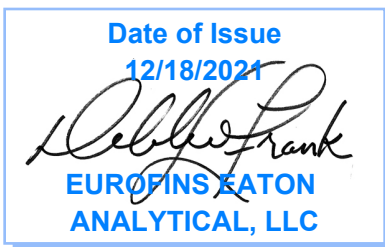


750 Royal Oaks Drive, Suite 100
Monrovia, California 91016-3629
Tel: (626) 386-1100
Fax: (866) 988-3757
1 800 566 LABS (1 800 566 5227)

Laboratory Report

for

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



Utah ELCP CA00006

DEB: Debbie L Frank
Project Manager

Report: 973704
Project: RED-HILL
Group: 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

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	Test(s)	Method(s)	Potable Water *	Waste Water
Enterococci	Enterolert	x	x	Gross Alpha coprecipitation	SM 7110 C	x	x
Escherichia coli (Enumeration)	SM 9221 B.1 SM 9221 F	x		Hardness	SM 2340 B	x	x
Fecal Coliform (P/A and Enumeration)	SM 9221 C (MTF/EC), SM 9221 E (MTF/EC)	x	x	Hexavalent Chromium	EPA 218.6,	x	x
Fecal Streptococci and Enterococci	SM 9230 B	x	x	Hexavalent Chromium	EPA 218.7,	x	
Heterotrophic Bacteria	SM 9215 B	x		Hexavalent Chromium	SM 3500-Cr B		x
Legionella	Legiolert®	x		Inorganic Anions and DBPs	EPA 300.0	x	x
Pseudomonas aeruginosa	Idexx Pseudalart	x		Norganic Anions and DBPs	EPA 300.1	x	
Total Coliform (P/A and Enumeration)	SM 9221A, SM 9221B, SM 9221 C	x	x	Kjeldahl Nitrogen	EPA 351.2		x
Total Coliform, Total Coliform with Chlorine Present	SM 9221 B	x	x	Metals	EPA 200.7, EPA200.8	x	x
Total Coliform/E. coli (P/A and Enumeration, Idexx Colilert, Idexx Colilert 18, Colisure)	SM 9223	x		Nitrosamines	EEA-Agilent 521.1 (GCMS-24250)	x	
Total Microcystins and Nodularins	EPA 546	X		Nitrate/Nitrite Nitrogen	EPA 353.2	x	x
Yeast and Mold	SM 9610	x		Odor	SM2150B	x	
1,2,3-Trichloropropane (TCP) at 5 PPT	CA SRL 524M-TCP	x		Organohalide Pesticides and PCB	EPA 505	x	
1,4-Dioxane	EPA 522	x		Ortho Phosphate	SM 4500P E	x	
2,3,7,8-TCDD	Modified EPA 1613 B	x		Oxyhalides Disinfection Byproducts	EPA 317.0	x	
Acrylamide	+ LCMS 2440)	x		Perchlorate	EPA 331.0	x	
Algal Toxins/Microcystin	+ LCMS 3570	x		Perchlorate (Low and High Levels)	EPA 314.0	x	
Alkalinity	SM 2320B	x	x	Perfluorinated Alkyl Acids	EPA 533, EPA 537, EPA 537.1	x	
Ammonia	EPA 350.1, SM 4500-NH3 H		x	PPCP and EDC	+ LCMS-2443	x	
Asbestos	EPA 100.2	x	x	pH	EPA 150.1 SM 4500-H+ B	x	x
Bicarbonate Alkalinity as HCO3	SM 2330 B	x	x	Phenolics – Low Level	+WC 2493 (EPA 420.2 and EPA 420.4 MOD)	x	x
BOD/CBOD	SM 5210 B		x	Phenylurea Pesticides/Herbicides	+ LCMS-2448	x	
Bromate	+ LCMS- 2447	x		Radium-226, Radium-228	GA Tech (Rad-2374)	x	
Carbonate as CO3	SM 2330 B	x	x	Radon-222	SM 7500RN	x	
Carbonyls	EPA 556	x	x	Residue (Filterable)	SM 2540C	x	x
Chemical Oxygen Demand	EPA 410.4, SM 5220D		x	Residue (Non-Filterable)	SM 2540D		x
Chlorinated Acids	EPA 515.4	x		Residue (Total)	SM 2540B		x
Chlorine Dioxide	Palin Test Chlordio X Plus, SM 4500-CLO2 D	x		Residue (Volatile)	EPA 160.4		x
Chlorine, Free, Combined, Total Residual, Chloramines	SM 4500-Cl G	x		Semi-Volatile Compounds	EPA 525.2	x	
Color	SM2120B	x		Silica	SM 4500-SiO2 C	x	x
Conductivity	EPA 120.1, SM 2510B	x	x	Sulfide	SM 4500-S D		x
Corrosivity (Langelier Index), Carbonate as CO3, Hydroxide as OH Calculated	SM 2330 B	x		Sulfite	SM 4500-SO3 B	x	x
Cyanide (Amenable)	SM 4500-CN G	x	x	Surfactants	SM 5540C	x	x
Cyanide (Free)	SM 4500CN F	x	x	Taste and Odor	SM 6040 E	x	
Cyanide (Total)	EPA 335.4	x	x	Total Organic Carbon	SM 5310 C	x	x
Cyanogen Chloride (Screen)	+ 335 Mod (WC-24467)	x		Total Phenols	EPA 420.1		x
Diquat and Paraquat	EPA 549.2	x		Total Phenols	EPA 420.4	x	x
DBP and HAA	SM 6251 B	x		Triazine Pesticides and their Degradates	+ LCMS-3617	x	
Dissolved Organic Carbon	SM 5310 C	x		Turbidity	EPA 180.1	x	x
Dissolved Oxygen	SM 4500-O G		x	Uranium by ICP/MS	EPA 200.8	x	
EDB/DCBP/TCP	EPA 504.1	x		UV 254 Organic Constituents	SM 5910B	x	
EDB/DBCP and Disinfection Byproducts	EPA 551.1	x		VOCs	EPA 524.2	x	
EDTA and NTA	+ WC-2454	x		VOCs	+ (GCMS 2412) by EPA 524.2 modified	x	
Endothall	EPA 548.1, +(LCMS-2445)	x					
Fluoride	SM 4500F C	x	x				
Glyphosate	EPA 547	x					
Glyphosate and AMPA	+ LCMS-3618	x					
Gross Alpha and Gross Beta	EPA 900.0	x	x				

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

(+) In-House Method

Acknowledgement of Samples Received

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

Attn: Erwin Kawata
 Phone: 808-748-5091

Client ID: HONOLULU
 Folder #: 973704
 Project: RED-HILL
 Sample Group: 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 **December 08, 2021 at 1220**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical, LLC.

Sample #	Sample ID	Sample Date
<u>202112070428</u>	HALAWA SHAFT-331-241-TP401	12/06/2021 1004
	Chloride Nitrate as Nitrogen by IC Nitrite Nitrogen by IC Sulfate	
<u>202112080692</u>	HALAWA SHAFT-331-241-TP401	12/06/2021 1004
	@ICPMS @525PLUS C PLUS TICS @625A_Physis C @625BN_Physis C @625PAH_Physis_TICS_C @8015 Ethanol_Subbed @VOASDWA C plus plus TICs C (SUB)Gas Fraction Hydrocarbons Mercury ICPMS Miscellaneous Charges TPH 8015 Diesel and Motor Oil TPH 8015 Jet Fuel 5 TPH 8015 Jef Fuel 8	
<u>202112080693</u>	TRAVEL BLANK::HALAWA SHAFT-331-241-TP401	12/06/2021 1004
	@VOASDWA C plus plus TICs TBC (SUB)Gas Fraction Hydrocarbons	
<u>202112090302</u>	RUSH 625 524 8015 200.8 525	12/06/2021 10:04
	RUSH	

Test Description

- @ICPMS -- ICPMS Metals
- @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
- @VOASDWA C plus plus TICs C -- Volatile Organics by GCMS
- @VOASDWA C plus plus TICs TBC -- Volatile Organics by GCMS



Eaton Analytical

CHAIN OF CUSTODY RECORD

EUROFINS EATON ANALYTICAL USE ONLY:

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

Phone: 626 386 1100
Fax: 626 386 1101

800 566 LABS (800 566 5227)

LOGIN COMMENTS:

SAMPLES CHECKED AGAINST COC BY: JD

SAMPLES LOGGED IN BY: SM

SAMPLE TEMP RECEIVED AT:

Colton / No. California / Arizona

Monrovia

____ °C (Compliance: 4 ± 2 °C)

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: FedEx

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

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME:

HONOLULU BOARD OF WATER SUPPLY

PROJECT CODE:

RED HILL-Weekly

EEA CLIENT CODE:

SAMPLE GROUP:

4Q2021

TAT requested: **RUSH**

STD ___ 1 wk ___ X ___ 3 day ___ 2 day ___ 1 day ___

SAMPLE DATE

SAMPLE ID

MATRIX *

FIELD DATA

FIELD DATA

12/6/21

HI0000331-241

CFW

Red Hill

X

(check for yes)

COMPLIANCE SAMPLES

- Requires state forms

Type of samples (circle one): ROUTINE SPECIAL CONFIRMATION (eg. SDWA, Phase V, NPDES, FDA, ...)

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

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

(check for yes)

NON-COMPLIANCE SAMPLES

REGULATION INVOLVED:

SAMPLER COMMENTS

* MATRIX TYPES: RSW = Raw Surface Water
RGW = Raw Ground Water

CFW = Chlor(am)inated Finished Water
FW = Other Finished Water

SEAW = Sea Water
WW = Waste Water

BW = Bottled Water
SW = Storm Water

SO = Soil
SL = Sludge

O = Other - Please Identify

SIGNATURE

PRINT NAME

COMPANY/TITLE

TIME

SAMPLED BY:

[Signature]

RELINQUISHED BY: E Juagdan

BWS HONOLULU

12/6/21

1004

RECEIVED BY:

[Signature]

E Juagdan

BWS HONOLULU

12/7/21

1200

RELINQUISHED BY:

[Signature]

EBW

12/8/21

1220

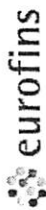
RECEIVED BY:

[Signature]

BWS HONOLULU

12/8/21

1220



Eaton Analytical

INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

SAMPLE TEMP RECEIVED:

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

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 031A (Observation = 3.4 °C) (Corr.Factor = -0.2 °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: Samples with Headspace (see below):

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

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

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

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

RECEIVED BY: _____ SIGNATURE _____ PRINT NAME _____ COMPANY/TITLE Eurofins Eaton Analytical DATE _____ TIME _____

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

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

Created Date & Time: 11/29/2021 5:32:18PM

Kit #: 306028



Created By: Debbie L Frank - [DEB]
Deliver By: 12/06/2021
STG: Bottle Orders
Ice Type: G

Client ID: HONOLULU



Project Code: RED-HILL Bottle Orders
Group Name: Red-Hill Expanded List (Albuquerque+)
PO#/JOB#: C20525101 exp 05312023
Description: HALAWA SHAFT - Stock 112921

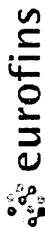
Note: Sampler Please return this paper with your samples

Ship Sample Kits to
Honolulu Board of Water Supply
630 South Beretania Street
Chemistry Lab
Honolulu, HI 96843
Attn: Ron Fenstermacher
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 #
1	Chloride, Nitrate as Nitrogen by IC, Nitrite Nitrogen by IC, Sulfate	1	
1	@625A_Physis C	2	
1	@625BN_Physis C	2	
1	@625PAH_Physis_TICs_C	4	
1	TPH 8015 Diesel and Motor Oil_C, TPH 8015 Jet Fuel 5_C, TPH 8015 Jet Fuel 8_C	9	
1	@525PLUS C PLUS TICs	2	UN1789
1	Fluoride - NOT EDC	1	
1	Alkalinity in CaCO3 units, PH (H3=past HT not compliant), Specific Conductance	1	
1	@VOA-TBA C	4	UN1789
1	Acetone by 624_Subbed C	4	UN1789
1	Acetone by 624_Subbed C TB	2	UN1789
1	@504MOD C	3	
1	@505_EAL_@ML505	4	
1	8015 Gas_C	3	
1	@504MOD TB C	2	
1	8015 Gas_C TB	2	
1	@VOASDWA C plus TICs TBC	3	UN1789
1	@VOASDWA C plus TICs C	3	UN1789
1	@8015 Ethanol_Subbed	4	
1	@ICPMS, Calcium Total ICAP, Magnesium Total ICAP, Mercury ICAPMS, Potassium Total ICAP, Sodium Total ICAP	1	UN2031
1	Total Dissolved Solid (TDS)	1	
1	Bromide by 300.0	1	



Eaton Analytical

Kit Order for Honolulu Board of Water Supply

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 (666) 988-3757

Created Date & Time: 11/29/2021 5:32:18PM

Note: Sampler Please return this paper with your samples

Client ID: HONOLULU
Project Code: RED-HILL Bottle Orders
Group Name: Red-Hill Expanded List (Albuquerque+)
PO#/JOB#: C20525101 exp 05312023
Description: HALAWA SHAFT - Stock 112921

