzene (S)		5	91.2	%	91	(70-130)		
MBLK	4-Bromofluorobenzene (S)			88.6	%	89	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)		5	88.6	%	89	(70-130)		
MRLLW	4-Bromofluorobenzene (S)		5	91.6	%	92	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	65.3	ug/L	**131**	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	66.3	ug/L	**133**	(70-130)	20	1.5
MBLK	4-Methyl-2-Pentanone (MIBK)			<5.0	ug/L				
MRL_CHK	4-Methyl-2-Pentanone (MIBK)		5	6.13	ug/L	123	(50-150)		
LCS1	Acetone		50	53.5	ug/L	107	(70-130)		
LCS2	Acetone		50	55.6	ug/L	111	(70-130)	20	4.0
MBLK	Acetone			<10	ug/L				
MRL_CHK	Acetone		5	6.64	ug/L	133	(50-150)		
LCS1	Benzene		5	5.01	ug/L	100	(70-130)		
LCS2	Benzene		5	4.98	ug/L	100	(70-130)	20	0.60
MBLK	Benzene			<0.5	ug/L				
MRL_CHK	Benzene		0.5	0.470	ug/L	94	(50-150)		
LCS1	Bromobenzene		5	4.39	ug/L	88	(70-130)		
LCS2	Bromobenzene		5	4.25	ug/L	85	(70-130)	20	3.2
MBLK	Bromobenzene			<0.5	ug/L				
MRL_CHK	Bromobenzene		0.5	0.410	ug/L	82	(50-150)		
LCS1	Bromochloromethane		5	4.86	ug/L	97	(70-130)		
LCS2	Bromochloromethane		5	4.99	ug/L	100	(70-130)	20	2.6
MBLK	Bromochloromethane			<0.5	ug/L				
MRL_CHK	Bromochloromethane		0.5	0.470	ug/L	94	(50-150)		
LCS1	Bromodichloromethane		5	5.00	ug/L	100	(70-130)		
LCS2	Bromodichloromethane		5	4.90	ug/L	98	(70-130)	20	2.0
MBLK	Bromodichloromethane			<0.5	ug/L				

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Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Bromodichloromethane		0.5	0.460	ug/L	92	(50-150)		
LCS1	Bromoethane		5	4.57	ug/L	91	(70-130)		
LCS2	Bromoethane		5	4.55	ug/L	91	(70-130)	20	0.44
MBLK	Bromoethane			<0.5	ug/L				
MRL_CHK	Bromoethane		0.5	0.430	ug/L	86	(50-150)		
LCS1	Bromoform		5	5.04	ug/L	101	(70-130)		
LCS2	Bromoform		5	4.98	ug/L	100	(70-130)	20	1.2
MBLK	Bromoform			<0.5	ug/L				
MRL_CHK	Bromoform		0.5	0.420	ug/L	84	(50-150)		
LCS1	Bromomethane (Methyl Bromide)		5	4.09	ug/L	82	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	3.88	ug/L	78	(70-130)	20	5.3
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
MRL_CHK	Bromomethane (Methyl Bromide)		0.5	0.430	ug/L	86	(50-150)		
LCS1	Carbon disulfide		5	4.20	ug/L	84	(70-130)		
LCS2	Carbon disulfide		5	4.12	ug/L	82	(70-130)	20	1.9
MBLK	Carbon disulfide			<0.5	ug/L				
MRL_CHK	Carbon disulfide		0.5	0.360	ug/L	72	(50-150)		
LCS1	Carbon Tetrachloride		5	5.10	ug/L	102	(70-130)		
LCS2	Carbon Tetrachloride		5	5.18	ug/L	104	(70-130)	20	1.6
MBLK	Carbon Tetrachloride			<0.5	ug/L				
MRL_CHK	Carbon Tetrachloride		0.5	0.450	ug/L	90	(50-150)		
LCS1	Chlorobenzene		5	5.05	ug/L	101	(70-130)		
LCS2	Chlorobenzene		5	5.01	ug/L	100	(70-130)	20	0.80
MBLK	Chlorobenzene			<0.5	ug/L				
MRL_CHK	Chlorobenzene		0.5	0.470	ug/L	94	(50-150)		
LCS1	Chlorodibromomethane		5	4.79	ug/L	96	(70-130)		
LCS2	Chlorodibromomethane		5	4.73	ug/L	95	(70-130)	20	1.3
MBLK	Chlorodibromomethane			<0.5	ug/L				
MRL_CHK	Chlorodibromomethane		0.5	0.410	ug/L	82	(50-150)		
LCS1	Chloroethane		5	4.46	ug/L	89	(70-130)		
LCS2	Chloroethane		5	4.47	ug/L	89	(70-130)	20	0.22
MBLK	Chloroethane			<0.5	ug/L				
MRL_CHK	Chloroethane		0.5	0.440	ug/L	88	(50-150)		
LCS1	Chloroform (Trichloromethane)		5	4.79	ug/L	96	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	4.91	ug/L	98	(70-130)	20	2.5
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
MRL_CHK	Chloroform (Trichloromethane)		0.5	0.490	ug/L	98	(50-150)		
LCS1	Chloromethane(Methyl Chloride)		5	3.67	ug/L	73	(70-130)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
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Report: 996776
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	Chloromethane(Methyl Chloride)		5	3.90	ug/L	78	(70-130)	20	6.1
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
MRL_CHK	Chloromethane(Methyl Chloride)		0.5	0.480	ug/L	96	(50-150)		
LCS1	cis-1,2-Dichloroethylene		5	4.92	ug/L	98	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	4.88	ug/L	98	(70-130)	20	0.82
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	cis-1,2-Dichloroethylene		0.5	0.480	ug/L	96	(50-150)		
LCS1	cis-1,3-Dichloropropene		5	4.63	ug/L	93	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	4.59	ug/L	92	(70-130)	20	0.87
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	cis-1,3-Dichloropropene		0.5	0.460	ug/L	92	(50-150)		
LCS1	Dibromomethane		5	5.19	ug/L	104	(70-130)		
LCS2	Dibromomethane		5	5.20	ug/L	104	(70-130)	20	0.19
MBLK	Dibromomethane			<0.5	ug/L				
MRL_CHK	Dibromomethane		0.5	0.520	ug/L	104	(50-150)		
LCS1	Dichlorodifluoromethane		5	4.25	ug/L	85	(70-130)		
LCS2	Dichlorodifluoromethane		5	4.49	ug/L	90	(70-130)	20	5.5
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
MRL_CHK	Dichlorodifluoromethane		0.5	0.450	ug/L	90	(50-150)		
LCS1	Dichloromethane		5	4.45	ug/L	89	(70-130)		
LCS2	Dichloromethane		5	4.61	ug/L	92	(70-130)	20	3.5
MBLK	Dichloromethane			<0.5	ug/L				
MRL_CHK	Dichloromethane		0.5	0.600	ug/L	120	(50-150)		
LCS1	Di-isopropyl ether		5	4.26	ug/L	85	(70-130)		
LCS2	Di-isopropyl ether		5	4.31	ug/L	86	(70-130)	20	1.2
MBLK	Di-isopropyl ether			<3.0	ug/L				
MRL_CHK	Di-isopropyl ether		0.5	0.420	ug/L	84	(50-150)		
LCS1	Ethyl benzene		5	4.98	ug/L	100	(70-130)		
LCS2	Ethyl benzene		5	4.98	ug/L	100	(70-130)	20	0.0
MBLK	Ethyl benzene			<0.5	ug/L				
MRL_CHK	Ethyl benzene		0.5	0.450	ug/L	90	(50-150)		
LCS1	Hexachlorobutadiene		5	5.00	ug/L	100	(70-130)		
LCS2	Hexachlorobutadiene		5	5.10	ug/L	102	(70-130)	20	2.0
MBLK	Hexachlorobutadiene			<0.5	ug/L				
MRL_CHK	Hexachlorobutadiene		0.5	0.470	ug/L	94	(50-150)		
LCS1	Isopropylbenzene		5	4.63	ug/L	93	(70-130)		
LCS2	Isopropylbenzene		5	4.47	ug/L	89	(70-130)	20	3.5
MBLK	Isopropylbenzene			<0.5	ug/L				

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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Isopropylbenzene		0.5	0.380	ug/L	76	(50-150)		
LCS1	m,p-Xylenes		10	9.90	ug/L	99	(70-130)		
LCS2	m,p-Xylenes		10	9.90	ug/L	99	(70-130)	20	0.0
MBLK	m,p-Xylenes			<0.5	ug/L				
MRL_CHK	m,p-Xylenes		1	0.880	ug/L	88	(50-150)		
MRLLW	m,p-Xylenes		0.5	0.450	ug/L	90	(50-150)		
LCS1	m-Dichlorobenzene (1,3-DCB)		5	4.46	ug/L	89	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	4.32	ug/L	86	(70-130)	20	3.2
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
MRL_CHK	m-Dichlorobenzene (1,3-DCB)		0.5	0.420	ug/L	84	(50-150)		
LCS1	Methyl Tert-butyl ether (MTBE)		5	4.99	ug/L	100	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	5.05	ug/L	101	(70-130)	20	1.2
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
MRL_CHK	Methyl Tert-butyl ether (MTBE)		0.5	0.510	ug/L	102	(50-150)		
LCS1	Naphthalene		5	5.90	ug/L	118	(70-130)		
LCS2	Naphthalene		5	6.25	ug/L	125	(70-130)	20	5.8
MBLK	Naphthalene			<0.5	ug/L				
MRL_CHK	Naphthalene		0.5	0.610	ug/L	122	(50-150)		
LCS1	n-Butylbenzene		5	4.87	ug/L	97	(70-130)		
LCS2	n-Butylbenzene		5	4.84	ug/L	97	(70-130)	20	0.62
MBLK	n-Butylbenzene			<0.5	ug/L				
MRL_CHK	n-Butylbenzene		0.5	0.450	ug/L	90	(50-150)		
LCS1	n-Propylbenzene		5	4.53	ug/L	91	(70-130)		
LCS2	n-Propylbenzene		5	4.40	ug/L	88	(70-130)	20	2.9
MBLK	n-Propylbenzene			<0.5	ug/L				
MRL_CHK	n-Propylbenzene		0.5	0.390	ug/L	78	(50-150)		
LCS1	o-Chlorotoluene		5	4.39	ug/L	88	(70-130)		
LCS2	o-Chlorotoluene		5	4.33	ug/L	87	(70-130)	20	1.4
MBLK	o-Chlorotoluene			<0.5	ug/L				
MRL_CHK	o-Chlorotoluene		0.5	0.390	ug/L	78	(50-150)		
LCS1	o-Dichlorobenzene (1,2-DCB)		5	4.84	ug/L	97	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	4.85	ug/L	97	(70-130)	20	0.21
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
MRL_CHK	o-Dichlorobenzene (1,2-DCB)		0.5	0.490	ug/L	98	(50-150)		
LCS1	o-Xylene		5	4.83	ug/L	97	(70-130)		
LCS2	o-Xylene		5	4.76	ug/L	95	(70-130)	20	1.5
MBLK	o-Xylene			<0.5	ug/L				
MRL_CHK	o-Xylene		0.5	0.430	ug/L	86	(50-150)		

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	p-Chlorotoluene		5	4.57	ug/L	91	(70-130)		
LCS2	p-Chlorotoluene		5	4.41	ug/L	88	(70-130)	20	3.6
MBLK	p-Chlorotoluene			<0.5	ug/L				
MRL_CHK	p-Chlorotoluene		0.5	0.400	ug/L	80	(50-150)		
LCS1	p-Dichlorobenzene (1,4-DCB)		5	4.40	ug/L	88	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	4.29	ug/L	86	(70-130)	20	2.5
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				
MRL_CHK	p-Dichlorobenzene (1,4-DCB)		0.5	0.410	ug/L	82	(50-150)		
LCS1	p-Isopropyltoluene		5	4.66	ug/L	93	(70-130)		
LCS2	p-Isopropyltoluene		5	4.56	ug/L	91	(70-130)	20	2.2
MBLK	p-Isopropyltoluene			<0.5	ug/L				
MRL_CHK	p-Isopropyltoluene		0.5	0.370	ug/L	74	(50-150)		
LCS1	sec-Butylbenzene		5	4.70	ug/L	94	(70-130)		
LCS2	sec-Butylbenzene		5	4.56	ug/L	91	(70-130)	20	3.0
MBLK	sec-Butylbenzene			<0.5	ug/L				
MRL_CHK	sec-Butylbenzene		0.5	0.380	ug/L	76	(50-150)		
LCS1	Styrene		5	4.71	ug/L	94	(70-130)		
LCS2	Styrene		5	4.66	ug/L	93	(70-130)	20	1.1
MBLK	Styrene			<0.5	ug/L				
MRL_CHK	Styrene		0.5	0.430	ug/L	86	(50-150)		
LCS1	tert-amyl Methyl Ether		5	5.22	ug/L	104	(70-130)		
LCS2	tert-amyl Methyl Ether		5	5.39	ug/L	108	(70-130)	20	3.2
MBLK	tert-amyl Methyl Ether			<3.0	ug/L				
MRL_CHK	tert-amyl Methyl Ether		0.5	0.490	ug/L	98	(50-150)		
LCS1	tert-Butyl Ethyl Ether		5	4.51	ug/L	90	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	4.71	ug/L	94	(70-130)	20	4.3
MBLK	tert-Butyl Ethyl Ether			<3.0	ug/L				
MRL_CHK	tert-Butyl Ethyl Ether		0.5	0.440	ug/L	88	(50-150)		
LCS1	tert-Butylbenzene		5	4.58	ug/L	92	(70-130)		
LCS2	tert-Butylbenzene		5	4.40	ug/L	88	(70-130)	20	4.0
MBLK	tert-Butylbenzene			<0.5	ug/L				
MRL_CHK	tert-Butylbenzene		0.5	0.390	ug/L	78	(50-150)		
LCS1	Tetrachloroethylene (PCE)		5	5.04	ug/L	101	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.89	ug/L	98	(70-130)	20	3.0
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
MRL_CHK	Tetrachloroethylene (PCE)		0.5	0.470	ug/L	94	(50-150)		
LCS1	Toluene		5	4.96	ug/L	99	(70-130)		
LCS2	Toluene		5	4.85	ug/L	97	(70-130)	20	2.2

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Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Toluene			<0.5	ug/L				
MRL_CHK	Toluene		0.5	0.470	ug/L	94	(50-150)		
LCS1	Toluene-d8 (S)		5	101	%	101	(70-130)		
LCS2	Toluene-d8 (S)		5	97.8	%	98	(70-130)		
MBLK	Toluene-d8 (S)			94.8	%	95	(70-130)		
MRL_CHK	Toluene-d8 (S)		5	98.2	%	98	(70-130)		
MRLLW	Toluene-d8 (S)		5	97.2	%	97	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.53	ug/L	91	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	4.57	ug/L	91	(70-130)	20	0.88
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	trans-1,2-Dichloroethylene		0.5	0.460	ug/L	92	(50-150)		
LCS1	trans-1,3-Dichloropropene		5	4.86	ug/L	97	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	4.66	ug/L	93	(70-130)	20	4.2
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	trans-1,3-Dichloropropene		0.5	0.440	ug/L	88	(50-150)		
LCS1	Trichloroethylene (TCE)		5	5.09	ug/L	102	(70-130)		
LCS2	Trichloroethylene (TCE)		5	5.06	ug/L	101	(70-130)	20	0.59
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
MRL_CHK	Trichloroethylene (TCE)		0.5	0.490	ug/L	98	(50-150)		
LCS1	Trichlorofluoromethane		5	4.48	ug/L	90	(70-130)		
LCS2	Trichlorofluoromethane		5	4.61	ug/L	92	(70-130)	20	2.9
MBLK	Trichlorofluoromethane			<0.5	ug/L				
MRL_CHK	Trichlorofluoromethane		0.5	0.470	ug/L	94	(50-150)		
LCS1	Trichlorotrifluoroethane(Freon		5	5.47	ug/L	109	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon		5	5.55	ug/L	111	(70-130)	20	1.5
MBLK	Trichlorotrifluoroethane(Freon			<0.5	ug/L				
MRL_CHK	Trichlorotrifluoroethane(Freon		0.5	0.430	ug/L	86	(50-150)		
LCS1	Vinyl chloride (VC)		5	4.27	ug/L	85	(70-130)		
LCS2	Vinyl chloride (VC)		5	4.26	ug/L	85	(70-130)	20	0.23
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
MRL_CHK	Vinyl chloride (VC)		0.5	0.440	ug/L	88	(50-150)		
MRLLW	Vinyl chloride (VC)		0.25	0.220	ug/L	88	(50-150)		

TBA by EPA 524.2 Modified by EPA 524.2 SIM

Analytical Batch: 1400476 **Analysis Date: 04/13/2022**

LCS1	1,2-Dichloroethane-d4 (S)			118	%	118	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			120	%	120	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			118	%	118	(70-130)		

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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	1,2-Dichloroethane-d4 (S)			120	%	120	(70-130)		
LCS1	4-Bromofluorobenzene (S)			90.0	%	90	(70-130)		
LCS2	4-Bromofluorobenzene (S)			92.0	%	92	(70-130)		
MBLK	4-Bromofluorobenzene (S)			90.0	%	90	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			90.0	%	90	(70-130)		
LCS1	t-Butyl Alcohol		5	5.73	ug/L	115	(70-130)		
LCS2	t-Butyl Alcohol		5	5.84	ug/L	117	(70-130)	20	1.9
MBLK	t-Butyl Alcohol			<2	ug/L				
MRL_CHK	t-Butyl Alcohol		2	2.46	ug/L	123	(50-150)		
LCS1	Toluene-d8 (S)			98.0	%	98	(70-130)		
LCS2	Toluene-d8 (S)			100	%	100	(70-130)		
MBLK	Toluene-d8 (S)			98.0	%	98	(70-130)		
MRL_CHK	Toluene-d8 (S)			98.0	%	98	(70-130)		
Alkalinity in CaCO3 units by SM 2320B									
Analytical Batch: 1401219						**Analysis Date: 04/13/2022**			
LCS1	Alkalinity in CaCO3 units		100	97.5	mg/L	98	(90-110)		
LCS2	Alkalinity in CaCO3 units		100	98.1	mg/L	98	(90-110)	20	0.61
MBLK	Alkalinity in CaCO3 units			<1	mg/L				
MRL_CHK	Alkalinity in CaCO3 units		2	2.20	mg/L	110	(50-150)		
MS_202204040138	Alkalinity in CaCO3 units	210	100	242	mg/L	**35**	(80-120)		
MS_202204050267	Alkalinity in CaCO3 units	79	100	175	mg/L	96	(80-120)		
MSD_202204040138	Alkalinity in CaCO3 units	210	100	245	mg/L	**38**	(80-120)	20	1.3
MSD_202204050267	Alkalinity in CaCO3 units	79	100	174	mg/L	95	(80-120)	20	0.60
PH (H3=past HT not compliant) by SM4500-HB									
Analytical Batch: 1401222						**Analysis Date: 04/13/2022**			
DUP_202204050267	PH (H3=past HT not compliant)	7.8		7.79	Units		(0-20)	20	0.52
LCS1	PH (H3=past HT not compliant)		6	5.99	Units	100	(98-102)		
LCS2	PH (H3=past HT not compliant)		6	5.99	Units	100	(98-102)	20	0.0
Specific Conductance by SM2510B									
Analytical Batch: 1401231						**Analysis Date: 04/13/2022**			
DUP1_202204040138	Specific Conductance	790		789	umho/cm		(0-20)	20	0.24
DUP1_202204050267	Specific Conductance	780		776	umho/cm		(0-20)	20	0.32
LCS1	Specific Conductance		1000	978	umho/cm	98	(90-110)		
LCS2	Specific Conductance		1000	973	umho/cm	97	(90-110)	20	0.51
MBLK	Specific Conductance			<1	umho/cm				
MRL_CHK	Specific Conductance		1.8	1.90	umho/cm	106	(50-150)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
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Report: 996776
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
Fluoride by SM 4500F-C									
Analytical Batch: 1401745						**Analysis Date: 04/18/2022**			
LCS1	Fluoride		1	0.979	mg/L	98	(90-110)		
LCS2	Fluoride		1	0.978	mg/L	98	(90-110)	20	0.10
MBLK	Fluoride			<0.025	mg/L				
MRL CHK	Fluoride		0 05	0 0473	mg/L	95	(50 150)		
MS_202204050833	Fluoride	0.69	1	1.67	mg/L	99	(80-120)		
MS_202204050894	Fluoride	0.48	1	1.47	mg/L	99	(80-120)		
MSD_202204050833	Fluoride	0.69	1	1.65	mg/L	97	(80-120)	20	1.4
MSD_202204050894	Fluoride	0.48	1	1.46	mg/L	98	(80-120)	20	0.83
Semivolatiles by GCMS by EPA 525.2									
Prep Batch: 1401158 Analytical Batch: 1403114						**Analysis Date: 04/20/2022**			
DUP_202204130072	1,3-Dimethyl-2-nitrobenzene (S)			103	%	103	(70-130)		
LCS1	1,3-Dimethyl-2-nitrobenzene (S)		5	103	%	103	(70-130)		
LCS2	1,3-Dimethyl-2-nitrobenzene (S)		5	97.2	%	97	(70-130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)			103	%	103	(70-130)		
MRL_CHK	1,3-Dimethyl-2-nitrobenzene (S)		5	105	%	105	(70-130)		
MS_202204121160	1,3-Dimethyl-2-nitrobenzene (S)		5	97.5	%	97	(70-130)		
DUP_202204130072	1-Methylnaphthalene			ND	ug/L		(0-20)		
LCS1	1-Methylnaphthalene		2	2.09	ug/L	105	(70-130)		
LCS2	1-Methylnaphthalene		2	2.06	ug/L	103	(70-130)	20	1.5
MBLK	1-Methylnaphthalene			<0.1	ug/L				
MRL_CHK	1-Methylnaphthalene		0.1	0.104	ug/L	104	(50-150)		
MS_202204121160	1-Methylnaphthalene		2	2.09	ug/L	104	(70-130)		
DUP_202204130072	2,4-DDD			ND	ug/L		(0-20)		
LCS1	2,4-DDD		2	2.10	ug/L	105	(70-130)		
LCS2	2,4-DDD		2	2.08	ug/L	104	(70-130)	20	0.48
MBLK	2,4-DDD			<0.1	ug/L				
MRL_CHK	2,4-DDD		0.1	0.134	ug/L	134	(50-150)		
MS_202204121160	2,4-DDD		2	1.89	ug/L	94	(70-130)		
DUP_202204130072	2,4-DDE			ND	ug/L		(0-20)		
LCS1	2,4-DDE		2	2.20	ug/L	110	(70-130)		
LCS2	2,4-DDE		2	2.23	ug/L	111	(70-130)	20	1.4
MBLK	2,4-DDE			<0.1	ug/L				
MRL_CHK	2,4-DDE		0.1	0.102	ug/L	102	(50-150)		
MS_202204121160	2,4-DDE		2	1.86	ug/L	93	(70-130)		
DUP_202204130072	2,4-DDT			ND	ug/L		(0-20)		

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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	2,4-DDT		2	2.27	ug/L	113	(70-130)		
LCS2	2,4-DDT		2	2.31	ug/L	115	(70-130)	20	1.8
MBLK	2,4-DDT			<0.1	ug/L				
MRL_CHK	2,4-DDT		0.1	0.0980	ug/L	98	(50-150)		
MS_202204121160	2,4-DDT		2	1.89	ug/L	95	(70-130)		
DUP_202204130072	2,4-Dinitrotoluene			ND	ug/L		(0-20)		
LCS1	2,4-Dinitrotoluene		2	2.14	ug/L	107	(70-130)		
LCS2	2,4-Dinitrotoluene		2	2.27	ug/L	113	(70-130)	20	5.9
MBLK	2,4-Dinitrotoluene			<0.1	ug/L				
MRL_CHK	2,4-Dinitrotoluene		0.1	0.112	ug/L	112	(50-150)		
MS_202204121160	2,4-Dinitrotoluene		2	2.54	ug/L	127	(70-130)		
DUP_202204130072	2,6-Dinitrotoluene			ND	ug/L		(0-20)		
LCS1	2,6-Dinitrotoluene		2	1.92	ug/L	96	(70-130)		
LCS2	2,6-Dinitrotoluene		2	1.96	ug/L	98	(70-130)	20	2.1
MBLK	2,6-Dinitrotoluene			<0.1	ug/L				
MRL_CHK	2,6-Dinitrotoluene		0.1	0.106	ug/L	106	(50-150)		
MS_202204121160	2,6-Dinitrotoluene		2	2.28	ug/L	114	(70-130)		
DUP_202204130072	2-methylnaphthalene			ND	ug/L		(0-20)		
LCS1	2-methylnaphthalene		2	2.15	ug/L	108	(70-130)		
LCS2	2-methylnaphthalene		2	2.10	ug/L	105	(70-130)	20	2.4
MBLK	2-methylnaphthalene			<0.1	ug/L				
MRL_CHK	2-methylnaphthalene		0.1	0.104	ug/L	104	(50-150)		
MS_202204121160	2-methylnaphthalene		2	2.12	ug/L	106	(70-130)		
DUP_202204130072	4,4-DDD			ND	ug/L		(0-20)		
LCS1	4,4-DDD		2	2.35	ug/L	118	(70-130)		
LCS2	4,4-DDD		2	2.34	ug/L	117	(70-130)	20	0.43
MBLK	4,4-DDD			<0.1	ug/L				
MRL_CHK	4,4-DDD		0.1	0.115	ug/L	115	(50-150)		
MS_202204121160	4,4-DDD		2	2.07	ug/L	103	(70-130)		
DUP_202204130072	4,4-DDE			ND	ug/L		(0-20)		
LCS1	4,4-DDE		2	2.27	ug/L	113	(70-130)		
LCS2	4,4-DDE		2	2.26	ug/L	113	(70-130)	20	0.44
MBLK	4,4-DDE			<0.1	ug/L				
MRL_CHK	4,4-DDE		0.1	0.103	ug/L	103	(50-150)		
MS_202204121160	4,4-DDE		2	1.80	ug/L	90	(70-130)		
DUP_202204130072	4,4-DDT			ND	ug/L		(0-20)		
LCS1	4,4-DDT		2	2.22	ug/L	111	(70-130)		
LCS2	4,4-DDT		2	2.30	ug/L	115	(70-130)	20	4.0