Kit #: 306028
Created By: Debbie L Frank - [DEB]
Deliver By: 12/06/2021
STG: Bottle Orders
Ice Type: G

Ship Sample Kits to
Honolulu Board of Water Supply
630 South Beretania Street
Chemistry Lab
Honolulu, HI 96843
Attn: Ron Fenstermacher
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 #
Sum Tests: 22		Sum Bottles: 59	
Comments			
2nd MS/MSD SITE ID: 331-241 HALAWA SHAFT			
SAMPLER: Eight 1 LITER AMBER GLASS BOTTLES FOR 625 SERIES and Nine 1 LITER AMBER GLASS BOTTLES FOR TPH 8015 SERIES.			
SHIPPING: Travel Blanks - TBAM/TBE, VOASDWA - Prepare TBs in the VOA LAB. Label Cooler on TOP and right below both Handles with Site description of contents (use extra Container Labels)			
ASM: Be sure to coordinate Follow-up as needed for any new detections in Field samples. Acetone - follow-ups need to use EPA 624			

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

TO C CHUCK

EUROFINS EATON ANALYTICAL, INC

750 ROYAL OAKS DR

SUITE 100

MONROVIA CA 91016

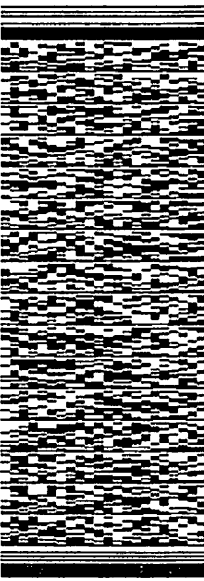
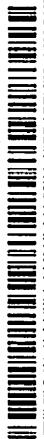
(626) 386-1178

REF

INV

PO

DEPT



2212221108140

560J3/E934FE:4A

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

Warning: Use only the printed original label for shipping. Using a photocopy of this label for shipping purposes is fraudulent and could result in additional billing charges, along with the cancellation of your FedEx account number.

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

WED - 08 DEC 11:30A

PRIORITY OVERNIGHT

3 of 3

MPS# 7754 2012 5923

0263

Mstr# 7754 2012 4880

0201

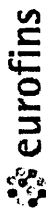
91016

WZ WHPA

CA-US

BUR





Eaton Analytical

INTERNAL CHAIN OF CUSTODY RECORD

EAA Folder Number:

SAMPLE TEMP RECEIVED:

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

SAMPLES REC'D DAY OF COLLECTION? Yes / No

IR Gun ID = 031A (Observation = 3.0 °C) (Corr. Factor = 0.2 °C) (Final = 2.8 °C)

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

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

Compliance Acceptance Criteria:

- 1) Chemistry: >0, ≤6°C, not frozen (NELAP) (if received after 24 hrs of sample collection)
- 2) Microbiology, Distribution: < 10°C, not frozen (can be ≥10°C if received on ice the same day as sample collection, within 8 hours)
- 3) Microbiology, Surface Water: < 10°C (if received after 2 hours of sample collection)

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

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

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

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

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

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

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

Exempt from headspace concerns: Methods 515.4, HAA(6251.552), 505, SPME,@CH, 532LCMS, 556, 536, Anatoxin, LCMS methods using 40 ml vials, International clients:

Samp ID	Bottle #	Nons/<6	>6mm	Test	Samp ID	Bottle #	Nons/<6	>6mm	Test

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

RECEIVED BY: [Signature] SIGNATURE: Joe Sauer PRINT NAME: _____ DATE: 12/6/21 TIME: 1146

SAMPLES CHECKED AGAINST COC BY: _____ SIGNATURE: _____ PRINT NAME: _____ DATE: _____ TIME: _____

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

SHIP DATE: 07DEC21
ACTWGT: 50.00 LB
CAD: 100205419/NET4400

BILL RECIPIENT

TO C CHUCK

EUROFINS EATON ANALYTICAL, INC

750 ROYAL OAKS DR

SUITE 100

MONROVIA CA 91016

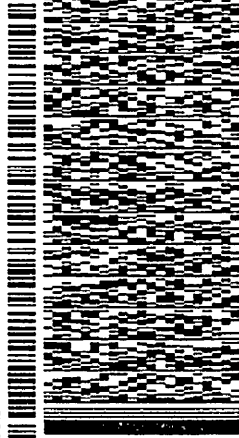
(626) 386-1178

REF

INV

PO

DEPT



212222101071W

56DJ3E934FE4A

WED - 08 DEC 11:30A

PRIORITY OVERNIGHT

1 of 3

TRK# 7754 2012 4880

0201

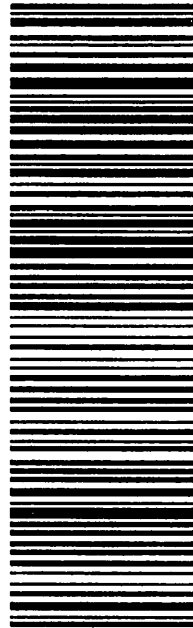
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Tel: (626) 386-1100
 Fax: (866) 988-3757
 1 800 566 LABS (1 800 566 5227)

Report: 973704
Project: RED-HILL
Group: 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 625 PAHs, BNA and ACIDs are submitted by Physis Environmental Laboratories, Inc.

Results for Ethanol, TPH Gasoline, Diesel, Motor Oil and Jet Fuels are submitted by Emax Laboratories

ND reporting (subcontract lab reports)

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

Tentatively Identified compounds (TIC).

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

@625mod (Low Level SVOCs by GCMS (PAH/BNA - Base/Neutral/Acid Extractables)

See subcontractor's report. Physis reports TICs in addendum report titled Total Ion Chromatogram.

@524.2 (VOC by GCMS)

202112080692 524.2 TICs None Detected

202112080693 524.2 TICs

Compound	Estimated Retention Time	Estimated Concentration
Unknown compound	1.305 minutes	1.63 ug/L
Furfural	9.584 minutes	1.71 ug/L

@525.2 (SVOC by GCMS)

202112080692 @525.2 TICs - None detected.

Testing is reduced per client request 12/10/21.

(625-SVOC LL)

Benzoic Acid is not regulated. It is a common artifact of method 625.

N1 - see 625 Acid fraction for results.

Project change per communication with Erwin Kawata, 071718

Ethanol - ELLE method 1671 2000 ug/L. EMAX method 8015, RL 2000 ug/L. MRLs are the same.

MTBE - 524.3 0.02 ug/L (20 ng/L) is not reported, method decommissioned. See 524.2 at elevated RL of 0.5 ug/L.

TBA - 524.3 1 ug/L is not reported, method decommissioned. See 524.2 at elevated RL of 2 ug/L

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Laboratory Comments

Report: 973704
Project: RED-HILL
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(Albuquerque+)

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ACETONE MRL elevated to 500 due to matrix artifact of preservation, project spec change
Erwin Kawata. 021821

Flags Legend:

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.

M2 - Matrix spike recovery was low; the associated blank spike recovery was acceptable.

N1 - See case narrative.

R7 - LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

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 (Albuquerque+)

Honolulu Board of Water Supply
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Samples Received on:
 12/08/2021 1220

Analyzed	Analyte	Sample ID	Result	HI Limit	Units	MRL
		202112070428				
		<u>HALAWA SHAFT-331-241-TP401</u>				
12/08/2021 15:05	Chloride		140	250	mg/L	2.5
12/07/2021 19:19	Nitrate as Nitrogen by IC		0.56	10	mg/L	0.10
12/07/2021 19:19	Sulfate		27	250	mg/L	1.0
		202112080692				
		<u>HALAWA SHAFT-331-241-TP401</u>				
12/12/2021 00:00	Benzoic acid		0.455		ug/L	0.2
12/09/2021 19:19	Chromium Total ICAP/MS		2.0	100	ug/L	1.0

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 (Albuquerque+)

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Samples Received on:
 12/08/2021 1220

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
<u>HALAWA SHAFT-331-241-TP401 (202112070428)</u>						Sampled on 12/06/2021 1004			
EPA 300.0 - Nitrate, Nitrite by EPA 300.0									
	12/07/21 19:19		1372152	(EPA 300.0)	Nitrate as Nitrogen by IC	0.56	mg/L	0.10	2
	12/07/21 19:19		1372152	(EPA 300.0)	Nitrite Nitrogen by IC	ND (M2)	mg/L	0.10	2
EPA 300.0 - Chloride, Sulfate by EPA 300.0									
	12/08/21 15:05		1372475	(EPA 300.0)	Chloride	140	mg/L	2.5	5
	12/07/21 19:19		1372159	(EPA 300.0)	Sulfate	27	mg/L	1.0	2
<u>HALAWA SHAFT-331-241-TP401 (202112080692)</u>						Sampled on 12/06/2021 1004			
EPA 200.8 - ICPMS Metals									
12/08/21	12/09/21 19:19	1372322	1372557	(EPA 200.8)	Antimony Total ICAP/MS	ND	ug/L	1.0	1
12/08/21	12/09/21 19:19	1372322	1372557	(EPA 200.8)	Arsenic Total ICAP/MS	ND	ug/L	1.0	1
12/08/21	12/09/21 19:19	1372322	1372557	(EPA 200.8)	Beryllium Total ICAP/MS	ND	ug/L	1.0	1
12/08/21	12/09/21 19:19	1372322	1372557	(EPA 200.8)	Cadmium Total ICAP/MS	ND	ug/L	0.50	1
12/08/21	12/09/21 19:19	1372322	1372557	(EPA 200.8)	Chromium Total ICAP/MS	2.0	ug/L	1.0	1
12/08/21	12/09/21 19:19	1372322	1372557	(EPA 200.8)	Copper Total ICAP/MS	ND	ug/L	2.0	1
12/08/21	12/09/21 19:19	1372322	1372557	(EPA 200.8)	Lead Total ICAP/MS	ND	ug/L	0.50	1
12/08/21	12/09/21 19:19	1372322	1372557	(EPA 200.8)	Nickel Total ICAP/MS	ND	ug/L	5.0	1
12/08/21	12/09/21 19:19	1372322	1372557	(EPA 200.8)	Selenium Total ICAP/MS	ND	ug/L	5.0	1
12/08/21	12/09/21 19:19	1372322	1372557	(EPA 200.8)	Silver Total ICAP/MS	ND	ug/L	0.50	1
12/08/21	12/09/21 19:19	1372322	1372557	(EPA 200.8)	Thallium Total ICAP/MS	ND	ug/L	1.0	1
12/08/21	12/09/21 19:19	1372322	1372557	(EPA 200.8)	Zinc Total ICAP/MS	ND	ug/L	20	1
EPA 200.8 - Mercury ICPMS									
12/08/21	12/09/21 19:19	1372322	1372558	(EPA 200.8)	Mercury ICPMS	ND	ug/L	0.20	1
EPA 525.2 - Semivolatiles by GCMS									
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	2,4-DDD	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	2,4-DDE	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	2,4-DDT	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	4,4-DDD	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	4,4-DDE	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	4,4-DDT	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Acenaphthene	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Acetochlor	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Alachlor	ND	ug/L	0.050	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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Report: 973704
Project: RED-HILL
Group: 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:
 12/08/2021 1220

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Anthracene	ND	ug/L	0.020	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Atrazine	ND (R7,LK)	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.020	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.020	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.020	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Beta-BHC	ND (R7,LK)	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Bromacil	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Butachlor	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.50	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Caffeine by method 525mod	ND (R7)	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Chloroneb	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Chrysene	ND	ug/L	0.020	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Delta-BHC	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.60	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.60	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Diazinon (Qualitative)	ND (R7)	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Dieldrin	ND	ug/L	0.20	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Diethylphthalate	ND (LK)	ug/L	0.50	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Dimethoate	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.50	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1.0	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Endosulfan II (Beta)	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Endrin	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	EPTC	ND	ug/L	0.10	1

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Report: 973704
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Honolulu Board of Water Supply
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Samples Received on:
 12/08/2021 1220

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Fluoranthene	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Fluorene	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Heptachlor	ND	ug/L	0.040	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Hexachlorocyclopentadiene	ND (R7)	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Isophorone	ND (R7)	ug/L	0.50	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Lindane	ND (R7)	ug/L	0.040	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Malathion	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Methoxychlor	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Metolachlor	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Metribuzin	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Molinate	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Naphthalene	ND	ug/L	0.30	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Parathion	ND (LK)	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Pendimethalin	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.20	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Phenanthrene	ND	ug/L	0.040	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Propachlor	ND (R7,LK)	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Pyrene	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Simazine	ND (R7,LK)	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Terbacil	ND	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Terbutylazine	ND (R7,LK)	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Thiobencarb (ELAP)	ND	ug/L	0.20	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.050	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Trifluralin	ND (R7,LK)	ug/L	0.10	1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	99	%		1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Acenaphthene-d10	92	%		1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Chrysene-d12	93	%		1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Perylene-d12	89	%		1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Phenanthrene-d10	95	%		1
12/09/21	12/11/21 11:54	1372484	1373180	(EPA 525.2)	Triphenylphosphate	103	%		1