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	4,4-DDT			<0.1	ug/L				
MRL_CHK	4,4-DDT		0.1	0.0980	ug/L	98	(50-150)		
MS_202204121160	4,4-DDT		2	1.88	ug/L	94	(70-130)		
DUP_202204130072	Acenaphthene			ND	ug/L		(0-20)		
LCS1	Acenaphthene		2	2.05	ug/L	102	(70-130)		
LCS2	Acenaphthene		2	2.09	ug/L	104	(70-130)	20	1.9
MBLK	Acenaphthene			<0.1	ug/L				
MRL_CHK	Acenaphthene		0.1	0.0940	ug/L	94	(50-150)		
MS_202204121160	Acenaphthene		2	2.07	ug/L	103	(70-130)		
DUP_202204130072	Acenaphthene-d10 (I)			89.3	%	89	(50-150)		
LCS1	Acenaphthene-d10 (I)		5	68.0	%	68	(50-150)		
LCS2	Acenaphthene-d10 (I)		5	85.2	%	85	(50-150)		
MBLK	Acenaphthene-d10 (I)			91.5	%	92	(50-150)		
MRL_CHK	Acenaphthene-d10 (I)		5	88.9	%	89	(50-150)		
MS_202204121160	Acenaphthene-d10 (I)		5	93.5	%	94	(50-150)		
DUP_202204130072	Acenaphthylene			ND	ug/L		(0-20)		
LCS1	Acenaphthylene		2	2.08	ug/L	104	(70-130)		
LCS2	Acenaphthylene		2	2.13	ug/L	107	(70-130)	20	2.4
MBLK	Acenaphthylene			<0.1	ug/L				
MRL_CHK	Acenaphthylene		0.1	0.0860	ug/L	86	(50-150)		
MS_202204121160	Acenaphthylene		2	2.17	ug/L	109	(70-130)		
DUP_202204130072	Acetochlor			ND	ug/L		(0-20)		
LCS1	Acetochlor		2	2.26	ug/L	113	(70-130)		
LCS2	Acetochlor		2	2.24	ug/L	112	(70-130)	20	0.89
MBLK	Acetochlor			<0.1	ug/L				
MRL_CHK	Acetochlor		0.05	0.0440	ug/L	88	(50-150)		
MS_202204121160	Acetochlor		2	2.24	ug/L	112	(70-130)		
DUP_202204130072	Alachlor			ND	ug/L		(0-20)		
LCS1	Alachlor		2	2.29	ug/L	115	(70-130)		
LCS2	Alachlor		2	2.24	ug/L	112	(70-130)	20	2.2
MBLK	Alachlor			<0.05	ug/L				
MRL_CHK	Alachlor		0.05	0.0670	ug/L	134	(50-150)		
MS_202204121160	Alachlor		2	2.23	ug/L	111	(70-130)		
DUP_202204130072	Alpha-BHC			ND	ug/L		(0-20)		
LCS1	Alpha-BHC		2	2.21	ug/L	111	(70-130)		
LCS2	Alpha-BHC		2	2.25	ug/L	113	(70-130)	20	1.8
MBLK	Alpha-BHC			<0.1	ug/L				
MRL_CHK	Alpha-BHC		0.1	0.109	ug/L	109	(50-150)		

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
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Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202204121160	Alpha-BHC		2	2.23	ug/L	112	(70-130)		
DUP_202204130072	alpha-Chlordane			ND	ug/L		(0-20)		
LCS1	alpha-Chlordane		2	2.15	ug/L	108	(70-130)		
LCS2	alpha-Chlordane		2	2.16	ug/L	108	(70-130)	20	0.46
MBLK	alpha-Chlordane			<0.05	ug/L				
MRL_CHK	alpha-Chlordane		0.05	0.0550	ug/L	110	(50-150)		
MS_202204121160	alpha-Chlordane		2	1.93	ug/L	97	(70-130)		
DUP_202204130072	Anthracene			ND	ug/L		(0-20)		
LCS1	Anthracene		2	2.12	ug/L	106	(70-130)		
LCS2	Anthracene		2	2.21	ug/L	110	(70-130)	20	4.2
MBLK	Anthracene			<0.02	ug/L				
MRL_CHK	Anthracene		0.02	0.0200	ug/L	100	(50-150)		
MS_202204121160	Anthracene		2	2.21	ug/L	110	(70-130)		
DUP_202204130072	Atrazine	ND		ND	ug/L		(0-20)		
LCS1	Atrazine		2	2.20	ug/L	110	(70-130)		
LCS2	Atrazine		2	2.40	ug/L	120	(70-130)	20	9.1
MBLK	Atrazine			<0.05	ug/L				
MRL_CHK	Atrazine		0.05	0.0590	ug/L	118	(50-150)		
MS_202204121160	Atrazine	ND	2	1.96	ug/L	98	(70-130)		
DUP_202204130072	Benz(a)Anthracene			ND	ug/L		(0-20)		
LCS1	Benz(a)Anthracene		2	2.10	ug/L	105	(70-130)		
LCS2	Benz(a)Anthracene		2	2.26	ug/L	113	(70-130)	20	7.3
MBLK	Benz(a)Anthracene			<0.05	ug/L				
MRL_CHK	Benz(a)Anthracene		0.05	0.0520	ug/L	104	(50-150)		
MS_202204121160	Benz(a)Anthracene		2	1.88	ug/L	94	(70-130)		
DUP_202204130072	Benzo(a)pyrene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(a)pyrene		2	2.22	ug/L	111	(70-130)		
LCS2	Benzo(a)pyrene		2	2.17	ug/L	109	(70-130)	20	2.3
MBLK	Benzo(a)pyrene			<0.02	ug/L				
MRL_CHK	Benzo(a)pyrene		0.02	0.0180	ug/L	90	(50-150)		
MS_202204121160	Benzo(a)pyrene	ND	2	1.60	ug/L	80	(70-130)		
DUP_202204130072	Benzo(b)Fluoranthene			ND	ug/L		(0-20)		
LCS1	Benzo(b)Fluoranthene		2	2.35	ug/L	117	(70-130)		
LCS2	Benzo(b)Fluoranthene		2	2.31	ug/L	115	(70-130)	20	1.7
MBLK	Benzo(b)Fluoranthene			<0.02	ug/L				
MRL_CHK	Benzo(b)Fluoranthene		0.02	0.0210	ug/L	105	(50-150)		
MS_202204121160	Benzo(b)Fluoranthene		2	1.81	ug/L	90	(70-130)		
DUP_202204130072	Benzo(g,h,i)Perylene			ND	ug/L		(0-20)		

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Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Benzo(g,h,i)Perylene		2	2.52	ug/L	126	(70-130)		
LCS2	Benzo(g,h,i)Perylene		2	2.36	ug/L	118	(70-130)	20	6.1
MBLK	Benzo(g,h,i)Perylene			<0.05	ug/L				
MRL_CHK	Benzo(g,h,i)Perylene		0.05	0.0510	ug/L	102	(50-150)		
MS_202204121160	Benzo(g,h,i)Perylene		2	1.35	ug/L	**68**	(70-130)		
DUP_202204130072	Benzo(k)Fluoranthene			ND	ug/L		(0-20)		
LCS1	Benzo(k)Fluoranthene		2	2.40	ug/L	120	(70-130)		
LCS2	Benzo(k)Fluoranthene		2	2.32	ug/L	116	(70-130)	20	3.4
MBLK	Benzo(k)Fluoranthene			<0.02	ug/L				
MRL_CHK	Benzo(k)Fluoranthene		0.02	0.0190	ug/L	95	(50-150)		
MS_202204121160	Benzo(k)Fluoranthene		2	1.80	ug/L	90	(70-130)		
DUP_202204130072	Beta-BHC			ND	ug/L		(0-20)		
LCS1	Beta-BHC		2	2.11	ug/L	105	(70-130)		
LCS2	Beta-BHC		2	2.31	ug/L	116	(70-130)	20	9.1
MBLK	Beta-BHC			<0.1	ug/L				
MRL_CHK	Beta-BHC		0.1	0.0940	ug/L	94	(50-150)		
MS_202204121160	Beta-BHC		2	2.24	ug/L	112	(70-130)		
DUP_202204130072	Bromacil			ND	ug/L		(0-20)		
LCS1	Bromacil		2	2.32	ug/L	116	(70-130)		
LCS2	Bromacil		2	2.44	ug/L	122	(70-130)	20	5.0
MBLK	Bromacil			<0.2	ug/L				
MRL_CHK	Bromacil		0.1	0.117	ug/L	117	(50-150)		
MS_202204121160	Bromacil		2	1.90	ug/L	95	(70-130)		
DUP_202204130072	Butachlor			ND	ug/L		(0-20)		
LCS1	Butachlor		2	2.39	ug/L	120	(70-130)		
LCS2	Butachlor		2	2.29	ug/L	115	(70-130)	20	4.3
MBLK	Butachlor			<0.05	ug/L				
MRL_CHK	Butachlor		0.05	0.0570	ug/L	114	(50-150)		
MS_202204121160	Butachlor		2	2.29	ug/L	115	(70-130)		
DUP_202204130072	Butylbenzylphthalate			ND	ug/L		(0-20)		
LCS1	Butylbenzylphthalate		2	2.44	ug/L	122	(70-130)		
LCS2	Butylbenzylphthalate		2	2.35	ug/L	117	(70-130)	20	3.8
MBLK	Butylbenzylphthalate			<0.5	ug/L				
MRL_CHK	Butylbenzylphthalate		0.15	0.170	ug/L	113	(50-150)		
MS_202204121160	Butylbenzylphthalate		2	2.23	ug/L	111	(70-130)		
DUP_202204130072	Caffeine by method 525mod			ND	ug/L		(0-20)		
LCS1	Caffeine by method 525mod		2	1.60	ug/L	80	(45-137)		
LCS2	Caffeine by method 525mod		2	1.64	ug/L	82	(45-137)	20	1.9

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Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Caffeine by method 525mod			<0.05	ug/L				
MRL_CHK	Caffeine by method 525mod		0.05	0.0560	ug/L	112	(50-150)		
MS_202204121160	Caffeine by method 525mod		2	1.49	ug/L	75	(46-144)		
DUP_202204130072	Chlorobenzilate			ND	ug/L		(0-20)		
LCS1	Chlorobenzilate		2	2.36	ug/L	118	(70-130)		
LCS2	Chlorobenzilate		2	2.48	ug/L	124	(70-130)	20	4.5
MBLK	Chlorobenzilate			<0.1	ug/L				
MRL_CHK	Chlorobenzilate		0.1	0.123	ug/L	123	(50-150)		
MS_202204121160	Chlorobenzilate		2	2.44	ug/L	122	(70-130)		
DUP_202204130072	Chloroneb			ND	ug/L		(0-20)		
LCS1	Chloroneb		2	2.21	ug/L	111	(70-130)		
LCS2	Chloroneb		2	2.26	ug/L	113	(70-130)	20	2.2
MBLK	Chloroneb			<0.1	ug/L				
MRL_CHK	Chloroneb		0.1	0.101	ug/L	101	(50-150)		
MS_202204121160	Chloroneb		2	2.30	ug/L	115	(70-130)		
DUP_202204130072	Chlorothalonil(Draconil,Bravo)			ND	ug/L		(0-20)		
LCS1	Chlorothalonil(Draconil,Bravo)		2	2.37	ug/L	118	(70-130)		
LCS2	Chlorothalonil(Draconil,Bravo)		2	2.38	ug/L	119	(70-130)	20	0.42
MBLK	Chlorothalonil(Draconil,Bravo)			<0.1	ug/L				
MRL_CHK	Chlorothalonil(Draconil,Bravo)		0.1	0.0970	ug/L	97	(50-150)		
MS_202204121160	Chlorothalonil(Draconil,Bravo)		2	2.28	ug/L	114	(70-130)		
DUP_202204130072	Chlorpyrifos (Dursban)			ND	ug/L		(0-20)		
LCS1	Chlorpyrifos (Dursban)		2	2.29	ug/L	114	(70-130)		
LCS2	Chlorpyrifos (Dursban)		2	2.34	ug/L	117	(70-130)	20	2.2
MBLK	Chlorpyrifos (Dursban)			<0.05	ug/L				
MRL_CHK	Chlorpyrifos (Dursban)		0.05	0.0530	ug/L	106	(50-150)		
MS_202204121160	Chlorpyrifos (Dursban)		2	2.23	ug/L	112	(70-130)		
DUP_202204130072	Chrysene			ND	ug/L		(0-20)		
LCS1	Chrysene		2	2.20	ug/L	110	(70-130)		
LCS2	Chrysene		2	2.24	ug/L	112	(70-130)	20	1.8
MBLK	Chrysene			<0.02	ug/L				
MRL_CHK	Chrysene		0.02	0.0190	ug/L	95	(50-150)		
MS_202204121160	Chrysene		2	2.21	ug/L	111	(70-130)		
DUP_202204130072	Chrysene-d12 (I)			91.8	%	92	(50-150)		
LCS1	Chrysene-d12 (I)		5	66.4	%	66	(50-150)		
LCS2	Chrysene-d12 (I)		5	96.4	%	96	(50-150)		
MBLK	Chrysene-d12 (I)			95.4	%	95	(50-150)		
MRL_CHK	Chrysene-d12 (I)		5	91.3	%	91	(50-150)		