SW 8015B - (SUB)Gas Fraction Hydrocarbons

12/10/21	12/10/21 14:51			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.02	1
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SW 8015B - TPH 8015 Diesel and Motor Oil

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Report: 973704
Project: RED-HILL
Group: 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:
 12/08/2021 1220

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
12/09/21	12/10/21 19:26			(SW 8015B)	TPH Diesel	ND	mg/L	0.026	1
12/09/21	12/10/21 19:26			(SW 8015B)	TPH Motor Oil	ND	mg/L	0.052	1
EPA 8015 - Jet Fuel 5 C8-C18									
12/09/21	12/10/21 19:26			(EPA 8015)	Jet Fuel 5	ND	mg/L	0.052	1
EPA 625 - 625PAH in ug/L									
12/09/21	12/12/21 00:00			(EPA 625)	1-Methylnaphthalene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	1-Methylphenanthrene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	2,3,5-Trimethylnaphthalene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	2,4,6-Trichlorophenol	NA (N1)	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	2,6-Dimethylnaphthalene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	2-Methylnaphthalene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Acenaphthene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Acenaphthylene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Anthracene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Benz(a)Anthracene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Benzo(a)pyrene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Benzo(b)fluoranthene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Benzo(e)pyrene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Benzo(g,h,i)perylene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Benzo(k)fluoranthene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Biphenyl	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Chrysene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Dibenz(a,h)Anthracene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Dibenzo(a,l)pyrene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Dibenzothiophene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Fluoranthene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Fluorene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Naphthalene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Pentachlorophenol	NA	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	Perylene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Phenanthrene	ND	ug/L	0.005	1
12/09/21	12/12/21 00:00			(EPA 625)	Pyrene	ND	ug/L	0.005	1
EPA 8015 - Jet Fuel 8 C8-C18									
	12/10/21 19:26			(EPA 8015)	Jet Fuel 8	ND	mg/L	0.052	1
EPA 625 - 625 Acid Extractable in ug/L									
12/09/21	12/12/21 00:00			(EPA 625)	2,4,5-Trichlorophenol	ND	ug/L	0.1	1

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12/09/21	12/12/21 00:00			(EPA 625)	2,4,6-Trichlorophenol	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	2,4-Dichlorophenol	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	2,4-Dinitrophenol	ND	ug/L	0.2	1
12/09/21	12/12/21 00:00			(EPA 625)	2,6-Dichlorophenol	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	2,6-Di-tert-butyl-4-methylphenol	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	2,6-Di-tert-butylphenol	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	2-Chlorophenol	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	2-Methylphenol	ND	ug/L	0.2	1
12/09/21	12/12/21 00:00			(EPA 625)	2-Nitrophenol	ND	ug/L	0.2	1
12/09/21	12/12/21 00:00			(EPA 625)	4,6-Dinitro-2-methylphenol	ND	ug/L	0.2	1
12/09/21	12/12/21 00:00			(EPA 625)	4-Chloro-3-methyl phenol	ND	ug/L	0.2	1
12/09/21	12/12/21 00:00			(EPA 625)	4-Methylphenol	ND	ug/L	0.2	1
12/09/21	12/12/21 00:00			(EPA 625)	4-Nitrophenol	ND	ug/L	0.2	1
12/09/21	12/12/21 00:00			(EPA 625)	6-tert-Butyl-2,4-dimethylphenol	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	Benzoic acid	0.455	ug/L	0.2	1
12/09/21	12/12/21 00:00			(EPA 625)	Benzyl alcohol	ND	ug/L	0.2	1
12/09/21	12/12/21 00:00			(EPA 625)	pentachlorophenol	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	Phenol	ND	ug/L	0.2	1
12/09/21	12/12/21 00:00			(EPA 625)	p-tert-Butylphenol	ND	ug/L	0.1	1
EPA 625 - 625 Base Neutral Extractable in ug/L									
12/09/21	12/12/21 00:00			(EPA 625)	2-Chloronaphthalene	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	2-Nitroaniline	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	3-Nitroaniline	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	4-Bromophenylphenyl Ether	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	4-Chlorophenylphenyl Ether	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	4-Nitroaniline	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	Aniline	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	Benzidine	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	bis(2-Chloroethoxy)methane	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	bis(2-Chloroethyl)ether	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	bis(2-Chloroisopropyl) ether	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	Dibenzofuran	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	Disalicylidenepropanediamine	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	Hexachloroethane	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	Nitrobenzene	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	N-Nitrosodi-N-propylamine	ND	ug/L	0.1	1
12/09/21	12/12/21 00:00			(EPA 625)	N-Nitrosodiphenylamine	ND	ug/L	0.1	1

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12/09/21	12/12/21 00:00			(EPA 625)	p-Chloroaniline	ND	ug/L	0.1	1
SW8015C - Ethanol									
	12/09/21 12:57			(SW8015C)	Ethanol	ND	ug/L	2000	1
EPA 524.2 - Volatile Organics by GCMS									
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5.0	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	2-Hexanone	ND	ug/L	10	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Acetone	ND (FB)	ug/L	500	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Benzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Bromobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Bromoethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Bromoform	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Chloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Chloroform (Trichloromethane)	ND	ug/L	0.50	1

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12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Dibromomethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Dichloromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3.0	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Naphthalene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	o-Xylene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Styrene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3.0	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3.0	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Toluene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Total THM	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Total xylenes	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.50	1

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Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.30	1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	1,2-Dichloroethane-d4	99	%		1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	4-Bromofluorobenzene	106	%		1
12/09/21	12/09/21 19:40	1372837	1372838	(EPA 524.2)	Toluene-d8	97	%		1

TRAVEL BLANK::HALAWA SHAFT-331-241-TP401 (202112080693)

Sampled on 12/06/2021 1004

SW 8015B - (SUB)Gas Fraction Hydrocarbons

12/10/21	12/10/21 14:13			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.02	1
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EPA 524.2 - Volatile Organics by GCMS

12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5.0	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	2-Hexanone	ND	ug/L	10	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Acetone	ND	ug/L	500	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Benzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Bromobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Bromoethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Bromoform	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.50	1

Rounding on totals after summation.
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Tel: (626) 386-1100
 Fax: (866) 988-3757
 1 800 566 LABS (1 800 566 5227)

Report: 973704
Project: RED-HILL
Group: 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:
 12/08/2021 1220

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Chloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Chloroform (Trichloromethane)	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Dibromomethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Dichloromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3.0	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Naphthalene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	o-Xylene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Styrene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3.0	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3.0	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Toluene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Total THM	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Total xylenes	ND	ug/L	0.50	1

Rounding on totals after summation.
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Laboratory Data

Report: 973704
Project: RED-HILL
Group: 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:
 12/08/2021 1220

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.50	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.30	1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	1,2-Dichloroethane-d4	102	%		1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	4-Bromofluorobenzene	104	%		1
12/09/21	12/09/21 20:02	1372837	1372838	(EPA 524.2)	Toluene-d8	96	%		1

Rounding on totals after summation.
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Report: 973704
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(Albuquerque+)

Honolulu Board of Water Supply

Nitrate, Nitrite by EPA 300.0

Analytical Batch: 1372152

202112070428 HALAWA SHAFT-331-241-TP401

Analysis Date: 12/07/2021

Analyzed by: TLH

Chloride, Sulfate by EPA 300.0

Analytical Batch: 1372159

202112070428 HALAWA SHAFT-331-241-TP401

Analysis Date: 12/07/2021

Analyzed by: TLH

Chloride, Sulfate by EPA 300.0

Analytical Batch: 1372475

202112070428 HALAWA SHAFT-331-241-TP401

Analysis Date: 12/08/2021

Analyzed by: LUPE

ICPMS Metals

Prep Batch: 1372322 Analytical Batch: 1372557

202112080692 HALAWA SHAFT-331-241-TP401

Analysis Date: 12/09/2021

Analyzed by: DHX7

Mercury ICPMS

Prep Batch: 1372322 Analytical Batch: 1372558

202112080692 HALAWA SHAFT-331-241-TP401

Analysis Date: 12/09/2021

Analyzed by: DHX7

Volatile Organics by GCMS

Prep Batch: 1372837 Analytical Batch: 1372838

202112080692 HALAWA SHAFT-331-241-TP401

202112080693 TRAVEL BLANK::HALAWA SHAFT-331-241-TP401

Analysis Date: 12/09/2021

Analyzed by: KCP

Analyzed by: KCP

Semivolatiles by GCMS

Prep Batch: 1372484 Analytical Batch: 1373180

202112080692 HALAWA SHAFT-331-241-TP401

Analysis Date: 12/11/2021

Analyzed by: PAC

Tel: (626) 386-1100
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Report: 973704
 Project: RED-HILL
 Group: 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: 1372152					Analysis Date: 12/07/2021				
LCS1	Nitrate as Nitrogen by IC		2.5	2.61	mg/L	105	(90-110)		
LCS2	Nitrate as Nitrogen by IC		2.5	2.57	mg/L	103	(90-110)	20	1.5
MBLK	Nitrate as Nitrogen by IC			<0.0042	mg/L				
MRL_CHK	Nitrate as Nitrogen by IC		0.05	0.0528	mg/L	106	(50-150)		
MRLLW	Nitrate as Nitrogen by IC		0.013	0.0150	mg/L	120	(50-150)		
MS_202112070309	Nitrate as Nitrogen by IC	ND	1.3	2.66	mg/L	105	(80-120)		
MS_202112070428	Nitrate as Nitrogen by IC	0.56	1.3	3.12	mg/L	103	(80-120)		
MSD_202112070309	Nitrate as Nitrogen by IC	ND	1.3	2.66	mg/L	105	(80-120)	20	0.015
MSD_202112070428	Nitrate as Nitrogen by IC	0.56	1.3	3.14	mg/L	103	(80-120)	20	0.51
LCS1	Nitrite Nitrogen by IC		1	1.02	mg/L	102	(90-110)		
LCS2	Nitrite Nitrogen by IC		1	1.01	mg/L	101	(90-110)	20	0.99
MBLK	Nitrite Nitrogen by IC			<0.0050	mg/L				
MRL_CHK	Nitrite Nitrogen by IC		0.05	0.0498	mg/L	100	(50-150)		
MRLLW	Nitrite Nitrogen by IC		0.013	0.0127	mg/L	102	(50-150)		
MS_202112070309	Nitrite Nitrogen by IC	ND	0.5	0.897	mg/L	90	(80-120)		
MS_202112070428	Nitrite Nitrogen by IC	ND	0.5	0.732	mg/L	<u>73</u>	(80-120)		
MSD_202112070309	Nitrite Nitrogen by IC	ND	0.5	0.897	mg/L	90	(80-120)	20	0.045
MSD_202112070428	Nitrite Nitrogen by IC	ND	0.5	0.739	mg/L	<u>74</u>	(80-120)	20	0.92
Chloride, Sulfate by EPA 300.0 by EPA 300.0									
Analytical Batch: 1372159					Analysis Date: 12/07/2021				
LCS1	Chloride		25	27.3	mg/L	109	(90-110)		
LCS2	Chloride		25	26.9	mg/L	107	(90-110)	20	1.5
MBLK	Chloride			<0.1397	mg/L				
MRL_CHK	Chloride		0.5	0.500	mg/L	100	(50-150)		
MS_202112070309	Chloride	56	13	81.8	mg/L	102	(80-120)		
MS_202112070428	Chloride	140	12.5	NR	mg/L		(80-120)		
MSD_202112070309	Chloride	56	13	81.7	mg/L	102	(80-120)	20	0.11
MSD_202112070428	Chloride	140	12.5	NR	mg/L		(80-120)		
LCS1	Sulfate		50	54.0	mg/L	108	(90-110)		
LCS2	Sulfate		50	53.2	mg/L	106	(90-110)	20	1.5
MBLK	Sulfate			<0.0614	mg/L				
MRL_CHK	Sulfate		1	1.05	mg/L	105	(50-150)		
MRLLW	Sulfate		0.25	0.282	mg/L	113	(50-150)		
MS_202112070309	Sulfate	85	25	138	mg/L	107	(80-120)		
MS_202112070428	Sulfate	27	25	80.9	mg/L	107	(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: 973704
 Project: RED-HILL
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 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MSD_202112070309	Sulfate	85	25	138	mg/L	107	(80-120)	20	0.23
MSD_202112070428	Sulfate	27	25	81.3	mg/L	108	(80-120)	20	0.45

Chloride, Sulfate by EPA 300.0 by EPA 300.0

Analytical Batch: 1372475

Analysis Date: 12/08/2021

LCS1	Chloride		25	25.0	mg/L	100	(90-110)		
LCS2	Chloride		25	24.6	mg/L	98	(90-110)	20	1.6
MBLK	Chloride			<0.1397	mg/L				
MRL_CHK	Chloride		0.5	0.454	mg/L	91	(50-150)		
MS_202112080607	Chloride	99	13	165	mg/L	106	(80-120)		
MS_202112090605	Chloride	15	13	39.7	mg/L	100	(80-120)		
MSD_202112080607	Chloride	99	13	166	mg/L	107	(80-120)	20	0.37
MSD_202112090605	Chloride	15	13	43.2	mg/L	114	(80-120)	20	8.4
LCS1	Sulfate		50	49.7	mg/L	99	(90-110)		
LCS2	Sulfate		50	48.8	mg/L	98	(90-110)	20	1.8
MBLK	Sulfate			<0.0614	mg/L				
MRL_CHK	Sulfate		1	0.960	mg/L	96	(50-150)		
MRLW	Sulfate		0.25	0.268	mg/L	107	(50-150)		
MS_202112080607	Sulfate	13	25	142	mg/L	103	(80-120)		
MS_202112090605	Sulfate	74	25	122	mg/L	97	(80-120)		
MSD_202112080607	Sulfate	13	25	144	mg/L	105	(80-120)	20	1.1
MSD_202112090605	Sulfate	74	25	129	mg/L	110	(80-120)	20	5.3

ICPMS Metals by EPA 200.8

Analytical Batch: 1372557

Analysis Date: 12/09/2021

LCS1	Antimony Total ICAP/MS		50	50.9	ug/L	102	(85-115)		
LCS2	Antimony Total ICAP/MS		50	49.7	ug/L	99	(85-115)	20	2.4
MBLK	Antimony Total ICAP/MS			<0.2437	ug/L				
MRL_CHK	Antimony Total ICAP/MS		1	1.06	ug/L	106	(50-150)		
MS_202112020397	Antimony Total ICAP/MS	ND	50	52.1	ug/L	104	(70-130)		
MS2_202112080103	Antimony Total ICAP/MS	ND	50	52.2	ug/L	104	(70-130)		
MSD_202112020397	Antimony Total ICAP/MS	ND	50	52.7	ug/L	105	(70-130)	20	1.1
MSD2_202112080103	Antimony Total ICAP/MS	ND	50	51.1	ug/L	102	(70-130)	20	2.2
LCS1	Arsenic Total ICAP/MS		50	51.0	ug/L	102	(85-115)		
LCS2	Arsenic Total ICAP/MS		50	50.2	ug/L	100	(85-115)	20	1.6
MBLK	Arsenic Total ICAP/MS			<0.4134	ug/L				
MRL_CHK	Arsenic Total ICAP/MS		1	1.02	ug/L	102	(50-150)		
MS_202112020397	Arsenic Total ICAP/MS	2.5	50	54.5	ug/L	104	(70-130)		

Spike recovery is already corrected for native results.

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Report: 973704
 Project: RED-HILL
 Group: Red-Hill Expanded List
 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS2_202112080103	Arsenic Total ICAP/MS	ND	50	51.3	ug/L	103	(70-130)		
MSD_202112020397	Arsenic Total ICAP/MS	2.5	50	54.9	ug/L	105	(70-130)	20	0.79
MSD2_202112080103	Arsenic Total ICAP/MS	ND	50	50.5	ug/L	101	(70-130)	20	1.7
LCS1	Beryllium Total ICAP/MS		25	25.3	ug/L	101	(85-115)		
LCS2	Beryllium Total ICAP/MS		25	24.9	ug/L	100	(85-115)	20	1.6
MBLK	Beryllium Total ICAP/MS			<0.1106	ug/L				
MRL_CHK	Beryllium Total ICAP/MS		1	1.06	ug/L	106	(50-150)		
MS_202112020397	Beryllium Total ICAP/MS	ND	25	26.4	ug/L	105	(70-130)		
MS2_202112080103	Beryllium Total ICAP/MS	ND	25	26.5	ug/L	106	(70-130)		
MSD_202112020397	Beryllium Total ICAP/MS	ND	25	26.3	ug/L	105	(70-130)	20	0.43
MSD2_202112080103	Beryllium Total ICAP/MS	ND	25	26.0	ug/L	104	(70-130)	20	1.8
LCS1	Cadmium Total ICAP/MS		25	25.3	ug/L	101	(85-115)		
LCS2	Cadmium Total ICAP/MS		25	25.0	ug/L	100	(85-115)	20	1.2
MBLK	Cadmium Total ICAP/MS			<0.0546	ug/L				
MRL_CHK	Cadmium Total ICAP/MS		0.5	0.501	ug/L	100	(50-150)		
MS_202112020397	Cadmium Total ICAP/MS	ND	25	24.7	ug/L	99	(70-130)		
MS2_202112080103	Cadmium Total ICAP/MS	ND	25	24.9	ug/L	100	(70-130)		
MSD_202112020397	Cadmium Total ICAP/MS	ND	25	25.2	ug/L	101	(70-130)	20	2.0
MSD2_202112080103	Cadmium Total ICAP/MS	ND	25	24.2	ug/L	97	(70-130)	20	2.8
LCS1	Chromium Total ICAP/MS		50	50.7	ug/L	101	(85-115)		
LCS2	Chromium Total ICAP/MS		50	49.7	ug/L	99	(85-115)	20	2.0
MBLK	Chromium Total ICAP/MS			<0.580	ug/L				
MRL_CHK	Chromium Total ICAP/MS		1	0.572	ug/L	57	(50-150)		
MS_202112020397	Chromium Total ICAP/MS	16	50	68.2	ug/L	105	(70-130)		
MS2_202112080103	Chromium Total ICAP/MS	ND	50	50.3	ug/L	100	(70-130)		
MSD_202112020397	Chromium Total ICAP/MS	16	50	68.5	ug/L	105	(70-130)	20	0.41
MSD2_202112080103	Chromium Total ICAP/MS	ND	50	49.5	ug/L	99	(70-130)	20	1.6
LCS1	Copper Total ICAP/MS		50	51.4	ug/L	103	(85-115)		
LCS2	Copper Total ICAP/MS		50	50.3	ug/L	101	(85-115)	20	2.2
MBLK	Copper Total ICAP/MS			<1.343	ug/L				
MRL_CHK	Copper Total ICAP/MS		2	1.98	ug/L	99	(50-150)		
MS_202112020397	Copper Total ICAP/MS	ND	50	49.6	ug/L	96	(70-130)		
MS2_202112080103	Copper Total ICAP/MS	ND	50	48.1	ug/L	94	(70-130)		
MSD_202112020397	Copper Total ICAP/MS	ND	50	50.3	ug/L	97	(70-130)	20	1.3
MSD2_202112080103	Copper Total ICAP/MS	ND	50	47.4	ug/L	93	(70-130)	20	1.5
LCS1	Lead Total ICAP/MS		50	50.6	ug/L	101	(85-115)		
LCS2	Lead Total ICAP/MS		50	49.6	ug/L	99	(85-115)	20	2.0
MBLK	Lead Total ICAP/MS			<0.0608	ug/L				

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Report: 973704
 Project: RED-HILL
 Group: Red-Hill Expanded List
 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Lead Total ICAP/MS		0.5	0.506	ug/L	101	(50-150)		
MS_202112020397	Lead Total ICAP/MS	ND	50	49.0	ug/L	98	(70-130)		
MS2_202112080103	Lead Total ICAP/MS	ND	50	48.8	ug/L	98	(70-130)		
MSD_202112020397	Lead Total ICAP/MS	ND	50	49.1	ug/L	98	(70-130)	20	0.12
MSD2_202112080103	Lead Total ICAP/MS	ND	50	48.6	ug/L	97	(70-130)	20	0.44
LCS1	Nickel Total ICAP/MS		50	50.5	ug/L	101	(85-115)		
LCS2	Nickel Total ICAP/MS		50	49.6	ug/L	99	(85-115)	20	1.8
MBLK	Nickel Total ICAP/MS			<0.4959	ug/L				
MRL_CHK	Nickel Total ICAP/MS		5	5.01	ug/L	100	(50-150)		
MS_202112020397	Nickel Total ICAP/MS	9.9	50	58.3	ug/L	97	(70-130)		
MS2_202112080103	Nickel Total ICAP/MS	ND	50	48.4	ug/L	96	(70-130)		
MSD_202112020397	Nickel Total ICAP/MS	9.9	50	58.9	ug/L	98	(70-130)	20	1.1
MSD2_202112080103	Nickel Total ICAP/MS	ND	50	47.9	ug/L	95	(70-130)	20	0.95
LCS1	Selenium Total ICAP/MS		50	51.6	ug/L	103	(85-115)		
LCS2	Selenium Total ICAP/MS		50	51.3	ug/L	103	(85-115)	20	0.58
MBLK	Selenium Total ICAP/MS			<0.6224	ug/L				
MRL_CHK	Selenium Total ICAP/MS		5	5.20	ug/L	104	(50-150)		
MS_202112020397	Selenium Total ICAP/MS	8.3	50	59.8	ug/L	103	(70-130)		
MS2_202112080103	Selenium Total ICAP/MS	ND	50	38.2	ug/L	76	(70-130)		
MSD_202112020397	Selenium Total ICAP/MS	8.3	50	59.4	ug/L	102	(70-130)	20	0.72
MSD2_202112080103	Selenium Total ICAP/MS	ND	50	36.5	ug/L	73	(70-130)	20	4.7
LCS1	Silver Total ICAP/MS		25	24.0	ug/L	96	(85-115)		
LCS2	Silver Total ICAP/MS		25	23.7	ug/L	95	(85-115)	20	1.3
MBLK	Silver Total ICAP/MS			<0.1929	ug/L				
MRL_CHK	Silver Total ICAP/MS		0.5	0.511	ug/L	102	(50-150)		
MS_202112020397	Silver Total ICAP/MS	ND	25	23.1	ug/L	92	(70-130)		
MS2_202112080103	Silver Total ICAP/MS	ND	25	22.8	ug/L	91	(70-130)		
MSD_202112020397	Silver Total ICAP/MS	ND	25	23.4	ug/L	94	(70-130)	20	1.3
MSD2_202112080103	Silver Total ICAP/MS	ND	25	22.5	ug/L	90	(70-130)	20	1.3
LCS1	Thallium Total ICAP/MS		50	50.2	ug/L	100	(85-115)		
LCS2	Thallium Total ICAP/MS		50	49.1	ug/L	98	(85-115)	20	2.2
MBLK	Thallium Total ICAP/MS			<0.1449	ug/L				
MRL_CHK	Thallium Total ICAP/MS		1	0.982	ug/L	98	(50-150)		
MS_202112020397	Thallium Total ICAP/MS	ND	50	48.8	ug/L	98	(70-130)		
MS2_202112080103	Thallium Total ICAP/MS	ND	50	49.3	ug/L	99	(70-130)		
MSD_202112020397	Thallium Total ICAP/MS	ND	50	49.6	ug/L	99	(70-130)	20	1.6
MSD2_202112080103	Thallium Total ICAP/MS	ND	50	48.2	ug/L	96	(70-130)	20	2.2
LCS1	Zinc Total ICAP/MS		50	52.5	ug/L	105	(85-115)		

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	Zinc Total ICAP/MS		50	51.8	ug/L	104	(85-115)	20	1.3
MBLK	Zinc Total ICAP/MS			<10.62	ug/L				
MRL_CHK	Zinc Total ICAP/MS		20	20.5	ug/L	102	(50-150)		
MS_202112020397	Zinc Total ICAP/MS	ND	50	55.4	ug/L	102	(70-130)		
MS2_202112080103	Zinc Total ICAP/MS	ND	50	50.9	ug/L	100	(70-130)		
MSD_202112020397	Zinc Total ICAP/MS	ND	50	55.4	ug/L	102	(70-130)	20	0.092
MSD2_202112080103	Zinc Total ICAP/MS	ND	50	50.0	ug/L	98	(70-130)	20	1.7

Mercury ICPMS by EPA 200.8

Analytical Batch: 1372558

Analysis Date: 12/09/2021

LCS1	Mercury ICPMS		0.75	0.745	ug/L	99	(85-115)		
LCS2	Mercury ICPMS		0.75	0.720	ug/L	96	(85-115)	20	3.4
MBLK	Mercury ICPMS			<0.1	ug/L				
MRL_CHK	Mercury ICPMS		0.2	0.193	ug/L	97	(50-150)		
MS_202112090725	Mercury ICPMS	ND	0.75	0.752	ug/L	100	(70-130)		
MS2_202112080103	Mercury ICPMS	ND	0.75	0.693	ug/L	91	(70-130)		
MSD_202112090725	Mercury ICPMS	ND	0.75	0.756	ug/L	100	(70-130)	20	0.53
MSD2_202112080103	Mercury ICPMS	ND	0.75	0.682	ug/L	90	(70-130)	20	1.6