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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202204121160	Chrysene-d12 (I)		5	84.2	%	84	(50-150)		
DUP_202204130072	Delta-BHC			ND	ug/L		(0-20)		
LCS1	Delta-BHC		2	2.19	ug/L	109	(70-130)		
LCS2	Delta-BHC		2	2.18	ug/L	109	(70-130)	20	0.46
MBLK	Delta-BHC			<0.1	ug/L				
MRL_CHK	Delta-BHC		0.1	0.115	ug/L	115	(50-150)		
MS_202204121160	Delta-BHC		2	2.08	ug/L	104	(70-130)		
DUP_202204130072	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	2.32	ug/L	116	(70-130)	20	1.7
MBLK	Di-(2-Ethylhexyl)adipate			<0.6	ug/L				
MRL_CHK	Di-(2-Ethylhexyl)adipate		0.3	0.320	ug/L	107	(50-150)		
MS_202204121160	Di-(2-Ethylhexyl)adipate	ND	2	1.72	ug/L	86	(70-130)		
DUP_202204130072	Di(2-E hylhexyl)phthalate	ND		ND	ug/L		(0-20)		
LCS1	Di(2-E hylhexyl)phthalate		2	2.28	ug/L	114	(70-130)		
LCS2	Di(2-E hylhexyl)phthalate		2	2.10	ug/L	105	(70-130)	20	8.2
MBLK	Di(2-E hylhexyl)phthalate			<0.6	ug/L				
MRL_CHK	Di(2-E hylhexyl)phthalate		0.6	0.664	ug/L	111	(50-150)		
MS_202204121160	Di(2-E hylhexyl)phthalate	ND	2	1.97	ug/L	99	(70-130)		
DUP_202204130072	Diazinon (Qualitative)			ND	ug/L		(0-20)		
LCS1	Diazinon (Qualitative)		2	1.52	ug/L	76	(15-132)		
LCS2	Diazinon (Qualitative)		2	1.68	ug/L	84	(15-132)	20	10
MBLK	Diazinon (Qualitative)			<0.10	ug/L				
MRL_CHK	Diazinon (Qualitative)		0.1	0.0810	ug/L	81	(15-132)		
MS_202204121160	Diazinon (Qualitative)		2	1.58	ug/L	79	(15-132)		
DUP_202204130072	Dibenz(a,h)Anthracene			ND	ug/L		(0-20)		
LCS1	Dibenz(a,h)Anthracene		2	2.48	ug/L	124	(70-130)		
LCS2	Dibenz(a,h)Anthracene		2	2.42	ug/L	121	(70-130)	20	2.5
MBLK	Dibenz(a,h)Anthracene			<0.05	ug/L				
MRL_CHK	Dibenz(a,h)Anthracene		0.05	0.0440	ug/L	88	(50-150)		
MS_202204121160	Dibenz(a,h)Anthracene		2	1.37	ug/L	**68**	(70-130)		
DUP_202204130072	Dichlorvos (DDVP)			ND	ug/L		(0-20)		
LCS1	Dichlorvos (DDVP)		2	2.28	ug/L	114	(70-130)		
LC 2	Dichlorvos (DDVP)		2	2 25	ug/L	113	(70 130)	20	1 8
MBLK	Dichlorvos (DDVP)			<0.05	ug/L				
MRL_CHK	Dichlorvos (DDVP)		0.05	0.0480	ug/L	96	(50-150)		
MS_202204121160	Dichlorvos (DDVP)		2	2.64	ug/L	**132**	(70-130)		
DUP_202204130072	Dieldrin			ND	ug/L		(0-20)		

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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Dieldrin		2	2.23	ug/L	112	(70-130)		
LCS2	Dieldrin		2	2.20	ug/L	110	(70-130)	20	1.4
MBLK	Dieldrin			<0.2	ug/L				
MRL_CHK	Dieldrin		0.1	0.117	ug/L	117	(50-150)		
MS_202204121160	Dieldrin		2	2.07	ug/L	103	(70-130)		
DUP_202204130072	Diethylphthalate			ND	ug/L		(0-20)		
LCS1	Diethylphthalate		2	2.23	ug/L	111	(70-130)		
LCS2	Diethylphthalate		2	2.37	ug/L	119	(70-130)	20	6.1
MBLK	Diethylphthalate			<0.5	ug/L				
MRL_CHK	Diethylphthalate		0.15	0.170	ug/L	113	(50-150)		
MS_202204121160	Diethylphthalate		2	2.42	ug/L	121	(70-130)		
DUP_202204130072	Dimethoate			ND	ug/L		(0-20)		
LCS1	Dimethoate		2	1.52	ug/L	76	(35-100)		
LCS2	Dimethoate		2	1.68	ug/L	84	(35-100)	20	10
MBLK	Dimethoate			<0.1	ug/L				
MRL_CHK	Dimethoate		0.1	0.0710	ug/L	71	(35-100)		
MS_202204121160	Dimethoate		2	2.00	ug/L	100	(34-111)		
DUP_202204130072	Dimethylphthalate			ND	ug/L		(0-20)		
LCS1	Dimethylphthalate		2	2.30	ug/L	115	(70-130)		
LCS2	Dimethylphthalate		2	2.34	ug/L	117	(70-130)	20	2.1
MBLK	Dimethylphthalate			<0.5	ug/L				
MRL_CHK	Dimethylphthalate		0.3	0.319	ug/L	106	(50-150)		
MS_202204121160	Dimethylphthalate		2	2.35	ug/L	117	(70-130)		
DUP_202204130072	Di-n-Butylphthalate			ND	ug/L		(0-20)		
LCS1	Di-n-Butylphthalate		4	4.30	ug/L	107	(70-130)		
LCS2	Di-n-Butylphthalate		4	4.34	ug/L	109	(70-130)	20	0.93
MBLK	Di-n-Butylphthalate			<1	ug/L				
MRL_CHK	Di-n-Butylphthalate		0.3	0.336	ug/L	112	(50-150)		
MS_202204121160	Di-n-Butylphthalate		4	4.37	ug/L	109	(70-130)		
DUP_202204130072	Di-N-octylphthalate			ND	ug/L		(0-20)		
LCS1	Di-N-octylphthalate		2	2.22	ug/L	111	(70-130)		
LCS2	Di-N-octylphthalate		2	2.01	ug/L	101	(70-130)	20	9.9
MBLK	Di-N-octylphthalate			<0.1	ug/L				
MRL_CHK	Di-N-octylphthalate		0.1	0.110	ug/L	110	(50-150)		
MS_202204121160	Di-N-octylphthalate		2	1.61	ug/L	81	(70-130)		
DUP_202204130072	Endosulfan I (Alpha)			ND	ug/L		(0-20)		
LCS1	Endosulfan I (Alpha)		2	2.23	ug/L	112	(70-130)		
LCS2	Endosulfan I (Alpha)		2	2.24	ug/L	112	(70-130)	20	0.45

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Endosulfan I (Alpha)			<0.1	ug/L				
MRL_CHK	Endosulfan I (Alpha)		0.1	0.116	ug/L	116	(50-150)		
MS_202204121160	Endosulfan I (Alpha)		2	2.08	ug/L	104	(70-130)		
DUP_202204130072	Endosulfan II (Beta)			ND	ug/L		(0-20)		
LCS1	Endosulfan II (Beta)		2	2.26	ug/L	113	(70-130)		
LCS2	Endosulfan II (Beta)		2	2.35	ug/L	117	(70-130)	20	3.9
MBLK	Endosulfan II (Beta)			<0.1	ug/L				
MRL_CHK	Endosulfan II (Beta)		0.1	0.126	ug/L	126	(50-150)		
MS_202204121160	Endosulfan II (Beta)		2	2.39	ug/L	120	(70-130)		
DUP_202204130072	Endosulfan Sulfate			ND	ug/L		(0-20)		
LCS1	Endosulfan Sulfate		2	2.24	ug/L	112	(70-130)		
LCS2	Endosulfan Sulfate		2	2.29	ug/L	114	(70-130)	20	2.2
MBLK	Endosulfan Sulfate			<0.1	ug/L				
MRL_CHK	Endosulfan Sulfate		0.1	0.118	ug/L	118	(50-150)		
MS_202204121160	Endosulfan Sulfate		2	2.06	ug/L	103	(70-130)		
DUP_202204130072	Endrin			ND	ug/L		(0-20)		
LCS1	Endrin		2	2.19	ug/L	109	(70-130)		
LCS2	Endrin		2	2.18	ug/L	109	(70-130)	20	0.46
MBLK	Endrin			<0.1	ug/L				
MRL_CHK	Endrin		0.1	0.150	ug/L	150	(50-150)		
MS_202204121160	Endrin		2	2.06	ug/L	103	(70-130)		
DUP_202204130072	Endrin Aldehyde			ND	ug/L		(0-20)		
LCS1	Endrin Aldehyde		2	2.10	ug/L	105	(70-130)		
LCS2	Endrin Aldehyde		2	1.90	ug/L	95	(70-130)	20	10
MBLK	Endrin Aldehyde			<0.1	ug/L				
MRL_CHK	Endrin Aldehyde		0.1	0.0850	ug/L	85	(50-150)		
MS_202204121160	Endrin Aldehyde		2	0.307	ug/L	**15**	(70-130)		
DUP_202204130072	EPTC			ND	ug/L		(0-20)		
LCS1	EPTC		2	2.15	ug/L	107	(70-130)		
LCS2	EPTC		2	2.12	ug/L	106	(70-130)	20	1.4
MBLK	EPTC			<0.1	ug/L				
MRL_CHK	EPTC		0.1	0.101	ug/L	101	(50-150)		
MS_202204121160	EPTC		2	2.12	ug/L	106	(70-130)		
DUP 202204130072	Fluoranthene			ND	ug/L		(0 20)		
LCS1	Fluoranthene		2	2.22	ug/L	111	(70-130)		
LCS2	Fluoranthene		2	2.32	ug/L	116	(70-130)	20	4.4
MBLK	Fluoranthene			<0.1	ug/L				
MRL_CHK	Fluoranthene		0.05	0.0500	ug/L	100	(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).
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Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202204121160	Fluoranthene		2	2.24	ug/L	112	(70-130)		
DUP_202204130072	Fluorene			ND	ug/L		(0-20)		
LCS1	Fluorene		2	2.15	ug/L	108	(70-130)		
LCS2	Fluorene		2	2.21	ug/L	111	(70-130)	20	2.8
MBLK	Fluorene			<0.05	ug/L				
MRL_CHK	Fluorene		0.05	0.0510	ug/L	102	(50-150)		
MS_202204121160	Fluorene		2	2.26	ug/L	113	(70-130)		
DUP_202204130072	gamma-Chlordane			ND	ug/L		(0-20)		
LCS1	gamma-Chlordane		2	2.18	ug/L	109	(70-130)		
LCS2	gamma-Chlordane		2	2.19	ug/L	110	(70-130)	20	0.46
MBLK	gamma-Chlordane			<0.05	ug/L				
MRL_CHK	gamma-Chlordane		0.05	0.0480	ug/L	96	(50-150)		
MS_202204121160	gamma-Chlordane		2	1.93	ug/L	97	(70-130)		
DUP_202204130072	Heptachlor			ND	ug/L		(0-20)		
LCS1	Heptachlor		2	2.12	ug/L	106	(70-130)		
LCS2	Heptachlor		2	2.11	ug/L	105	(70-130)	20	0.47
MBLK	Heptachlor			<0.04	ug/L				
MRL_CHK	Heptachlor		0.04	0.0460	ug/L	115	(50-150)		
MS_202204121160	Heptachlor		2	1.98	ug/L	99	(70-130)		
DUP_202204130072	Heptachlor Epoxide (isomer B)			ND	ug/L		(0-20)		
LCS1	Heptachlor Epoxide (isomer B)		2	2.23	ug/L	112	(70-130)		
LCS2	Heptachlor Epoxide (isomer B)		2	2.19	ug/L	109	(70-130)	20	1.8
MBLK	Heptachlor Epoxide (isomer B)			<0.05	ug/L				
MRL_CHK	Heptachlor Epoxide (isomer B)		0.05	0.0590	ug/L	118	(50-150)		
MS_202204121160	Heptachlor Epoxide (isomer B)		2	2.15	ug/L	108	(70-130)		
DUP_202204130072	Hexachlorobenzene	ND		ND	ug/L		(0-20)		
LCS1	Hexachlorobenzene		2	2.03	ug/L	102	(70-130)		
LCS2	Hexachlorobenzene		2	2.14	ug/L	107	(70-130)	20	5.3
MBLK	Hexachlorobenzene			<0.05	ug/L				
MRL_CHK	Hexachlorobenzene		0.05	0.0590	ug/L	118	(50-150)		
MS_202204121160	Hexachlorobenzene	ND	2	2.06	ug/L	103	(70-130)		
DUP_202204130072	Hexachlorocyclopentadiene	ND		ND	ug/L		(0-20)		
LCS1	Hexachlorocyclopentadiene		2	1.92	ug/L	96	(70-130)		
LCS2	Hexachlorocyclopentadiene		2	2.01	ug/L	100	(70-130)	20	4.6
MBLK	Hexachlorocyclopentadiene			<0.05	ug/L				
MRL_CHK	Hexachlorocyclopentadiene		0.05	0.0480	ug/L	96	(50-150)		
MS_202204121160	Hexachlorocyclopentadiene	ND	2	2.03	ug/L	101	(70-130)		
DUP_202204130072	Indeno(1,2,3,c,d)Pyrene			ND	ug/L		(0-20)		