Volatile Organics by GCMS by EPA 524.2

Analytical Batch: 1372838

Analysis Date: 12/09/2021

LCS1	1,1,1,2-Tetrachloroethane		5	5.07	ug/L	101	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	5.00	ug/L	100	(70-130)	20	1.4
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	4.86	ug/L	97	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.93	ug/L	99	(70-130)	20	1.4
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	5.16	ug/L	103	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	4.91	ug/L	98	(70-130)	20	5.0
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,2,2-Tetrachloroethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,1,2-Trichloroethane		5	4.87	ug/L	97	(70-130)		
LCS2	1,1,2-Trichloroethane		5	4.80	ug/L	96	(70-130)	20	1.5
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,2-Trichloroethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,1-Dichloroethane		5	4.94	ug/L	99	(70-130)		
LCS2	1,1-Dichloroethane		5	4.98	ug/L	100	(70-130)	20	0.81

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MBLK	1,1-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethane		0.5	0.540	ug/L	108	(50-150)		
LCS1	1,1-Dichloroethylene		5	5.37	ug/L	107	(70-130)		
LCS2	1,1-Dichloroethylene		5	5.26	ug/L	105	(70-130)	20	2.1
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethylene		0.5	0.600	ug/L	120	(50-150)		
LCS1	1,1-Dichloropropene		5	5.16	ug/L	103	(70-130)		
LCS2	1,1-Dichloropropene		5	5.06	ug/L	101	(70-130)	20	2.0
MBLK	1,1-Dichloropropene			<0.5	ug/L				
MRL_CHK	1,1-Dichloropropene		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,2,3-Trichlorobenzene		5	4.93	ug/L	99	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	4.97	ug/L	99	(70-130)	20	0.81
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,3-Trichlorobenzene		0.5	0.530	ug/L	106	(50-150)		
LCS1	1,2,3-Trichloropropane		5	5.00	ug/L	100	(70-130)		
LCS2	1,2,3-Trichloropropane		5	4.74	ug/L	95	(70-130)	20	5.3
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,2,4-Trichlorobenzene		5	4.97	ug/L	99	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	5.07	ug/L	101	(70-130)	20	2.0
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trichlorobenzene		0.5	0.550	ug/L	110	(50-150)		
LCS1	1,2,4-Trimethylbenzene		5	5.30	ug/L	106	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	5.21	ug/L	104	(70-130)	20	1.7
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trimethylbenzene		0.5	0.490	ug/L	98	(50-150)		
LCS1	1,2-Dichloroethane		5	5.06	ug/L	101	(70-130)		
LCS2	1,2-Dichloroethane		5	5.01	ug/L	100	(70-130)	20	0.99
MBLK	1,2-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,2-Dichloroethane		0.5	0.490	ug/L	98	(50-150)		
LCS1	1,2-Dichloroethane-d4 (S)		5	98.2	%	98	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)		5	98.2	%	98	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			99.6	%	100	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)		5	99.8	%	100	(70-130)		
MRLLW	1,2-Dichloroethane-d4 (S)		5	98.8	%	99	(70-130)		
LCS1	1,2-Dichloropropane		5	4.94	ug/L	99	(70-130)		
LCS2	1,2-Dichloropropane		5	4.91	ug/L	98	(70-130)	20	0.61
MBLK	1,2-Dichloropropane			<0.5	ug/L				

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	1,2-Dichloropropane		0.5	0.490	ug/L	98	(50-150)		
LCS1	1,3,5-Trimethylbenzene		5	5.35	ug/L	107	(70-130)		
LCS2	1,3,5-Trimethylbenzene		5	5.23	ug/L	105	(70-130)	20	2.3
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,3,5-Trimethylbenzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,3-Dichloropropane		5	4.93	ug/L	99	(70-130)		
LCS2	1,3-Dichloropropane		5	4.84	ug/L	97	(70-130)	20	1.8
MBLK	1,3-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,3-Dichloropropane		0.5	0.490	ug/L	98	(50-150)		
LCS1	2,2-Dichloropropane		5	4.76	ug/L	95	(70-130)		
LCS2	2,2-Dichloropropane		5	4.73	ug/L	95	(70-130)	20	0.63
MBLK	2,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	2,2-Dichloropropane		0.5	0.610	ug/L	122	(50-150)		
LCS1	2-Butanone (MEK)		50	53.0	ug/L	106	(70-130)		
LCS2	2-Butanone (MEK)		50	51.8	ug/L	104	(70-130)	20	2.3
MBLK	2-Butanone (MEK)			<5.0	ug/L				
MRL_CHK	2-Butanone (MEK)		5	5.51	ug/L	110	(50-150)		
LCS1	2-Hexanone		50	48.8	ug/L	98	(70-130)		
LCS2	2-Hexanone		50	47.2	ug/L	94	(70-130)	20	3.3
MBLK	2-Hexanone			<5.0	ug/L				
MRL_CHK	2-Hexanone		5	4.59	ug/L	92	(50-150)		
LCS1	4-Bromofluorobenzene (S)		5	99.6	%	100	(70-130)		
LCS2	4-Bromofluorobenzene (S)		5	102	%	102	(70-130)		
MBLK	4-Bromofluorobenzene (S)			103	%	103	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)		5	103	%	103	(70-130)		
MRLLW	4-Bromofluorobenzene (S)		5	99.8	%	100	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	49.5	ug/L	99	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	47.5	ug/L	95	(70-130)	20	4.1
MBLK	4-Methyl-2-Pentanone (MIBK)			<5.0	ug/L				
MRL_CHK	4-Methyl-2-Pentanone (MIBK)		5	4.60	ug/L	92	(50-150)		
LCS1	Acetone		50	50.3	ug/L	101	(70-130)		
LCS2	Acetone		50	48.7	ug/L	97	(70-130)	20	3.2
MBLK	Acetone			<10	ug/L				
MRL_CHK	Acetone		5	4.90	ug/L	98	(50-150)		
LCS1	Benzene		5	5.11	ug/L	102	(70-130)		
LCS2	Benzene		5	4.96	ug/L	99	(70-130)	20	3.0
MBLK	Benzene			<0.5	ug/L				
MRL_CHK	Benzene		0.5	0.520	ug/L	104	(50-150)		

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

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

(S) - Indicates surrogate compound.

(I) - Indicates internal standard compound.

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Report: 973704
 Project: RED-HILL
 Group: Red-Hill Expanded List
 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Bromobenzene		5	5.15	ug/L	103	(70-130)		
LCS2	Bromobenzene		5	5.04	ug/L	101	(70-130)	20	2.2
MBLK	Bromobenzene			<0.5	ug/L				
MRL_CHK	Bromobenzene		0.5	0.490	ug/L	98	(50-150)		
LCS1	Bromochloromethane		5	4.91	ug/L	98	(70-130)		
LCS2	Bromochloromethane		5	4.91	ug/L	98	(70-130)	20	0.0
MBLK	Bromochloromethane			<0.5	ug/L				
MRL_CHK	Bromochloromethane		0.5	0.470	ug/L	94	(50-150)		
LCS1	Bromodichloromethane		5	4.96	ug/L	99	(70-130)		
LCS2	Bromodichloromethane		5	4.86	ug/L	97	(70-130)	20	2.0
MBLK	Bromodichloromethane			<0.5	ug/L				
MRL_CHK	Bromodichloromethane		0.5	0.420	ug/L	84	(50-150)		
LCS1	Bromoethane		5	4.92	ug/L	98	(70-130)		
LCS2	Bromoethane		5	5.03	ug/L	101	(70-130)	20	2.2
MBLK	Bromoethane			<0.5	ug/L				
MRL_CHK	Bromoethane		0.5	0.570	ug/L	114	(50-150)		
LCS1	Bromoform		5	5.18	ug/L	104	(70-130)		
LCS2	Bromoform		5	4.76	ug/L	95	(70-130)	20	8.4
MBLK	Bromoform			<0.5	ug/L				
MRL_CHK	Bromoform		0.5	0.570	ug/L	114	(50-150)		
LCS1	Bromomethane (Methyl Bromide)		5	5.10	ug/L	102	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	5.14	ug/L	103	(70-130)	20	0.78
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
MRL_CHK	Bromomethane (Methyl Bromide)		0.5	0.600	ug/L	120	(50-150)		
LCS1	Carbon disulfide		5	4.52	ug/L	90	(70-130)		
LCS2	Carbon disulfide		5	4.52	ug/L	90	(70-130)	20	0.0
MBLK	Carbon disulfide			<0.5	ug/L				
MRL_CHK	Carbon disulfide		0.5	0.430	ug/L	86	(50-150)		
LCS1	Carbon Tetrachloride		5	5.27	ug/L	105	(70-130)		
LCS2	Carbon Tetrachloride		5	5.34	ug/L	107	(70-130)	20	1.3
MBLK	Carbon Tetrachloride			<0.5	ug/L				
MRL_CHK	Carbon Tetrachloride		0.5	0.430	ug/L	86	(50-150)		
LCS1	Chlorobenzene		5	5.00	ug/L	100	(70-130)		
LCS2	Chlorobenzene		5	5.01	ug/L	100	(70-130)	20	0.20
MBLK	Chlorobenzene			<0.5	ug/L				
MRL_CHK	Chlorobenzene		0.5	0.460	ug/L	92	(50-150)		
LCS1	Chlorodibromomethane		5	4.83	ug/L	97	(70-130)		
LCS2	Chlorodibromomethane		5	4.82	ug/L	96	(70-130)	20	0.21

Spike recovery is already corrected for native results.
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 RPD not calculated for LCS2 when different a concentration than LCS1 is used.
 RPD not calculated for Duplicates when the result is not five times the MRL (Minimum Reporting Level).
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Report: 973704
 Project: RED-HILL
 Group: Red-Hill Expanded List
 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	Chlorodibromomethane			<0.5	ug/L				
MRL_CHK	Chlorodibromomethane		0.5	0.520	ug/L	104	(50-150)		
LCS1	Chloroethane		5	5.18	ug/L	104	(70-130)		
LCS2	Chloroethane		5	4.86	ug/L	97	(70-130)	20	6.4
MBLK	Chloroethane			<0.5	ug/L				
MRL_CHK	Chloroethane		0.5	0.640	ug/L	128	(50-150)		
LCS1	Chloroform (Trichloromethane)		5	4.85	ug/L	97	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	4.84	ug/L	97	(70-130)	20	0.21
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
MRL_CHK	Chloroform (Trichloromethane)		0.5	0.510	ug/L	102	(50-150)		
LCS1	Chloromethane(Methyl Chloride)		5	4.84	ug/L	97	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	4.81	ug/L	96	(70-130)	20	0.62
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
MRL_CHK	Chloromethane(Methyl Chloride)		0.5	0.640	ug/L	128	(50-150)		
LCS1	cis-1,2-Dichloroethylene		5	5.18	ug/L	104	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	5.04	ug/L	101	(70-130)	20	2.7
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	cis-1,2-Dichloroethylene		0.5	0.530	ug/L	106	(50-150)		
LCS1	cis-1,3-Dichloropropene		5	4.93	ug/L	99	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	4.95	ug/L	99	(70-130)	20	0.41
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	cis-1,3-Dichloropropene		0.5	0.400	ug/L	80	(50-150)		
LCS1	Dibromomethane		5	4.98	ug/L	100	(70-130)		
LCS2	Dibromomethane		5	4.84	ug/L	97	(70-130)	20	2.9
MBLK	Dibromomethane			<0.5	ug/L				
MRL_CHK	Dibromomethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	Dichlorodifluoromethane		5	5.02	ug/L	100	(70-130)		
LCS2	Dichlorodifluoromethane		5	4.96	ug/L	99	(70-130)	20	1.2
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
MRL_CHK	Dichlorodifluoromethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	Dichloromethane		5	5.23	ug/L	105	(70-130)		
LCS2	Dichloromethane		5	5.07	ug/L	101	(70-130)	20	3.1
MBLK	Dichloromethane			<0.5	ug/L				
MRL_CHK	Dichloromethane		0.5	0.560	ug/L	112	(50-150)		
LCS1	Di-isopropyl ether		5	5.02	ug/L	100	(70-130)		
LCS2	Di-isopropyl ether		5	5.00	ug/L	100	(70-130)	20	0.40
MBLK	Di-isopropyl ether			<3.0	ug/L				
MRL_CHK	Di-isopropyl ether		0.5	0.540	ug/L	108	(50-150)		

Spike recovery is already corrected for native results.