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Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Indeno(1,2,3,c,d)Pyrene		2	2.53	ug/L	127	(70-130)		
LCS2	Indeno(1,2,3,c,d)Pyrene		2	2.40	ug/L	120	(70-130)	20	4.9
MBLK	Indeno(1,2,3,c,d)Pyrene			<0.05	ug/L				
MRL_CHK	Indeno(1,2,3,c,d)Pyrene		0.05	0.0490	ug/L	98	(50-150)		
MS_202204121160	Indeno(1,2,3,c,d)Pyrene		2	1.38	ug/L	**69**	(70-130)		
DUP_202204130072	Isophorone			ND	ug/L		(0-20)		
LCS1	Isophorone		2	2.30	ug/L	115	(70-130)		
LCS2	Isophorone		2	2.13	ug/L	106	(70-130)	20	7.7
MBLK	Isophorone			<0.5	ug/L				
MRL_CHK	Isophorone		0.1	0.107	ug/L	107	(50-150)		
MS_202204121160	Isophorone		2	2.20	ug/L	110	(70-130)		
DUP_202204130072	Lindane			ND	ug/L		(0-20)		
LCS1	Lindane		2	2.09	ug/L	104	(70-130)		
LCS2	Lindane		2	2.16	ug/L	108	(70-130)	20	3.3
MBLK	Lindane			<0.04	ug/L				
MRL_CHK	Lindane		0.04	0.0420	ug/L	105	(50-150)		
MS_202204121160	Lindane		2	2.08	ug/L	104	(70-130)		
DUP_202204130072	Malathion			ND	ug/L		(0-20)		
LCS1	Malathion		2	2.36	ug/L	118	(70-130)		
LCS2	Malathion		2	2.41	ug/L	121	(70-130)	20	2.1
MBLK	Malathion			<0.1	ug/L				
MRL_CHK	Malathion		0.1	0.103	ug/L	103	(50-150)		
MS_202204121160	Malathion		2	2.47	ug/L	124	(70-130)		
DUP_202204130072	Methoxychlor			ND	ug/L		(0-20)		
LCS1	Methoxychlor		2	2.39	ug/L	119	(70-130)		
LCS2	Methoxychlor		2	2.34	ug/L	117	(70-130)	20	2.1
MBLK	Methoxychlor			<0.1	ug/L				
MRL_CHK	Methoxychlor		0.1	0.102	ug/L	102	(50-150)		
MS_202204121160	Methoxychlor		2	2.74	ug/L	**137**	(70-130)		
DUP_202204130072	Metolachlor			ND	ug/L		(0-20)		
LCS1	Metolachlor		2	2.32	ug/L	116	(70-130)		
LCS2	Metolachlor		2	2.32	ug/L	116	(70-130)	20	0.0
MBLK	Metolachlor			<0.05	ug/L				
MRL_CHK	Metolachlor		0.05	0.0570	ug/L	114	(50-150)		
MS_202204121160	Metolachlor		2	2.42	ug/L	121	(70-130)		
DUP_202204130072	Metribuzin			ND	ug/L		(0-20)		
LCS1	Metribuzin		2	2.16	ug/L	108	(70-130)		
LCS2	Metribuzin		2	2.16	ug/L	108	(70-130)	20	0.0

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RPD not calculated for LCS2 when different a concentration than LCS1 is used.
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Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Metribuzin			<0.05	ug/L				
MRL_CHK	Metribuzin		0.05	0.0490	ug/L	98	(50-150)		
MS_202204121160	Metribuzin		2	1.67	ug/L	84	(70-130)		
DUP_202204130072	Molinate	ND		ND	ug/L		(0-20)		
LCS1	Molinate		2	2.27	ug/L	114	(70-130)		
LCS2	Molinate		2	2.25	ug/L	112	(70-130)	20	0.89
MBLK	Molinate			<0.1	ug/L				
MRL_CHK	Molinate		0.1	0.111	ug/L	111	(50-150)		
MS_202204121160	Molinate	ND	2	2.33	ug/L	117	(70-130)		
DUP_202204130072	Naphthalene			ND	ug/L		(0-20)		
LCS1	Naphthalene		2	2.10	ug/L	105	(70-130)		
LCS2	Naphthalene		2	2.02	ug/L	101	(70-130)	20	3.9
MBLK	Naphthalene			<0.3	ug/L				
MRL_CHK	Naphthalene		0.1	0.102	ug/L	102	(50-150)		
MS_202204121160	Naphthalene		2	2.09	ug/L	104	(70-130)		
DUP_202204130072	Parathion			ND	ug/L		(0-20)		
LCS1	Parathion		2	2.21	ug/L	110	(70-130)		
LCS2	Parathion		2	2.34	ug/L	117	(70-130)	20	5.7
MBLK	Parathion			<0.1	ug/L				
MRL_CHK	Parathion		0.1	0.130	ug/L	130	(50-150)		
MS_202204121160	Parathion		2	2.66	ug/L	**133**	(70-130)		
DUP_202204130072	Pendimethalin			ND	ug/L		(0-20)		
LCS1	Pendimethalin		2	2.20	ug/L	110	(70-130)		
LCS2	Pendimethalin		2	2.26	ug/L	113	(70-130)	20	2.7
MBLK	Pendimethalin			<0.1	ug/L				
MRL_CHK	Pendimethalin		0.1	0.117	ug/L	117	(50-150)		
MS_202204121160	Pendimethalin		2	2.41	ug/L	121	(70-130)		
DUP_202204130072	Permethrin (mixed isomers)			ND	ug/L		(0-20)		
LCS1	Permethrin (mixed isomers)		4	4.77	ug/L	119	(70-130)		
LCS2	Permethrin (mixed isomers)		4	4.46	ug/L	112	(70-130)	20	6.7
MBLK	Permethrin (mixed isomers)			<0.2	ug/L				
MRL_CHK	Permethrin (mixed isomers)		0.2	0.196	ug/L	98	(50-150)		
MS_202204121160	Permethrin (mixed isomers)		4	3.98	ug/L	99	(70-130)		
DUP_202204130072	Perylene-d12 (S)			100	%	101	(70-130)		
LCS1	Perylene-d12 (S)		5	103	%	103	(70-130)		
LCS2	Perylene-d12 (S)		5	98.8	%	99	(70-130)		
MBLK	Perylene-d12 (S)			98.7	%	99	(70-130)		
MRL_CHK	Perylene-d12 (S)		5	96.6	%	97	(70-130)		

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

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202204121160	Perylene-d12 (S)		5	73.4	%	73	(70-130)		
DUP_202204130072	Phenanthrene			ND	ug/L		(0-20)		
LCS1	Phenanthrene		2	2.15	ug/L	108	(70-130)		
LCS2	Phenanthrene		2	2.14	ug/L	107	(70-130)	20	0.47
MBLK	Phenanthrene			<0.04	ug/L				
MRL_CHK	Phenanthrene		0.02	0.0220	ug/L	110	(50-150)		
MS_202204121160	Phenanthrene		2	2.18	ug/L	109	(70-130)		
DUP_202204130072	Phenanthrene-d10 (I)			93.2	%	93	(50-150)		
LCS1	Phenanthrene-d10 (I)		5	67.8	%	68	(50-150)		
LCS2	Phenanthrene-d10 (I)		5	92.2	%	92	(50-150)		
MBLK	Phenanthrene-d10 (I)			95.3	%	95	(50-150)		
MRL_CHK	Phenanthrene-d10 (I)		5	91.4	%	91	(50-150)		
MS_202204121160	Phenanthrene-d10 (I)		5	99.6	%	100	(50-150)		
DUP_202204130072	Propachlor			ND	ug/L		(0-20)		
LCS1	Propachlor		2	2.20	ug/L	110	(70-130)		
LCS2	Propachlor		2	2.32	ug/L	116	(70-130)	20	5.3
MBLK	Propachlor			<0.05	ug/L				
MRL_CHK	Propachlor		0.05	0.0580	ug/L	116	(50-150)		
MS_202204121160	Propachlor		2	2.37	ug/L	118	(70-130)		
DUP_202204130072	Pyrene			ND	ug/L		(0-20)		
LCS1	Pyrene		2	2.24	ug/L	112	(70-130)		
LCS2	Pyrene		2	2.33	ug/L	117	(70-130)	20	3.9
MBLK	Pyrene			<0.05	ug/L				
MRL_CHK	Pyrene		0.05	0.0510	ug/L	102	(50-150)		
MS_202204121160	Pyrene		2	2.24	ug/L	112	(70-130)		
DUP_202204130072	Simazine	ND		ND	ug/L		(0-20)		
LCS1	Simazine		2	2.21	ug/L	110	(70-130)		
LCS2	Simazine		2	2.47	ug/L	123	(70-130)	20	11
MBLK	Simazine			<0.05	ug/L				
MRL_CHK	Simazine		0.05	0.0630	ug/L	126	(50-150)		
MS_202204121160	Simazine	ND	2	1.98	ug/L	99	(70-130)		
DUP_202204130072	Terbacil			ND	ug/L		(0-20)		
LCS1	Terbacil		2	2.29	ug/L	114	(70-130)		
LCS2	Terbacil		2	2.26	ug/L	113	(70-130)	20	1.3
MBLK	Terbacil			<0.1	ug/L				
MRL_CHK	Terbacil		0.1	0.117	ug/L	117	(50-150)		
MS_202204121160	Terbacil		2	2.21	ug/L	111	(70-130)		
DUP_202204130072	Terbuthylazine			ND	ug/L		(0-20)		

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Terbuthylazine		2	2.29	ug/L	114	(70-130)		
LCS2	Terbuthylazine		2	2.41	ug/L	120	(70-130)	20	5.1
MBLK	Terbuthylazine			<0.1	ug/L				
MRL_CHK	Terbuthylazine		0.1	0.110	ug/L	110	(50-150)		
MS_202204121160	Terbuthylazine		2	2.03	ug/L	102	(70-130)		
DUP_202204130072	Thiobencarb	ND		ND	ug/L		(0-20)		
LCS1	Thiobencarb		2	2.27	ug/L	114	(70-130)		
LCS2	Thiobencarb		2	2.30	ug/L	115	(70-130)	20	1.3
MBLK	Thiobencarb			<0.2	ug/L				
MRL_CHK	Thiobencarb		0.1	0.106	ug/L	106	(50-150)		
MS_202204121160	Thiobencarb	ND	2	2.27	ug/L	114	(70-130)		
DUP_202204130072	trans-Nonachlor			ND	ug/L		(0-20)		
LCS1	trans-Nonachlor		2	2.24	ug/L	112	(70-130)		
LCS2	trans-Nonachlor		2	2.20	ug/L	110	(70-130)	20	1.8
MBLK	trans-Nonachlor			<0.05	ug/L				
MRL_CHK	trans-Nonachlor		0.05	0.0570	ug/L	114	(50-150)		
MS_202204121160	trans-Nonachlor		2	1.84	ug/L	92	(70-130)		
DUP_202204130072	Trifluralin			ND	ug/L		(0-20)		
LCS1	Trifluralin		2	2.26	ug/L	113	(70-130)		
LCS2	Trifluralin		2	2.38	ug/L	119	(70-130)	20	5.2
MBLK	Trifluralin			<0.1	ug/L				
MRL_CHK	Trifluralin		0.1	0.101	ug/L	101	(50-150)		
MS_202204121160	Trifluralin		2	2.40	ug/L	120	(70-130)		
DUP_202204130072	Triphenylphosphate (S)			109	%	109	(70-130)		
LCS1	Triphenylphosphate (S)		5	105	%	105	(70-130)		
LCS2	Triphenylphosphate (S)		5	108	%	108	(70-130)		
MBLK	Triphenylphosphate (S)			111	%	111	(70-130)		
MRL_CHK	Triphenylphosphate (S)		5	110	%	110	(70-130)		
MS_202204121160	Triphenylphosphate (S)		5	97.2	%	97	(70-130)		

Organochlorine Pesticides by EPA 505

Prep Batch: 1399386 Analytical Batch: 1405881 **Analysis Date: 04/07/2022**

CCCH	Aldrin		0.1	0.0949	ug/L	95	(70-130)		
CCCL	Aldrin		0.002	0.00240	ug/L	120	(50-150)		
MBLK	Aldrin			<0.005	ug/L				
MRL_CHK	Aldrin		0.01	0.0107	ug/L	107	(50-150)		
MS1_202203300162	Aldrin		0.02	0.0201	ug/L	100	(65-135)		
CCCH	Dieldrin		0.1	0.101	ug/L	101	(70-130)		

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.
(I) - Indicates internal standard compound.

eurofins | Eaton Analytical

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

Report: 996776
Project: RED-HILL
Group: Quarterly Red-Hill Expanded List (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
CCCL	Dieldrin		0.002	0.00280	ug/L	140	(50-150)		
MBLK	Dieldrin			<0.002	ug/L				
MRL_CHK	Dieldrin		0.01	0.0122	ug/L	122	(50-150)		
MS1_202203300162	Dieldrin		0.02	0.0237	ug/L	118	(65-135)		
CCCH	Tetrachloro-m-xylene (S)			99.9	%	100	(70-130)		
CCCL	Tetrachloro-m-xylene (S)			102	%	102	(50-150)		
MBLK	Tetrachloro-m-xylene (S)			108	%	108	(70-130)		
MRL_CHK	Tetrachloro-m-xylene (S)			98.9	%	99	(70-130)		
MS1_202203300162	Tetrachloro-m-xylene (S)			103	%	103	(70-130)		
CCCH	Toxaphene		2.5	2.02	ug/L	81	(70-130)		
CCCL	Toxaphene		0.1	0.101	ug/L	101	(50-150)		
MBLK	Toxaphene			<0.1	ug/L				
MRL_CHK	Toxaphene		0.5	0.429	ug/L	86	(50-150)		
MS1_202203300162	Toxaphene	ND	2.5	1.86	ug/L	74	(65-135)		

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.
(I) - Indicates internal standard compound.

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

Laboratory Hits

Report: 996776
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:
04/05/2022 1231

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
	202204050267	**HALAWA WELLS 2 (331-024-WL064)**				
04/14/2022 00:29	Alkalinity in CaCO3 units		79		mg/L	2.0
04/21/2022 19:59	alpha-Chlordane		0.055		ug/L	0.050
04/15/2022 11:17	Bicarb.Alkalinity as HCO3calc		97		mg/L	2.0
04/21/2022 19:59	Bromacil		0.10		ug/L	0.10
04/07/2022 11:45	Bromide		610		ug/L	10
04/06/2022 21:08	Calcium Total ICAP		27		mg/L	1.0
04/08/2022 02:48	Chlordane		0.45	2	ug/L	0.10
04/05/2022 22:08	Chloride		150	250	mg/L	5.0
04/08/2022 13:23	Chromium Total ICAP/MS		2.1	100	ug/L	1.0
04/08/2022 02:48	Dieldrin		0.124		ug/L	0.0100
04/08/2022 02:48	Dieldrin		0.12		ug/L	0.0020
04/18/2022 21:57	Fluoride		0.070	4	mg/L	0.050
04/21/2022 19:59	gamma-Chlordane		0.062		ug/L	0.050
04/08/2022 02:48	Heptachlor Epoxide		0.038	0.2	ug/L	0.010
04/06/2022 21:08	Magnesium Total ICAP		26		mg/L	0.10
04/05/2022 22:08	Nitrate as Nitrogen by IC		2.6	10	mg/L	0.12
04/14/2022 00:29	PH (H3=past HT not compliant)		7.8		Units	0.10
04/06/2022 21:08	Potassium Total ICAP		4.1		mg/L	1.0
04/06/2022 21:08	Sodium Total ICAP		81		mg/L	1.0
04/14/2022 00:29	Specific Conductance, 25 C		780		umho/cm	2.0
04/05/2022 22:08	Sulfate		41	250	mg/L	5.0
04/10/2022 00:12	Total Dissolved Solids (TDS)		440	500	mg/L	10
04/08/2022 13:23	Zinc Total ICAP/MS		20	5000	ug/L	20

SUMMARY OF POSITIVE DATA ONLY

eurofins | Environment Testing America

ANALYTICAL REPORT

Eurofins Calscience
2841 Dow Avenue, Suite 100
Tustin, CA 92780
Tel: (714)895-5494

Laboratory Job ID: 570-91315-1
Client Project/Site: 996776

For:
Eurofins Eaton Analytical
750 Royal Oaks Drive
Monrovia, California 91016

Attn: Jaclyn Contreras

Authorized for release by:
4/20/2022 4:53:30 PM
Sheila Luu, Project Mgmt. Assistant
Sheila.Luu@et.eurofinsus.com

Designee for

Xuan Dang, Project Manager I
(714)895-5494
Xuan.Dang@et.eurofinsus.com

Table of Contents

Definitions/Glossary

Client: Eurofins Eaton Analytical
Project/Site: 996776

Job ID: 570-91315-1

Qualifiers

GC/MS VOA

Qualifier	Qualifier Description
J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Glossary

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

Case Narrative

Client: Eurofins Eaton Analytical
Project/Site: 996776

Job ID: 570-91315-1

Job ID: 570-91315-1

Laboratory: Eurofins Calscience

Narrative

Job Narrative
570-91315-1

Comments
No additional comments.

Receipt
The samples were received on 4/6/2022 2:04 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.0º C.

GC/MS VOA
Method 624.1: Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with analytical batch 570-227420. The laboratory control sample (LCS) was performed in duplicate (LCSD) to provide precision data for this batch.

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

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

Detection Summary

Client: Eurofins Eaton Analytical
Project/Site: 996776

Job ID: 570-91315-1

Client Sample ID: 202204050267 — Lab Sample ID: 570-91315-1

No Detections.

Client Sample ID: 202204050270 — Lab Sample ID: 570-91315-2

No Detections.

This Detection Summary does not include radiochemical test results.

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Client Sample ID: 202204050267
Date Collected: 04/04/22 09:35
Date Received: 04/06/22 14:04

Lab Sample ID: 570-91315-1
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		50	10	ug/L			04/18/22 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*97*		*60 - 140*		*04/18/22 18:36*	*1*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*04/18/22 18:36*	*1*
Dibromofluoromethane	*102*		*60 - 140*		*04/18/22 18:36*	*1*
Toluene-d8 (Surr)	*110*		*60 - 140*		*04/18/22 18:36*	*1*

Client Sample ID: 202204050270
Date Collected: 04/04/22 09:35
Date Received: 04/06/22 14:04

Lab Sample ID: 570-91315-2
Matrix: Water

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		50	10	ug/L			04/18/22 19:02	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*94*		*60 - 140*		*04/18/22 19:02*	*1*
4-Bromofluorobenzene (Surr)	*105*		*60 - 140*		*04/18/22 19:02*	*1*
Dibromofluoromethane	*102*		*60 - 140*		*04/18/22 19:02*	*1*
Toluene-d8 (Surr)	*107*		*60 - 140*		*04/18/22 19:02*	*1*

Surrogate Summary

Client: Eurofins Eaton Analytical
Project/Site: 996776

Job ID: 570-91315-1

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Matrix: Water

Prep Type: Total/NA

		Percent Surrogate Recovery (Acceptance Limits)			
		DCA	BFB	DBFM	TOL
Lab Sample ID	Client Sample ID	(60-140)	(60-140)	(60-140)	(60-140)
570-91315-1	202204050267	97	104	102	110
570-91315-2	202204050270	94	105	102	107
LCS 570-227420/4	Lab Control Sample	102	101	101	103
LCSD 570-227420/5	Lab Control Sample Dup	101	99	101	102
MB 570-227420/11	Method Blank	90	104	97	107

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
BFB = 4-Bromofluorobenzene (Surr)
DBFM = Dibromofluoromethane
TOL = Toluene-d8 (Surr)

Method: 624.1 - Volatile Organic Compounds (GC/MS)

Lab Sample ID: MB 570-227420/11
Matrix: Water
Analysis Batch: 227420

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		50	10	ug/L			04/18/22 15:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
1,2-Dichloroethane-d4 (Surr)	*90*		*60 - 140*		*04/18/22 15:30*	*1*
4-Bromofluorobenzene (Surr)	*104*		*60 - 140*		*04/18/22 15:30*	*1*
Dibromofluoromethane	*97*		*60 - 140*		*04/18/22 15:30*	*1*
Toluene-d8 (Surr)	*107*		*60 - 140*		*04/18/22 15:30*	*1*

Lab Sample ID: LCS 570-227420/4
Matrix: Water
Analysis Batch: 227420

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

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec Limits		
Acetone			50.0	50.03		ug/L		100	60 - 140		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*102*		*60 - 140*
4-Bromofluorobenzene (Surr)	*101*		*60 - 140*
Dibromofluoromethane	*101*		*60 - 140*
Toluene-d8 (Surr)	*103*		*60 - 140*

Lab Sample ID: LCSD 570-227420/5
Matrix: Water
Analysis Batch: 227420

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

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec Limits	RPD	RPD Limit
Acetone			50.0	49.99	J	ug/L		100	60 - 140	0	30

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
1,2-Dichloroethane-d4 (Surr)	*101*		*60 - 140*
4-Bromofluorobenzene (Surr)	*99*		*60 - 140*
Dibromofluoromethane	*101*		*60 - 140*
Toluene-d8 (Surr)	*102*		*60 - 140*

QC Association Summary

Client: Eurofins Eaton Analytical
Project/Site: 996776

Job ID: 570-91315-1

GC/MS VOA

Analysis Batch: 227420

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
570-91315-1	202204050267	Total/NA	Water	624.1	
570-91315-2	202204050270	Total/NA	Water	624.1	
MB 570-227420/11	Method Blank	Total/NA	Water	624.1	
LCS 570-227420/4	Lab Control Sample	Total/NA	Water	624.1	
LCSD 570-227420/5	Lab Control Sample Dup	Total/NA	Water	624.1	

Lab Chronicle

Client: Eurofins Eaton Analytical
Project/Site: 996776

Job ID: 570-91315-1

Client Sample ID: 202204050267
Date Collected: 04/04/22 09:35
Date Received: 04/06/22 14:04

Lab Sample ID: 570-91315-1
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	227420	04/18/22 18:36	UX77	ECL 4
	Instrument ID: GCMSW									

Client Sample ID: 202204050270
Date Collected: 04/04/22 09:35
Date Received: 04/06/22 14:04

Lab Sample ID: 570-91315-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	5 mL	5 mL	227420	04/18/22 19:02	UX77	ECL 4
	Instrument ID: GCMSW									

Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Accreditation/Certification Summary

Client: Eurofins Eaton Analytical
Project/Site: 996776

Job ID: 570-91315-1

Laboratory: Eurofins Calscience

The accreditations/certifications listed below are applicable to this report.

Authority	Program	Identification Number	Expiration Date
California	State	2944	09-30-22
Oregon	NELAP	CA300001	01-31-23

Method Summary

Client: Eurofins Eaton Analytical
Project/Site: 996776

Job ID: 570-91315-1

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	ECL 4

Protocol References:

40CFR136A = "Methods for Organic Chemical Analysis of Municipal Industrial Wastewater", 40CFR, Part 136, Appendix A, October 26, 1984 and subsequent revisions.

Laboratory References:

ECL 4 = Eurofins Calscience Tustin, 2841 Dow Avenue, Tustin, CA 92780, TEL (714)895-5494

Sample Summary

Client: Eurofins Eaton Analytical
Project/Site: 996776

Job ID: 570-91315-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
570-91315-1	202204050267	Water	04/04/22 09:35	04/06/22 14:04
570-91315-2	202204050270	Water	04/04/22 09:35	04/06/22 14:04

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Eaton Analytica

Ship To:
`Eurofins Calscience
2841 Dow Avenue
Suite 100
Tustin, CA 92780

Phone 949-261-1022 Fax 949-260-3299

Submittal Form

Date: 4/6/2022

*REPORTING REQUIRMENTS: *Do Not Combine Reports with any other samples submitted under different Folder Numbers!*
Report & Invoice must have the Folder# 996776 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

Folder #: 996776 **Report Due:** 04/08/2022

Sample ID	Client Sample ID for reference onl	Sample Date & Time	Matrix	Clip Code	PWSID
202204050267	HALAWA WELLS 2 (331-024-WL064)	04/04/22 0935	DW		JLS

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

Method	Prep Method	Analysis Requested
EPA 624 1		Acetone by 624 1

Sample ID	Client Sample ID for reference onl	Sample Date & Time	Matrix	Clip Code	PWSID
202204050270	Travel Blanks	04/04/22 0935	DW		JLS

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

Method	Prep Method	Analysis Requested
EPA 624 1		Acetone by 624 1

570-91315 Chain of Custody

Relinquished by: [signature] Sample Control Date 4/6/22 Time 1424

Received by: [signature] EC Date 4/6/22 Time 1404

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

2.5/1.0 1k SC6

Login Sample Receipt Checklist

Client: Eurofins Eaton Analytical

Job Number: 570-91315-1

Login Number: 91315
List Number: 1
Creator: Vitente, Precy

List Source: Eurofins Calscience

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	True	
Sample custody seals, if present, are intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	Received project as a subcontract.
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

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

Date: 04-20-2022
EMAX Batch No.: 22D028

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 996776

Enclosed is the Laboratory report for samples received on 04/06/22.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
202204050267	D028-01	04/04/22	WATER	TPH GASOLINE
				ETHANOL
				TPH
202204050270	D028-02	04/04/22	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,

Gaspar 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

Submittal Form

Date: 4/6/2022

*REPORTING REQUIRMENTS: *Do Not Combine Reports with any other samples submitted under different Folder Numbers!*
Report & Invoice must have the Folder # **996776** Job # **1000014**

22D028

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.

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

Torrance, CA 90505

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

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**

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

Folder #: 996776 **Report Due:** 04/08/2022

Sample ID	*Client Sample ID for reference onl*	Sample Date & Time	Matrix	Clip Code	PWSID
202204050267	HALAWA WELLS 2 (331-024-WL064)	04/04/22 0935	DW		JLS

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

Method	Prep Method	Analysis Requested
SW8015C		Ethanol
SW 8015B	EPA 5030C	(SUB)Gas Fraction Hydrocarbons
SW 8015B	EPA 3550B	TPH 8015 Diesel and Motor Oil
EPA 8015		Jet Fuel 8 C8-C18
EPA 8015	EPA 8015	Jet Fuel 5 C8-C18

Relinquished by: Sample Control Date 4/6/22 Time 1211

Received by: Alan P Date 4/6/22 Time 1211

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 ① 0.5/0.7
② 0.4/0.6

eurofins | Eaton Analytical

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

Torrance, CA 90505

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

Folder #: 996776
Report Due: 04/08/2022

Submittal Form

22D0728

Date: 4/6/2022

REPORTING REQUIRMENTS:** ***Do Not Combine Reports with any other samples submitted under different Folder Numbers!
Report & Invoice must have the Folder# **996776** 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**

2

Sample ID	Client Sample ID for reference onl	Sample Date & Time	Matrix	Clip Code	PWSID
202204050270	Travel Blanks	04/04/22 0935	DW		JGS

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: _____ Sample Control Date 4/6/22 Time 1211

Received by: Alan R. Date 4/6/22 Time 1211

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 ① 0.5/0.7

② 0.4/0.6

SAMPLE RECEIPT FORM 1

Reference: Addendum SM02.11.2
Form: SM02F1

Type of Delivery	Airbill / Tracking Number	ECN 22D028
☐ Fedex ☐ UPS ☐ GSO ☐ Others		Recipient Alan Ramos
☐ EMAX Courier ☑ Client Delivery		Date 4/6/22 Time 12:11