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

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

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Report: 973704
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 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Ethyl benzene		5	5.06	ug/L	101	(70-130)		
LCS2	Ethyl benzene		5	4.98	ug/L	100	(70-130)	20	1.6
MBLK	Ethyl benzene			<0.5	ug/L				
MRL_CHK	Ethyl benzene		0.5	0.490	ug/L	98	(50-150)		
LCS1	Hexachlorobutadiene		5	4.96	ug/L	99	(70-130)		
LCS2	Hexachlorobutadiene		5	5.11	ug/L	102	(70-130)	20	3.0
MBLK	Hexachlorobutadiene			<0.5	ug/L				
MRL_CHK	Hexachlorobutadiene		0.5	0.550	ug/L	110	(50-150)		
LCS1	Isopropylbenzene		5	5.39	ug/L	108	(70-130)		
LCS2	Isopropylbenzene		5	5.16	ug/L	103	(70-130)	20	4.4
MBLK	Isopropylbenzene			<0.5	ug/L				
MRL_CHK	Isopropylbenzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	m,p-Xylenes		10	10.1	ug/L	101	(70-130)		
LCS2	m,p-Xylenes		10	9.95	ug/L	100	(70-130)	20	1.5
MBLK	m,p-Xylenes			<0.5	ug/L				
MRL_CHK	m,p-Xylenes		1	0.890	ug/L	89	(50-150)		
MRLLW	m,p-Xylenes		0.5	0.480	ug/L	96	(50-150)		
LCS1	m-Dichlorobenzene (1,3-DCB)		5	5.24	ug/L	105	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	5.11	ug/L	102	(70-130)	20	2.5
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
MRL_CHK	m-Dichlorobenzene (1,3-DCB)		0.5	0.550	ug/L	110	(50-150)		
LCS1	Methyl Tert-butyl ether (MTBE)		5	5.00	ug/L	100	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	4.88	ug/L	98	(70-130)	20	2.4
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
MRL_CHK	Methyl Tert-butyl ether (MTBE)		0.5	0.490	ug/L	98	(50-150)		
LCS1	Naphthalene		5	4.85	ug/L	97	(70-130)		
LCS2	Naphthalene		5	4.90	ug/L	98	(70-130)	20	1.0
MBLK	Naphthalene			<0.5	ug/L				
MRL_CHK	Naphthalene		0.5	0.530	ug/L	106	(50-150)		
LCS1	n-Butylbenzene		5	4.98	ug/L	100	(70-130)		
LCS2	n-Butylbenzene		5	5.11	ug/L	102	(70-130)	20	2.6
MBLK	n-Butylbenzene			<0.5	ug/L				
MRL_CHK	n-Butylbenzene		0.5	0.500	ug/L	100	(50-150)		
LCS1	n-Propylbenzene		5	5.53	ug/L	111	(70-130)		
LCS2	n-Propylbenzene		5	5.37	ug/L	107	(70-130)	20	2.9
MBLK	n-Propylbenzene			<0.5	ug/L				
MRL_CHK	n-Propylbenzene		0.5	0.530	ug/L	106	(50-150)		
LCS1	o-Chlorotoluene		5	5.40	ug/L	108	(70-130)		

Spike recovery is already corrected for native results.

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

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

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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	o-Chlorotoluene		5	5.19	ug/L	104	(70-130)	20	4.0
MBLK	o-Chlorotoluene			<0.5	ug/L				
MRL_CHK	o-Chlorotoluene		0.5	0.520	ug/L	104	(50-150)		
LCS1	o-Dichlorobenzene (1,2-DCB)		5	4.93	ug/L	99	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	4.94	ug/L	99	(70-130)	20	0.20
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
MRL_CHK	o-Dichlorobenzene (1,2-DCB)		0.5	0.500	ug/L	100	(50-150)		
LCS1	o-Xylene		5	5.08	ug/L	102	(70-130)		
LCS2	o-Xylene		5	4.88	ug/L	98	(70-130)	20	4.0
MBLK	o-Xylene			<0.5	ug/L				
MRL_CHK	o-Xylene		0.5	0.470	ug/L	94	(50-150)		
LCS1	p-Chlorotoluene		5	5.37	ug/L	107	(70-130)		
LCS2	p-Chlorotoluene		5	5.15	ug/L	103	(70-130)	20	4.2
MBLK	p-Chlorotoluene			<0.5	ug/L				
MRL_CHK	p-Chlorotoluene		0.5	0.510	ug/L	102	(50-150)		
LCS1	p-Dichlorobenzene (1,4-DCB)		5	5.28	ug/L	106	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	5.12	ug/L	102	(70-130)	20	3.1
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				
MRL_CHK	p-Dichlorobenzene (1,4-DCB)		0.5	0.490	ug/L	98	(50-150)		
LCS1	p-Isopropyltoluene		5	5.37	ug/L	107	(70-130)		
LCS2	p-Isopropyltoluene		5	5.22	ug/L	104	(70-130)	20	2.8
MBLK	p-Isopropyltoluene			<0.5	ug/L				
MRL_CHK	p-Isopropyltoluene		0.5	0.460	ug/L	92	(50-150)		
LCS1	sec-Butylbenzene		5	5.39	ug/L	108	(70-130)		
LCS2	sec-Butylbenzene		5	5.29	ug/L	106	(70-130)	20	1.9
MBLK	sec-Butylbenzene			<0.5	ug/L				
MRL_CHK	sec-Butylbenzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	Styrene		5	5.03	ug/L	101	(70-130)		
LCS2	Styrene		5	4.95	ug/L	99	(70-130)	20	1.6
MBLK	Styrene			<0.5	ug/L				
MRL_CHK	Styrene		0.5	0.430	ug/L	86	(50-150)		
LCS1	tert-amyl Methyl Ether		5	4.82	ug/L	96	(70-130)		
LCS2	tert-amyl Methyl Ether		5	4.79	ug/L	96	(70-130)	20	0.62
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	5.18	ug/L	104	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	5.09	ug/L	102	(70-130)	20	1.8
MBLK	tert-Butyl Ethyl Ether			<3.0	ug/L				

Spike recovery is already corrected for native results.

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

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

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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	tert-Butyl Ethyl Ether		0.5	0.510	ug/L	102	(50-150)		
LCS1	tert-Butylbenzene		5	5.33	ug/L	107	(70-130)		
LCS2	tert-Butylbenzene		5	5.23	ug/L	105	(70-130)	20	1.9
MBLK	tert-Butylbenzene			<0.5	ug/L				
MRL_CHK	tert-Butylbenzene		0.5	0.500	ug/L	100	(50-150)		
LCS1	Tetrachloroethylene (PCE)		5	5.15	ug/L	103	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.93	ug/L	99	(70-130)	20	4.4
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
MRL_CHK	Tetrachloroethylene (PCE)		0.5	0.490	ug/L	98	(50-150)		
LCS1	Toluene		5	4.67	ug/L	93	(70-130)		
LCS2	Toluene		5	4.66	ug/L	93	(70-130)	20	0.21
MBLK	Toluene			<0.5	ug/L				
MRL_CHK	Toluene		0.5	0.440	ug/L	88	(50-150)		
LCS1	Toluene-d8 (S)		5	98.8	%	99	(70-130)		
LCS2	Toluene-d8 (S)		5	101	%	101	(70-130)		
MBLK	Toluene-d8 (S)			97.8	%	98	(70-130)		
MRL_CHK	Toluene-d8 (S)		5	97.2	%	97	(70-130)		
MRLW	Toluene-d8 (S)		5	97.6	%	98	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	5.18	ug/L	104	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	5.08	ug/L	102	(70-130)	20	2.0
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	trans-1,2-Dichloroethylene		0.5	0.510	ug/L	102	(50-150)		
LCS1	trans-1,3-Dichloropropene		5	4.75	ug/L	95	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	4.80	ug/L	96	(70-130)	20	1.1
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	trans-1,3-Dichloropropene		0.5	0.640	ug/L	128	(50-150)		
LCS1	Trichloroethylene (TCE)		5	5.18	ug/L	104	(70-130)		
LCS2	Trichloroethylene (TCE)		5	5.05	ug/L	101	(70-130)	20	2.5
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
MRL_CHK	Trichloroethylene (TCE)		0.5	0.510	ug/L	102	(50-150)		
LCS1	Trichlorofluoromethane		5	5.21	ug/L	104	(70-130)		
LCS2	Trichlorofluoromethane		5	5.21	ug/L	104	(70-130)	20	0.0
MBLK	Trichlorofluoromethane			<0.5	ug/L				
MRL_CHK	Trichlorofluoromethane		0.5	0.550	ug/L	110	(50-150)		
LCS1	Trichlorotrifluoroethane(Freon)		5	5.41	ug/L	108	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon)		5	5.32	ug/L	106	(70-130)	20	1.7
MBLK	Trichlorotrifluoroethane(Freon)			<0.5	ug/L				
MRL_CHK	Trichlorotrifluoroethane(Freon)		0.5	0.530	ug/L	106	(50-150)		

Spike recovery is already corrected for native results.

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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

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

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

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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	Vinyl chloride (VC)		5	5.00	ug/L	100	(70-130)		
LCS2	Vinyl chloride (VC)		5	5.10	ug/L	102	(70-130)	20	2.0
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
MRL_CHK	Vinyl chloride (VC)		0.5	0.560	ug/L	112	(50-150)		
MRLW	Vinyl chloride (VC)		0.25	0.320	ug/L	128	(50-150)		

Semivolatiles by GCMS by EPA 525.2

Prep Batch: 1372484 Analytical Batch: 1373180

Analysis Date: 12/11/2021

DUP_202112020302	1,3-Dimethyl-2-nitrobenzene (S)			99.0	%	99	(70-130)		
LCS1	1,3-Dimethyl-2-nitrobenzene (S)		5	98.0	%	98	(70-130)		
LCS2	1,3-Dimethyl-2-nitrobenzene (S)		5	82.0	%	82	(70-130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)			97.2	%	97	(70-130)		
MRL_CHK	1,3-Dimethyl-2-nitrobenzene (S)		5	99.2	%	99	(70-130)		
MS_202112020301	1,3-Dimethyl-2-nitrobenzene (S)		5	97.4	%	97	(70-130)		
DUP_202112020302	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	2.23	ug/L	111	(70-130)	20	6.0
MBLK	2,4-DDD			<0.1	ug/L				
MRL_CHK	2,4-DDD		0.1	0.117	ug/L	117	(50-150)		
MS_202112020301	2,4-DDD		2	2.08	ug/L	104	(70-130)		
DUP_202112020302	2,4-DDE			ND	ug/L		(0-20)		
LCS1	2,4-DDE		2	2.00	ug/L	100	(70-130)		
LCS2	2,4-DDE		2	2.09	ug/L	104	(70-130)	20	4.4
MBLK	2,4-DDE			<0.1	ug/L				
MRL_CHK	2,4-DDE		0.1	0.107	ug/L	107	(50-150)		
MS_202112020301	2,4-DDE		2	1.94	ug/L	97	(70-130)		
DUP_202112020302	2,4-DDT			ND	ug/L		(0-20)		
LCS1	2,4-DDT		2	2.05	ug/L	103	(70-130)		
LCS2	2,4-DDT		2	2.14	ug/L	107	(70-130)	20	4.3
MBLK	2,4-DDT			<0.1	ug/L				
MRL_CHK	2,4-DDT		0.1	0.113	ug/L	113	(50-150)		
MS_202112020301	2,4-DDT		2	2.04	ug/L	102	(70-130)		
DUP_202112020302	2,4-Dinitrotoluene	ND		ND	ug/L		(0-20)		
LCS1	2,4-Dinitrotoluene		2	2.30	ug/L	115	(70-130)		
LCS2	2,4-Dinitrotoluene		2	2.54	ug/L	127	(70-130)	20	9.9
MBLK	2,4-Dinitrotoluene			<0.1	ug/L				
MRL_CHK	2,4-Dinitrotoluene		0.1	0.127	ug/L	127	(50-150)		
MS_202112020301	2,4-Dinitrotoluene	ND	2	2.45	ug/L	123	(70-130)		

Spike recovery is already corrected for native results.