COC INSPECTION

☑ Client Name ☑ Client PM/FC ☐ Sampler Name ☑ Sampling Date/Time ☑ Sample ID ☑ Matrix
☑ Address ☑ Tel # / Fax # ☐ Courier Signature ☑ Analysis Required ☐ Preservative (if any) ☐ TAT
Safety Issues (if any) ☐ High concentrations expected ☐ From Superfund Site ☐ Rad screening required
Note:

PACKAGING INSPECTION

Container ☑ Cooler ☐ Box ☐ Other
Condition ☐ Custody Seal ☐ Intact ☐ Damaged
Packaging ☑ Bubble Pack ☐ Styrofoam ☐ Popcorn ☐ Sufficient ☐
correction factor +0.2
Temperatures (Cool, ≤6 °C but not frozen) ☑ Cooler 1 0.5/0.7 °C ☑ Cooler 2 0.4/0.6 °C ☐ Cooler 3 ___ °C ☐ Cooler 4 ___ °C ☐ Cooler 5 ___ °C
☐ Cooler 6 ___ °C ☐ Cooler 7 ___ °C ☐ Cooler 8 ___ °C ☐ Cooler 9 ___ °C ☐ Cooler 10 ___ °C
Thermometer: (A) S/N 210583479 *B - S/N* ___ *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	1-10	D10		R8
1,2	8-10, 11	D1	Jet fuel 8 is not mentioned on the label in sample 1 containers 8-10. Sample 2 container 11, Analysis for 8500MOD TBC not mentioned on COC.	↓

4/6/22 AB 4/7/22

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

NOTES/OBSERVATIONS:

SAMPLE MATRIX IS DRINKING WATER? ☑ YES ☐ NO

LEGEND:

☐ **Continue to next page.**

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

REVIEWS:

Sample Labeling Jhowin Zamora [signature] **Date** 4/6/22 4/6/22
SRF [signature] **Date** 4/6/22
PM [signature] **Date** 4/7/22

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

996776

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

SDG#: 22D028

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 996776

SDG : 22D028

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

A total of two(2) water samples were received on 04/06/22 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. VG55D02B - 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. VG55D02L/VG55D02C 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 D026-01M/D026-01S. 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 : 996776

SDG NO. : 22D028
Instrument ID : GCT055

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	VG55D02B	1	NA	04/06/2215:29	04/06/2215:29	UD06005A	UD06004A	22VG55D02	Method Blank
LCS1W	VG55D02L	1	NA	04/06/2216:06	04/06/2216:06	UD06006A	UD06004A	22VG55D02	Lab Control Sample (LCS)
LCD1W	VG55D02C	1	NA	04/06/2216:43	04/06/2216:43	UD06007A	UD06004A	22VG55D02	LCS Duplicate
202204050267	D028-01	1	NA	04/06/2217:57	04/06/2217:57	UD06009A	UD06004A	22VG55D02	Field Sample
202204050270	D028-02	1	NA	04/06/2218:33	04/06/2218:33	UD06010A	UD06004A	22VG55D02	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:	04/04/22 09:35
Project	: 996776	Date Received:	04/06/22
Batch No.	: 22D028	Date Extracted:	04/06/22 17:57
Sample ID	: 202204050267	Date Analyzed:	04/06/22 17:57
Lab Samp ID:	D028-01	Dilution Factor:	1
Lab File ID:	UD06009A	Matrix:	WATER
Ext Btch ID:	22VG55D02	% Moisture:	NA
Calib. Ref.:	UD06004A	Instrument ID:	55

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	0.0344	0.0400	86	60-140

Notes:

Parameter	H-C Range
Gasoline	C6-C10

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/04/22 09:35
Project	: 996776	Date Received:	04/06/22
Batch No.	: 22D028	Date Extracted:	04/06/22 18:33
Sample ID	: 202204050270	Date Analyzed:	04/06/22 18:33
Lab Samp ID:	D028-02	Dilution Factor:	1
Lab File ID:	UD06010A	Matrix:	WATER
Ext Btch ID:	22VG55D02	% Moisture:	NA
Calib. Ref.:	UD06004A	Instrument ID:	55

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	0.0345	0.0400	86	60-140

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

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

QC SUMMARIES

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

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/06/22 15:29
Project	: 996776	Date Received:	04/06/22
Batch No.	: 22D028	Date Extracted:	04/06/22 15:29
Sample ID	: MBLK1W	Date Analyzed:	04/06/22 15:29
Lab Samp ID:	VG55D02B	Dilution Factor:	1
Lab File ID:	UD06005A	Matrix:	WATER
Ext Btch ID:	22VG55D02	% Moisture:	NA
Calib. Ref.:	UD06004A	Instrument ID:	55

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	0.0347	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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 996776
BATCH NO. : 22D028
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VG55D02B	VG55D02L	VG55D02C
LAB FILE ID	: UD06005A	UD06006A	UD06007A
DATE PREPARED	: 04/06/22 15:29	04/06/22 16:06	04/06/22 16:43
DATE ANALYZED	: 04/06/22 15:29	04/06/22 16:06	04/06/22 16:43
PREP BATCH	: 22VG55D02	22VG55D02	22VG55D02
CALIBRATION REF:	UD06004A	UD06004A	UD06004A

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	0.439	88	0.500	0.467	93	6	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0432	108	0.0400	0.0442	111	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 : 996833
BATCH NO. : 22D026
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 202204050422	202204050422MS	202204050422MSD
LAB SAMPLE ID	: D026-01	D026-01M	D026-01S
LAB FILE ID	: UD06012A	UD06013A	UD06014A
DATE PREPARED	: 04/06/22 19:46	04/06/22 20:23	04/06/22 20:59
DATE ANALYZED	: 04/06/22 19:46	04/06/22 20:23	04/06/22 20:59
PREP BATCH	: 22VG55D02	22VG55D02	22VG55D02
CALIBRATION REF	: UD06004A	UD06004A	UD06004A

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	0.432	86	0.500	0.459	92	6	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0417	104	0.0400	0.0436	109	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

996776

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 22D028

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 996776

SDG : 22D028

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 04/06/22 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. DSD006WB - 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 DSD006WL. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG. One(1) set of MS/MSD was analyzed. Diesel was within MS QC limits in 22D026-01M/22D026-01S. 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: 996776

SDG : 22D028

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 04/06/22 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. DSD006WB - 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 J5D006WL. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG. One(1) set of MS/MSD was analyzed. JP5 was within MS QC limits in 22D011-01M/22D011-01S. 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: 996776

SDG : 22D028

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 04/06/22 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. DSD006WB - 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 J8D006WL. Refer to LCS summary form for details.

Matrix QC Sample
No matrix QC sample was provided on this SDG. One(1) set of MS/MSD was analyzed. JP8 was within MS QC limits in 22D011-02M/22D011-02S. 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 : 996776

SDG NO. : 22D028
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	DSD006WB	1	NA	04/07/2214:06	04/06/2215:15	LD07010A	LD07004A	22DSD006W	Method Blank
LCS1W	DSD006WL	1	NA	04/07/2214:24	04/06/2215:15	LD07011A	LD07004A	22DSD006W	Lab Control Sample (LCS)
202204050267	D028-01	1	NA	04/07/2219:01	04/06/2215:15	LD07025A	LD07004A	22DSD006W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 996776

SDG NO. : 22D028
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	DSD006WB	1	NA	04/07/2214:06	04/06/2215:15	LD07010A	LD07005A	22DSD006W	Method Blank
LCS1W	J5D006WL	1	NA	04/07/2214:43	04/06/2215:15	LD07012A	LD07005A	22DSD006W	Lab Control Sample (LCS)
202204050267	D028-01	1	NA	04/07/2219:01	04/06/2215:15	LD07025A	LD07005A	22DSD006W	Field Sample

FN - Filename
% Moist - Percent Moisture

LAB CHRONICLE
PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL
Project : 996776

SDG NO. : 22D028
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	DSD006WB	1	NA	04/07/2214:06	04/06/2215:15	LD07010A	LD07006A	22DSD006W	Method Blank
LCS1W	J8D006WL	1	NA	04/07/2215:01	04/06/2215:15	LD07013A	LD07006A	22DSD006W	Lab Control Sample (LCS)
202204050267	D028-01	1	NA	04/07/2219:01	04/06/2215:15	LD07025A	LD07006A	22DSD006W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/04/22 09:35
Project	: 996776	Date Received:	04/06/22
Batch No.	: 22D028	Date Extracted:	04/06/22 15:15
Sample ID	: 202204050267	Date Analyzed:	04/07/22 19:01
Lab Samp ID:	22D028-01	Dilution Factor:	1
Lab File ID:	LD07025A	Matrix:	WATER
Ext Btch ID:	22DSD006W	% Moisture:	NA
Calib. Ref.:	LD07004A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.025	0.012
Motor Oil	ND	0.049	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.455	0.490	93	60-130
Hexacosane	0.137	0.123	112	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	: 1020ml	Final Volume :	5ml
Prepared by	: POreto	Analyzed by :	SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/04/22 09:35
Project	: 996776	Date Received:	04/06/22
Batch No.	: 22D028	Date Extracted:	04/06/22 15:15
Sample ID	: 202204050267	Date Analyzed:	04/07/22 19:01
Lab Samp ID:	22D028-01	Dilution Factor:	1
Lab File ID:	LD07025A	Matrix:	WATER
Ext Btch ID:	22DSD006W	% Moisture:	NA
Calib. Ref.:	LD07005A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP5	ND	0.049	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.455	0.490	93	60-130
Hexacosane	0.137	0.123	112	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 : 1020ml Final Volume : 5ml
Prepared by : POreto Analyzed by : SDeeso

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/04/22 09:35
Project	: 996776	Date Received:	04/06/22
Batch No.	: 22D028	Date Extracted:	04/06/22 15:15
Sample ID	: 202204050267	Date Analyzed:	04/07/22 19:01
Lab Samp ID:	22D028-01	Dilution Factor:	1
Lab File ID:	LD07025A	Matrix:	WATER
Ext Btch ID:	22DSD006W	% Moisture:	NA
Calib. Ref.:	LD07006A	Instrument ID:	D5

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JP8	ND	0.049	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.455	0.490	93	60-130
Hexacosane	0.137	0.123	112	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 : 1020ml 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:	04/06/22 15:15
Project	: 996776	Date Received:	04/06/22
Batch No.	: 22D028	Date Extracted:	04/06/22 15:15
Sample ID	: MBLK1W	Date Analyzed:	04/07/22 14:06
Lab Samp ID:	DSD006WB	Dilution Factor:	1
Lab File ID:	LD07010A	Matrix:	WATER
Ext Btch ID:	22DSD006W	% Moisture:	NA
Calib. Ref.:	LD07004A	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	0.426	0.500	85	60-130
Hexacosane	0.133	0.125	106	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
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 996833
BATCH NO. : 22D026
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 202204050422	202204050422MS	202204050422MSD
LAB SAMPLE ID	: 22D026-01	22D026-01M	22D026-01S
LAB FILE ID	: LD07021A	LD07022A	LD07023A
DATE PREPARED	: 04/06/22 15:15	04/06/22 15:15	04/06/22 15:15
DATE ANALYZED	: 04/07/22 17:47	04/07/22 18:06	04/07/22 18:24
PREP BATCH	: 22DSD006W	22DSD006W	22DSD006W
CALIBRATION REF	: LD07004A	LD07004A	LD07004A

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	3.07	117	2.58	2.93	114	5	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.525	0.514	98	0.515	0.478	93	60-130
Hexacosane	0.131	0.151	115	0.129	0.143	111	60-130

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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 996776
BATCH NO. : 22D028
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSD006WB	DSD006WL
LAB FILE ID	: LD07010A	LD07011A
DATE PREPARED	: 04/06/22 15:15	04/06/22 15:15
DATE ANALYZED	: 04/07/22 14:06	04/07/22 14:24
PREP BATCH	: 22DSD006W	22DSD006W
CALIBRATION REF	: LD07004A	LD07004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.95	118	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.468	94	60-130
Hexacosane	0.125	0.136	109	60-130

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/06/22 15:15
Project	: 996776	Date Received:	04/06/22
Batch No.	: 22D028	Date Extracted:	04/06/22 15:15
Sample ID	: MBLK1W	Date Analyzed:	04/07/22 14:06
Lab Samp ID:	DSD006WB	Dilution Factor:	1
Lab File ID:	LD07010A	Matrix:	WATER
Ext Btch ID:	22DSD006W	% Moisture:	NA
Calib. Ref.:	LD07005A	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	0.426	0.500	85	60-130
Hexacosane	0.133	0.125	106	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
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 996369
BATCH NO. : 22D011
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 202204010310	202204010310MS	202204010310MSD
LAB SAMPLE ID	: 22D011-01	22D011-01M	22D011-01S
LAB FILE ID	: LD07015A	LD07016A	LD07017A
DATE PREPARED	: 04/06/22 15:15	04/06/22 15:15	04/06/22 15:15
DATE ANALYZED	: 04/07/22 15:38	04/07/22 15:57	04/07/22 16:34
PREP BATCH	: 22DSD006W	22DSD006W	22DSD006W
CALIBRATION REF:	LD07005A	LD07005A	LD07005A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.58	2.69	104	2.55	3.01	118	11	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.515	0.516	100	0.510	0.540	106	60-130
Hexacosane	0.129	0.137	106	0.127	0.137	107	60-130

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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 996776
BATCH NO. : 22D028
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSD006WB	J5D006WL
LAB FILE ID	: LD07010A	LD07012A
DATE PREPARED	: 04/06/22 15:15	04/06/22 15:15
DATE ANALYZED	: 04/07/22 14:06	04/07/22 14:43
PREP BATCH	: 22DSD006W	22DSD006W
CALIBRATION REF	: LD07005A	LD07005A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP5	ND	2.50	2.32	93	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.482	96	60-130
Hexacosane	0.125	0.127	102	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 996776
BATCH NO. : 22D028
METHOD : 3520C/8015B

MATRIX	: WATER	% MOISTURE:NA
DILUTION FACTOR	: 1	1
SAMPLE ID	: MBLK1W	LCS1W
LAB SAMPLE ID	: DSD006WB	J8D006WL
LAB FILE ID	: LD07010A	LD07013A
DATE PREPARED	: 04/06/22 15:15	04/06/22 15:15
DATE ANALYZED	: 04/07/22 14:06	04/07/22 15:01
PREP BATCH	: 22DSD006W	22DSD006W
CALIBRATION REF	: LD07006A	LD07006A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP8	ND	2.50	2.16	86	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.509	102	60-130
Hexacosane	0.125	0.134	107	60-130

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

Client	: EUROFINS EATON ANALYTICAL	Date Collected:	04/06/22 15:15
Project	: 996776	Date Received:	04/06/22
Batch No.	: 22D028	Date Extracted:	04/06/22 15:15
Sample ID	: MBLK1W	Date Analyzed:	04/07/22 14:06
Lab Samp ID	: DSD006WB	Dilution Factor:	1
Lab File ID	: LD07010A	Matrix:	WATER
Ext Btch ID	: 22DSD006W	% Moisture:	NA
Calib. Ref.	: LD07006A	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	0.426	0.500	85	60-130
Hexacosane	0.133	0.125	106	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
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 996369
BATCH NO. : 22D011
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR	: 1	1	1
SAMPLE ID	: 202204010311	202204010311MS	202204010311MSD
LAB SAMPLE ID	: 22D011-02	22D011-02M	22D011-02S
LAB FILE ID	: LD07018A	LD07019A	LD07020A
DATE PREPARED	: 04/06/22 15:15	04/06/22 15:15	04/06/22 15:15
DATE ANALYZED	: 04/07/22 16:52	04/07/22 17:10	04/07/22 17:29
PREP BATCH	: 22DSD006W	22DSD006W	22DSD006W
CALIBRATION REF	: LD07006A	LD07006A	LD07006A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.55	2.57	101	2.53	2.94	116	13	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.510	0.498	98	0.505	0.541	107	60-130
Hexacosane	0.127	0.142	111	0.126	0.139	110	60-130

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

996776

METHOD SW8015C
ALCOHOLS BY GC

SDG#: 22D028

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 996776

SDG : 22D028

METHOD SW8015C
ALCOHOLS BY GC

One(1) water sample was received on 04/06/22 to be analyzed for Alcohols by GC in accordance with Method SW8015C 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. MED003WB - 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. MED003WL/MED003WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample
Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Ethanol was within MS QC limits in D028-01M/D028-01S. Refer to Matrix QC summary form for details.

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

LAB CHRONICLE
ALCOHOLS BY GC

Client : EUROFINS EATON ANALYTICAL
Project : 996776

SDG NO. : 22D028
Instrument ID : GCT050

WATER

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
MBLK1W	MED003WB	1	NA	04/06/2216:16	NA	TD06004A	TD06002A	MED003W	Method Blank
LCS1W	MED003WL	1	NA	04/06/2216:30	NA	TD06005A	TD06002A	MED003W	Lab Control Sample (LCS)
LCD1W	MED003WC	1	NA	04/06/2216:51	NA	TD06006A	TD06002A	MED003W	LCS Duplicate
202204050267	D028-01	1	NA	04/06/2217:06	NA	TD06007A	TD06002A	MED003W	Field Sample
202204050267MS	D028-01M	1	NA	04/06/2217:21	NA	TD06008A	TD06002A	MED003W	Matrix Spike Sample (MS)
202204050267MSD	D028-01S	1	NA	04/06/2217:36	NA	TD06009A	TD06002A	MED003W	MS Duplicate (MSD)

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8015C
ALCOHOLS BY GC

Client : EUROFINS EATON ANALYTICAL	Date Collected: 04/04/22
Project : 996776	Date Received: 04/06/22
Batch No. : 22D028	Date Extracted: NA
Sample ID: 202204050267	Date Analyzed: 04/06/22 17:06
Lab Samp ID: D028-01	Dilution Factor: 1
Lab File ID: TD06007A	Matrix : WATER
Ext Btch ID: MED003W	% Moisture : NA
Calib. Ref.: TD06002A	Instrument ID : GCT050

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

RL : Reporting Limit

QC SUMMARIES

METHOD SW8015C
ALCOHOLS BY GC

Client : EUROFINS EATON ANALYTICAL	Date Collected: NA
Project : 996776	Date Received: NA
Batch No. : 22D028	Date Extracted: NA
Sample ID: MBLK1W	Date Analyzed: 04/06/22 16:16
Lab Samp ID: MED003WB	Dilution Factor: 1
Lab File ID: TD06004A	Matrix : WATER
Ext Btch ID: MED003W	% Moisture : NA
Calib. Ref.: TD06002A	Instrument ID : GCT050

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

RL : Reporting Limit

EMAX QUALITY CONTROL DATA
LCS/LCD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 996776
BATCH NO.: 22D028
METHOD: METHOD SW8015C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	MBLK1W				
LAB SAMP ID:	MED003WB	MED003WL	MED003WC		
LAB FILE ID:	TD06004A	TD06005A	TD06006A		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	NA
DATE ANALYZED:	04/06/2216:16	04/06/2216:30	04/06/2216:51	DATE RECEIVED:	NA
PREP. BATCH:	MED003W	MED003W	MED003W		
CALIB. REF:	TD06002A	TD06002A	TD06002A		

ACCESSION:

PARAMETER	BLNK RSLT (ug/L)	SPIKE AMT (ug/L)	BS RSLT (ug/L)	BS % REC	SPIKE AMT (ug/L)	BSD RSLT (ug/L)	BSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethanol	ND	10000	9680	97	10000	9600	96	1	60-130	30

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 996776
BATCH NO.: 22D028
METHOD: METHOD SW8015C

MATRIX:	WATER			% MOISTURE:	NA
DILUTION FACTOR:	1	1	1		
SAMPLE ID:	202204050267				
LAB SAMP ID:	D028-01	D028-01M	D028-01S		
LAB FILE ID:	TD06007A	TD06008A	TD06009A		
DATE EXTRACTED:	NA	NA	NA	DATE COLLECTED:	04/04/22
DATE ANALYZED:	04/06/2217:06	04/06/2217:21	04/06/2217:36	DATE RECEIVED:	04/06/22
PREP. BATCH:	MED003W	MED003W	MED003W		
CALIB. REF:	TD06002A	TD06002A	TD06002A		

ACCESSION:

PARAMETER	SMPL RSLT (ug/L)	SPIKE AMT (ug/L)	MS RSLT (ug/L)	MS % REC	SPIKE AMT (ug/L)	MSD RSLT (ug/L)	MSD % REC	RPD (%)	QC LIMIT (%)	MAX RPD (%)
Ethanol	ND	10000	8880	89	10000	9040	90	2	60-130	30

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 # 996776 Job # 1000014
Physis Project ID: 1407003-233

Dear Debbie,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 4/6/2022. 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

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

PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-233

Folder # 996776 Job # 1000014

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
96368	202204050267	HALAWA WELLS 2 (331-024-WL064)	4/4/2022	9:35	Samplewater	Not Specified

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

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

1904 E. Wright Circle Anaheim, CA 92806 (714) 602-5320 fax (714) 602-5321 www.physislabs.com CA ELAP #2769

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

Acid Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 96368-R1	**202204050267 HALAWA WELLS 2 (**	**Matrix: Samplewater**					**Sampled:**	**04-Apr-22**	**9:35**	**Received:**	**06-Apr-22**
(2,4,6-Tribromophenol)	EPA 625.1	% Recovery	57	1			Total		O-35138	07-Apr-22	13-May-22
(d5-Phenol)	EPA 625.1	% Recovery	23	1			Total		O-35138	07-Apr-22	13-May-22
2,4,5-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
2,4,6-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
2,4-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
2,4-Dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	07-Apr-22	13-May-22
2,6-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-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	07-Apr-22	13-May-22
2,6-Di-tert-butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
2-Chlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
2-Methyl-4,6-dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	07-Apr-22	13-May-22
2-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	07-Apr-22	13-May-22
2-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	07-Apr-22	13-May-22
3+4-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	07-Apr-22	13-May-22
4-Chloro-3-methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	07-Apr-22	13-May-22
4-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	07-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	07-Apr-22	13-May-22
Benzoic Acid	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	07-Apr-22	13-May-22
Benzyl Alcohol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	07-Apr-22	13-May-22
Pentachlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
Phenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total		O-35138	07-Apr-22	13-May-22
p-tert-Butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-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: 96368-R1	**202204050267 HALAWA WELLS 2 (**	**Matrix: Samplewater**					**Sampled: 04-Apr-22 9:35**			**Received: 06-Apr-22**	
2-Chloronaphthalene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
2-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
3-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
4-Bromophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
4-Chloroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
4-Chlorophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
4-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
Aniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
Benzidine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
Bis(2-Chloroethoxy) methane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
Bis(2-Chloroethyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
Bis(2-Chloroisopropyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
D benzofuran	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
Hexachloroethane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
Nitrobenzene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
N-Nitrosodi-n-propylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-Apr-22	13-May-22
N-Nitrosodiphenylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35138	07-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: 96368-R1	**202204050267 HALAWA WELLS 2 (**	**Matrix: Samplewater**					**Sampled:**	**04-Apr-22**	**9:35**	**Received:**	**06-Apr-22**
(d10-Acenaphthene)	EPA 625.1	% Recovery	87	1			Total		O-35138	07-Apr-22	13-May-22
(d10-Phenanthrene)	EPA 625.1	% Recovery	94	1			Total		O-35138	07-Apr-22	13-May-22
(d12-Chrysene)	EPA 625.1	% Recovery	91	1			Total		O-35138	07-Apr-22	13-May-22
(d12-Perylene)	EPA 625.1	% Recovery	95	1			Total		O-35138	07-Apr-22	13-May-22
(d8-Naphthalene)	EPA 625.1	% Recovery	75	1			Total		O-35138	07-Apr-22	13-May-22
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Benzo[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Benzo[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Benzo[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Benzo[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Benzo[k]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
D benz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
D benzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
D benzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22

PHYSIS Project ID: 1407003-233
Client: Eurofins Eaton Analytical
Project: Folder # 996776 Job # 1000014

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	07-Apr-22	13-May-22
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-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	07-Apr-22	13-May-22
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-Apr-22	13-May-22
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35138	07-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: 96367-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							

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: 96367-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: 96367-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: 96367-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: 96367-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: 96367-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: 96367-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: 96367-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: 96367-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: 96368

RT	Area Pct	Concentration (ng/L)	Library/ID	Cas Number	Qual
30.68	6.1260	1111	Anthracene-D10-	1517-22-2	95
74.77	10.7773	1955	5H-[1]benzopyrano[3,4-c]pyridin-5-one, 4-amino-2-phenyl-	1010402-00-5	64
25.15	3.0159	547	8-Bromo-2,3,4,5-tetrahydro-1H-pyrido[4,3-b]indole	497261-38-8	53
74.77	2.9361	533	Fumaric acid, naphth-2-yl naphth-2-ylmethyl ester	1000405-83-8	54
65.08	2.4641	447	,3-Pentafluoropropionyl)amino]methyl]phenyl]methyl]-2,2,3,3,3-pentafluor	1000373-22-2	44
25.15	1.6704	303	Peroxide, diethyl	628-37-5	48
30.69	0.8847	160	2,3-Dihydro-8-hydroxyfuro(2,3-b)quinoline	95172-49-9	60
65.09	0.8358	152	3-[2-(Furan-2-yl)-[1,2,4]triazolo[1,5-a]pyrimidin-7-yl]pyridine	1000443-42-9	55

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

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Submittal Form

Date: 4/6/2022

*REPORTING REQUIRMENTS: *Do Not Combine Reports with any other samples submitted under different Folder Numbers!*
Report & Invoice must have the Folder # **996776** 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.

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

Anaheim, CA 92806-6028

Phone: 714-602-5320 Fax:

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**

Folder #: **996776**
Report Due: **04/08/2022**

Sample ID	Client Sample ID for reference onl	Sample Date & Time	Matrix	Clip Code	PWSID
202204050267	HALAWA WELLS 2 (331-024-WL064)	04/04/22 0935	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 Base Neutral Extractable in ug/L
EPA 625	EPA 625	625 Acid Extractable in ug/L

Relinquished by: [signature] Sample Control Date 4/6/22 Time 1340

Received by: [signature] Date 4/6/22 Time 1340

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

750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016 Tel (626) 386-1100 Fax (866) 988-3757 www.EurofinsUS.com/Eaton

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

PHYSIS
ENVIRONMENTAL LABORATORIES, INC.

Project Iteration ID: 1407003-233
Client Name: Eurofins Eaton Analytical
Project Name: Folder # 996776 Job # 1000014
COC Page Number: 2 of 2
Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: YC
2. Date Received: 4/6/22
3. Time Received: 1340
4. Client Name: Eurofins
5. Courier Information: (Please circle)
   - (Client) • UPS • Area Fast • DRS
   - FedEx • GSO/GLS • Ontrac • PAMS
   - PHYSIS Driver:
     - i. Start Time:_____ iii. Total Mileage:_____
     - ii. End Time:_____ 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): 6-3 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: RGH

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:

See Temp