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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

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

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

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Report: 973704
 Project: RED-HILL
 Group: Red-Hill Expanded List
 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
DUP_202112020302	2,6-Dinitrotoluene			ND	ug/L		(0-20)		
LCS1	2,6-Dinitrotoluene		2	2.42	ug/L	121	(70-130)		
LCS2	2,6-Dinitrotoluene		2	2.48	ug/L	124	(70-130)	20	2.5
MBLK	2,6-Dinitrotoluene			<0.1	ug/L				
MRL_CHK	2,6-Dinitrotoluene		0.1	0.110	ug/L	110	(50-150)		
MS_202112020301	2,6-Dinitrotoluene		2	2.54	ug/L	127	(70-130)		
DUP_202112020302	4,4-DDD			ND	ug/L		(0-20)		
LCS1	4,4-DDD		2	2.18	ug/L	109	(70-130)		
LCS2	4,4-DDD		2	2.30	ug/L	115	(70-130)	20	5.4
MBLK	4,4-DDD			<0.1	ug/L				
MRL_CHK	4,4-DDD		0.1	0.110	ug/L	110	(50-150)		
MS_202112020301	4,4-DDD		2	2.15	ug/L	108	(70-130)		
DUP_202112020302	4,4-DDE			ND	ug/L		(0-20)		
LCS1	4,4-DDE		2	2.15	ug/L	108	(70-130)		
LCS2	4,4-DDE		2	2.30	ug/L	115	(70-130)	20	6.7
MBLK	4,4-DDE			<0.1	ug/L				
MRL_CHK	4,4-DDE		0.1	0.111	ug/L	111	(50-150)		
MS_202112020301	4,4-DDE		2	2.10	ug/L	105	(70-130)		
DUP_202112020302	4,4-DDT			ND	ug/L		(0-20)		
LCS1	4,4-DDT		2	2.09	ug/L	104	(70-130)		
LCS2	4,4-DDT		2	2.17	ug/L	109	(70-130)	20	3.8
MBLK	4,4-DDT			<0.1	ug/L				
MRL_CHK	4,4-DDT		0.1	0.118	ug/L	118	(50-150)		
MS_202112020301	4,4-DDT		2	2.06	ug/L	103	(70-130)		
DUP_202112020302	Acenaphthene			ND	ug/L		(0-20)		
LCS1	Acenaphthene		2	2.11	ug/L	106	(70-130)		
LCS2	Acenaphthene		2	2.03	ug/L	102	(70-130)	20	3.9
MBLK	Acenaphthene			<0.1	ug/L				
MRL_CHK	Acenaphthene		0.1	0.107	ug/L	107	(50-150)		
MS_202112020301	Acenaphthene		2	2.07	ug/L	104	(70-130)		
DUP_202112020302	Acenaphthene-d10 (I)			96.1	%	96	(50-150)		
LCS1	Acenaphthene-d10 (I)		5	101	%	101	(50-150)		
LCS2	Acenaphthene-d10 (I)		5	74.7	%	75	(50-150)		
MBLK	Acenaphthene-d10 (I)			95.5	%	96	(50-150)		
MRL_CHK	Acenaphthene-d10 (I)		5	94.5	%	95	(50-150)		
MS_202112020301	Acenaphthene-d10 (I)		5	93.8	%	94	(50-150)		
DUP_202112020302	Acenaphthylene	ND		ND	ug/L		(0-20)		
LCS1	Acenaphthylene		2	2.01	ug/L	100	(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%
LCS2	Acenaphthylene		2	2.00	ug/L	100	(70-130)	20	0.50
MBLK	Acenaphthylene			<0.1	ug/L				
MRL_CHK	Acenaphthylene		0.1	0.0910	ug/L	91	(50-150)		
MS_202112020301	Acenaphthylene	ND	2	2.08	ug/L	104	(70-130)		
DUP_202112020302	Acetochlor			ND	ug/L		(0-20)		
LCS1	Acetochlor		2	2.26	ug/L	113	(70-130)		
LCS2	Acetochlor		2	2.38	ug/L	119	(70-130)	20	5.2
MBLK	Acetochlor			<0.1	ug/L				
MRL_CHK	Acetochlor		0.05	0.0480	ug/L	96	(50-150)		
MS_202112020301	Acetochlor		2	2.20	ug/L	110	(70-130)		
DUP_202112020302	Alachlor	ND		ND	ug/L		(0-20)		
LCS1	Alachlor		2	2.28	ug/L	114	(70-130)		
LCS2	Alachlor		2	2.41	ug/L	121	(70-130)	20	5.1
MBLK	Alachlor			<0.05	ug/L				
MRL_CHK	Alachlor		0.05	0.0600	ug/L	120	(50-150)		
MS_202112020301	Alachlor	ND	2	2.19	ug/L	109	(70-130)		
DUP_202112020302	Alpha-BHC			ND	ug/L		(0-20)		
LCS1	Alpha-BHC		2	2.08	ug/L	104	(70-130)		
LCS2	Alpha-BHC		2	2.45	ug/L	123	(70-130)	20	16
MBLK	Alpha-BHC			<0.1	ug/L				
MRL_CHK	Alpha-BHC		0.1	0.115	ug/L	115	(50-150)		
MS_202112020301	Alpha-BHC		2	2.13	ug/L	106	(70-130)		
DUP_202112020302	alpha-Chlordane	ND		ND	ug/L		(0-20)		
LCS1	alpha-Chlordane		2	2.08	ug/L	104	(70-130)		
LCS2	alpha-Chlordane		2	2.18	ug/L	109	(70-130)	20	4.7
MBLK	alpha-Chlordane			<0.05	ug/L				
MRL_CHK	alpha-Chlordane		0.05	0.0530	ug/L	106	(50-150)		
MS_202112020301	alpha-Chlordane	ND	2	1.96	ug/L	98	(70-130)		
DUP_202112020302	Anthracene	ND		ND	ug/L		(0-20)		
LCS1	Anthracene		2	2.08	ug/L	104	(70-130)		
LCS2	Anthracene		2	2.13	ug/L	106	(70-130)	20	2.4
MBLK	Anthracene			<0.02	ug/L				
MRL_CHK	Anthracene		0.02	0.0220	ug/L	110	(50-150)		
MS_202112020301	Anthracene	ND	2	2.12	ug/L	106	(70-130)		
DUP_202112020302	Atrazine	ND		ND	ug/L		(0-20)		
LCS1	Atrazine		2	2.20	ug/L	110	(70-130)		
LCS2	Atrazine		2	2.95	ug/L	147	(70-130)	20	29
MBLK	Atrazine			<0.05	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).

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Report: 973704
 Project: RED-HILL
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 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Atrazine		0.05	0.0520	ug/L	104	(50-150)		
MS_202112020301	Atrazine	ND	2	2.08	ug/L	104	(70-130)		
DUP_202112020302	Benz(a)Anthracene	ND		ND	ug/L		(0-20)		
LCS1	Benz(a)Anthracene		2	2.13	ug/L	107	(70-130)		
LCS2	Benz(a)Anthracene		2	2.26	ug/L	113	(70-130)	20	5.9
MBLK	Benz(a)Anthracene			<0.05	ug/L				
MRL_CHK	Benz(a)Anthracene		0.05	0.0570	ug/L	114	(50-150)		
MS_202112020301	Benz(a)Anthracene	ND	2	2.14	ug/L	107	(70-130)		
DUP_202112020302	Benzo(a)pyrene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(a)pyrene		2	2.02	ug/L	101	(70-130)		
LCS2	Benzo(a)pyrene		2	1.94	ug/L	97	(70-130)	20	4.0
MBLK	Benzo(a)pyrene			<0.02	ug/L				
MRL_CHK	Benzo(a)pyrene		0.02	0.0200	ug/L	100	(50-150)		
MS_202112020301	Benzo(a)pyrene	ND	2	2.02	ug/L	101	(70-130)		
DUP_202112020302	Benzo(b)Fluoranthene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(b)Fluoranthene		2	2.10	ug/L	105	(70-130)		
LCS2	Benzo(b)Fluoranthene		2	2.05	ug/L	103	(70-130)	20	2.4
MBLK	Benzo(b)Fluoranthene			<0.02	ug/L				
MRL_CHK	Benzo(b)Fluoranthene		0.02	0.0230	ug/L	115	(50-150)		
MS_202112020301	Benzo(b)Fluoranthene	ND	2	2.12	ug/L	106	(70-130)		
DUP_202112020302	Benzo(g,h,i)Perylene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(g,h,i)Perylene		2	1.99	ug/L	100	(70-130)		
LCS2	Benzo(g,h,i)Perylene		2	1.66	ug/L	83	(70-130)	20	18
MBLK	Benzo(g,h,i)Perylene			<0.05	ug/L				
MRL_CHK	Benzo(g,h,i)Perylene		0.05	0.0470	ug/L	94	(50-150)		
MS_202112020301	Benzo(g,h,i)Perylene	ND	2	1.90	ug/L	95	(70-130)		
DUP_202112020302	Benzo(k)Fluoranthene	ND		ND	ug/L		(0-20)		
LCS1	Benzo(k)Fluoranthene		2	2.16	ug/L	108	(70-130)		
LCS2	Benzo(k)Fluoranthene		2	2.07	ug/L	104	(70-130)	20	4.3
MBLK	Benzo(k)Fluoranthene			<0.02	ug/L				
MRL_CHK	Benzo(k)Fluoranthene		0.02	0.0220	ug/L	110	(50-150)		
MS_202112020301	Benzo(k)Fluoranthene	ND	2	2.17	ug/L	108	(70-130)		
DUP_202112020302	Beta-BHC			ND	ug/L		(0-20)		
LCS1	Beta-BHC		2	2.11	ug/L	105	(70-130)		
LCS2	Beta-BHC		2	2.79	ug/L	139	(70-130)	20	28
MBLK	Beta-BHC			<0.1	ug/L				
MRL_CHK	Beta-BHC		0.1	0.116	ug/L	116	(50-150)		
MS_202112020301	Beta-BHC		2	2.12	ug/L	106	(70-130)		

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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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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
DUP_202112020302	Bromacil	ND		ND	ug/L		(0-20)		
LCS1	Bromacil		2	2.50	ug/L	125	(70-130)		
LCS2	Bromacil		2	2.50	ug/L	125	(70-130)	20	0.0
MBLK	Bromacil			<0.2	ug/L				
MRL_CHK	Bromacil		0.1	0.129	ug/L	129	(50-150)		
MS_202112020301	Bromacil	ND	2	2.58	ug/L	129	(70-130)		
DUP_202112020302	Butachlor	ND		ND	ug/L		(0-20)		
LCS1	Butachlor		2	2.44	ug/L	122	(70-130)		
LCS2	Butachlor		2	2.60	ug/L	130	(70-130)	20	6.3
MBLK	Butachlor			<0.05	ug/L				
MRL_CHK	Butachlor		0.05	0.0620	ug/L	124	(50-150)		
MS_202112020301	Butachlor	ND	2	2.38	ug/L	119	(70-130)		
DUP_202112020302	Butylbenzylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Butylbenzylphthalate		2	2.35	ug/L	118	(70-130)		
LCS2	Butylbenzylphthalate		2	2.50	ug/L	125	(70-130)	20	6.2
MBLK	Butylbenzylphthalate			<0.5	ug/L				
MRL_CHK	Butylbenzylphthalate		0.15	0.205	ug/L	137	(50-150)		
MS_202112020301	Butylbenzylphthalate	ND	2	2.40	ug/L	120	(70-130)		
DUP_202112020302	Caffeine by method 525mod	ND		ND	ug/L		(0-20)		
LCS1	Caffeine by method 525mod		2	1.78	ug/L	89	(45-137)		
LCS2	Caffeine by method 525mod		2	1.40	ug/L	70	(45-137)	20	<u>23</u>
MBLK	Caffeine by method 525mod			<0.05	ug/L				
MRL_CHK	Caffeine by method 525mod		0.05	0.0430	ug/L	86	(50-150)		
MS_202112020301	Caffeine by method 525mod	ND	2	2.02	ug/L	101	(46-144)		
DUP_202112020302	Chlorobenzilate			ND	ug/L		(0-20)		
LCS1	Chlorobenzilate		2	2.21	ug/L	111	(70-130)		
LCS2	Chlorobenzilate		2	2.36	ug/L	118	(70-130)	20	6.6
MBLK	Chlorobenzilate			<0.1	ug/L				
MRL_CHK	Chlorobenzilate		0.1	0.102	ug/L	102	(50-150)		
MS_202112020301	Chlorobenzilate		2	2.43	ug/L	121	(70-130)		
DUP_202112020302	Chloroneb			ND	ug/L		(0-20)		
LCS1	Chloroneb		2	2.07	ug/L	104	(70-130)		
LCS2	Chloroneb		2	2.28	ug/L	114	(70-130)	20	9.7
MBLK	Chloroneb			<0.1	ug/L				
MRL_CHK	Chloroneb		0.1	0.111	ug/L	111	(50-150)		
MS_202112020301	Chloroneb		2	2.07	ug/L	104	(70-130)		
DUP_202112020302	Chlorothalonil(Draconil,Bravo)			ND	ug/L		(0-20)		
LCS1	Chlorothalonil(Draconil,Bravo)		2	2.30	ug/L	115	(70-130)		

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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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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	Chlorothalonil(Draconil,Bravo)		2	2.56	ug/L	128	(70-130)	20	11
MBLK	Chlorothalonil(Draconil,Bravo)			<0.1	ug/L				
MRL_CHK	Chlorothalonil(Draconil,Bravo)		0.05	0.0560	ug/L	112	(50-150)		
MS_202112020301	Chlorothalonil(Draconil,Bravo)		2	2.34	ug/L	117	(70-130)		
DUP_202112020302	Chlorpyrifos (Dursban)			ND	ug/L		(0-20)		
LCS1	Chlorpyrifos (Dursban)		2	2.13	ug/L	106	(70-130)		
LCS2	Chlorpyrifos (Dursban)		2	2.24	ug/L	112	(70-130)	20	5.0
MBLK	Chlorpyrifos (Dursban)			<0.05	ug/L				
MRL_CHK	Chlorpyrifos (Dursban)		0.05	0.0580	ug/L	116	(50-150)		
MS_202112020301	Chlorpyrifos (Dursban)		2	2.10	ug/L	105	(70-130)		
DUP_202112020302	Chrysene	ND		ND	ug/L		(0-20)		
LCS1	Chrysene		2	2.08	ug/L	104	(70-130)		
LCS2	Chrysene		2	2.07	ug/L	103	(70-130)	20	0.48
MBLK	Chrysene			<0.02	ug/L				
MRL_CHK	Chrysene		0.02	0.0210	ug/L	105	(50-150)		
MS_202112020301	Chrysene	ND	2	2.09	ug/L	105	(70-130)		
DUP_202112020302	Chrysene-d12 (I)			94.9	%	95	(50-150)		
LCS1	Chrysene-d12 (I)		5	102	%	102	(50-150)		
LCS2	Chrysene-d12 (I)		5	98.2	%	98	(50-150)		
MBLK	Chrysene-d12 (I)			98.5	%	99	(50-150)		
MRL_CHK	Chrysene-d12 (I)		5	92.8	%	93	(50-150)		
MS_202112020301	Chrysene-d12 (I)		5	93.1	%	93	(50-150)		
DUP_202112020302	Delta-BHC			ND	ug/L		(0-20)		
LCS1	Delta-BHC		2	2.08	ug/L	104	(70-130)		
LCS2	Delta-BHC		2	2.19	ug/L	109	(70-130)	20	5.2
MBLK	Delta-BHC			<0.1	ug/L				
MRL_CHK	Delta-BHC		0.1	0.117	ug/L	117	(50-150)		
MS_202112020301	Delta-BHC		2	2.04	ug/L	102	(70-130)		
DUP_202112020302	Di-(2-Ethylhexyl)adipate	ND		ND	ug/L		(0-20)		
LCS1	Di-(2-Ethylhexyl)adipate		2	2.37	ug/L	118	(70-130)		
LCS2	Di-(2-Ethylhexyl)adipate		2	2.37	ug/L	119	(70-130)	20	0.0
MBLK	Di-(2-Ethylhexyl)adipate			<0.6	ug/L				
MRL_CHK	Di-(2-Ethylhexyl)adipate		0.3	0.378	ug/L	126	(50-150)		
MS_202112020301	Di-(2-Ethylhexyl)adipate	ND	2	2.23	ug/L	112	(70-130)		
DUP_202112020302	Di(2-Ethylhexyl)phthalate	ND		ND	ug/L		(0-20)		
LCS1	Di(2-Ethylhexyl)phthalate		2	2.27	ug/L	114	(70-130)		
LCS2	Di(2-Ethylhexyl)phthalate		2	2.09	ug/L	104	(70-130)	20	8.3
MBLK	Di(2-Ethylhexyl)phthalate			<0.6	ug/L				

Spike recovery is already corrected for native results.

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

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

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Report: 973704
 Project: RED-HILL
 Group: Red-Hill Expanded List
 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Di(2-Ethylhexyl)phthalate		0.6	0.789	ug/L	132	(50-150)		
MS_202112020301	Di(2-Ethylhexyl)phthalate	ND	2	2.15	ug/L	107	(70-130)		
DUP_202112020302	Diazinon (Qualitative)	ND		ND	ug/L		(0-20)		
LCS1	Diazinon (Qualitative)		2	2.00	ug/L	100	(15-132)		
LCS2	Diazinon (Qualitative)		2	2.56	ug/L	128	(15-132)	20	<u>25</u>
MBLK	Diazinon (Qualitative)			<0.10	ug/L				
MRL_CHK	Diazinon (Qualitative)		0.1	0.105	ug/L	105	(15-132)		
MS_202112020301	Diazinon (Qualitative)	ND	2	1.96	ug/L	98	(15-132)		
DUP_202112020302	Dibenz(a,h)Anthracene	ND		ND	ug/L		(0-20)		
LCS1	Dibenz(a,h)Anthracene		2	2.00	ug/L	100	(70-130)		
LCS2	Dibenz(a,h)Anthracene		2	1.66	ug/L	83	(70-130)	20	19
MBLK	Dibenz(a,h)Anthracene			<0.05	ug/L				
MRL_CHK	Dibenz(a,h)Anthracene		0.05	0.0500	ug/L	100	(50-150)		
MS_202112020301	Dibenz(a,h)Anthracene	ND	2	1.98	ug/L	99	(70-130)		
DUP_202112020302	Dichlorvos (DDVP)			ND	ug/L		(0-20)		
LCS1	Dichlorvos (DDVP)		2	2.16	ug/L	108	(70-130)		
LCS2	Dichlorvos (DDVP)		2	1.98	ug/L	99	(70-130)	20	9.2
MBLK	Dichlorvos (DDVP)			<0.05	ug/L				
MRL_CHK	Dichlorvos (DDVP)		0.05	0.0530	ug/L	106	(50-150)		
MS_202112020301	Dichlorvos (DDVP)		2	2.18	ug/L	109	(70-130)		
DUP_202112020302	Dieldrin	ND		ND	ug/L		(0-20)		
LCS1	Dieldrin		2	2.06	ug/L	103	(70-130)		
LCS2	Dieldrin		2	2.12	ug/L	106	(70-130)	20	2.9
MBLK	Dieldrin			<0.2	ug/L				
MRL_CHK	Dieldrin		0.1	0.123	ug/L	123	(50-150)		
MS_202112020301	Dieldrin	ND	2	2.02	ug/L	101	(70-130)		
DUP_202112020302	Diethylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Diethylphthalate		2	2.20	ug/L	110	(70-130)		
LCS2	Diethylphthalate		2	2.63	ug/L	<u>132</u>	(70-130)	20	18
MBLK	Diethylphthalate			<0.5	ug/L				
MRL_CHK	Diethylphthalate		0.15	0.192	ug/L	128	(50-150)		
MS_202112020301	Diethylphthalate	ND	2	2.23	ug/L	111	(70-130)		
DUP_202112020302	Dimethoate	ND		ND	ug/L		(0-20)		
LCS1	Dimethoate		2	1.61	ug/L	81	(35-100)		
LCS2	Dimethoate		2	1.73	ug/L	86	(35-100)	20	7.2
MBLK	Dimethoate			<0.1	ug/L				
MRL_CHK	Dimethoate		0.1	0.0790	ug/L	79	(35-100)		
MS_202112020301	Dimethoate	ND	2	2.01	ug/L	100	(34-111)		

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Report: 973704
 Project: RED-HILL
 Group: Red-Hill Expanded List
 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
DUP_202112020302	Dimethylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Dimethylphthalate		2	2.21	ug/L	111	(70-130)		
LCS2	Dimethylphthalate		2	2.42	ug/L	121	(70-130)	20	9.1
MBLK	Dimethylphthalate			<0.5	ug/L				
MRL_CHK	Dimethylphthalate		0.3	0.336	ug/L	112	(50-150)		
MS_202112020301	Dimethylphthalate	ND	2	2.22	ug/L	111	(70-130)		
DUP_202112020302	Di-n-Butylphthalate	ND		ND	ug/L		(0-20)		
LCS1	Di-n-Butylphthalate		4	4.44	ug/L	111	(70-130)		
LCS2	Di-n-Butylphthalate		4	4.77	ug/L	119	(70-130)	20	7.2
MBLK	Di-n-Butylphthalate			<1	ug/L				
MRL_CHK	Di-n-Butylphthalate		0.3	0.407	ug/L	136	(50-150)		
MS_202112020301	Di-n-Butylphthalate	ND	4	4.57	ug/L	114	(70-130)		
DUP_202112020302	Di-N-octylphthalate			ND	ug/L		(0-20)		
LCS1	Di-N-octylphthalate		2	1.85	ug/L	92	(70-130)		
LCS2	Di-N-octylphthalate		2	1.68	ug/L	84	(70-130)	20	9.6
MBLK	Di-N-octylphthalate			<0.1	ug/L				
MRL_CHK	Di-N-octylphthalate		0.1	0.106	ug/L	106	(50-150)		
MS_202112020301	Di-N-octylphthalate		2	1.73	ug/L	87	(70-130)		
DUP_202112020302	Endosulfan I (Alpha)			ND	ug/L		(0-20)		
LCS1	Endosulfan I (Alpha)		2	2.09	ug/L	105	(70-130)		
LCS2	Endosulfan I (Alpha)		2	2.23	ug/L	111	(70-130)	20	6.5
MBLK	Endosulfan I (Alpha)			<0.1	ug/L				
MRL_CHK	Endosulfan I (Alpha)		0.1	0.0960	ug/L	96	(50-150)		
MS_202112020301	Endosulfan I (Alpha)		2	2.04	ug/L	102	(70-130)		
DUP_202112020302	Endosulfan II (Beta)			ND	ug/L		(0-20)		
LCS1	Endosulfan II (Beta)		2	2.18	ug/L	109	(70-130)		
LCS2	Endosulfan II (Beta)		2	2.20	ug/L	110	(70-130)	20	0.91
MBLK	Endosulfan II (Beta)			<0.1	ug/L				
MRL_CHK	Endosulfan II (Beta)		0.1	0.118	ug/L	118	(50-150)		
MS_202112020301	Endosulfan II (Beta)		2	2.08	ug/L	104	(70-130)		
DUP_202112020302	Endosulfan Sulfate			ND	ug/L		(0-20)		
LCS1	Endosulfan Sulfate		2	2.20	ug/L	110	(70-130)		
LCS2	Endosulfan Sulfate		2	2.31	ug/L	116	(70-130)	20	4.9
MBLK	Endosulfan Sulfate			<0.1	ug/L				
MRL_CHK	Endosulfan Sulfate		0.1	0.110	ug/L	110	(50-150)		
MS_202112020301	Endosulfan Sulfate		2	2.19	ug/L	110	(70-130)		
DUP_202112020302	Endrin	ND		ND	ug/L		(0-20)		
LCS1	Endrin		2	2.35	ug/L	118	(70-130)		

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

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Report: 973704
 Project: RED-HILL
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 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	Endrin		2	2.40	ug/L	120	(70-130)	20	2.1
MBLK	Endrin			<0.1	ug/L				
MRL_CHK	Endrin		0.1	0.130	ug/L	130	(50-150)		
MS_202112020301	Endrin	ND	2	1.95	ug/L	98	(70-130)		
DUP_202112020302	Endrin Aldehyde			ND	ug/L		(0-20)		
LCS1	Endrin Aldehyde		2	1.95	ug/L	98	(70-130)		
LCS2	Endrin Aldehyde		2	2.16	ug/L	108	(70-130)	20	10
MBLK	Endrin Aldehyde			<0.1	ug/L				
MRL_CHK	Endrin Aldehyde		0.1	0.0890	ug/L	89	(50-150)		
MS_202112020301	Endrin Aldehyde		2	1.73	ug/L	86	(70-130)		
DUP_202112020302	EPTC			ND	ug/L		(0-20)		
LCS1	EPTC		2	2.11	ug/L	106	(70-130)		
LCS2	EPTC		2	1.81	ug/L	91	(70-130)	20	15
MBLK	EPTC			<0.1	ug/L				
MRL_CHK	EPTC		0.1	0.101	ug/L	101	(50-150)		
MS_202112020301	EPTC		2	2.12	ug/L	106	(70-130)		
DUP_202112020302	Fluoranthene	ND		ND	ug/L		(0-20)		
LCS1	Fluoranthene		2	2.22	ug/L	111	(70-130)		
LCS2	Fluoranthene		2	2.33	ug/L	117	(70-130)	20	4.8
MBLK	Fluoranthene			<0.1	ug/L				
MRL_CHK	Fluoranthene		0.05	0.0600	ug/L	120	(50-150)		
MS_202112020301	Fluoranthene	ND	2	2.21	ug/L	111	(70-130)		
DUP_202112020302	Fluorene	ND		ND	ug/L		(0-20)		
LCS1	Fluorene		2	2.20	ug/L	110	(70-130)		
LCS2	Fluorene		2	2.35	ug/L	117	(70-130)	20	6.6
MBLK	Fluorene			<0.05	ug/L				
MRL_CHK	Fluorene		0.05	0.0570	ug/L	114	(50-150)		
MS_202112020301	Fluorene	ND	2	2.18	ug/L	109	(70-130)		
DUP_202112020302	gamma-Chlordane	ND		ND	ug/L		(0-20)		
LCS1	gamma-Chlordane		2	2.12	ug/L	106	(70-130)		
LCS2	gamma-Chlordane		2	2.20	ug/L	110	(70-130)	20	3.7
MBLK	gamma-Chlordane			<0.05	ug/L				
MRL_CHK	gamma-Chlordane		0.05	0.0520	ug/L	104	(50-150)		
MS_202112020301	gamma-Chlordane	ND	2	2.02	ug/L	101	(70-130)		
DUP_202112020302	Heptachlor	ND		ND	ug/L		(0-20)		
LCS1	Heptachlor		2	2.08	ug/L	104	(70-130)		
LCS2	Heptachlor		2	2.04	ug/L	102	(70-130)	20	1.9
MBLK	Heptachlor			<0.04	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		0.04	0.0480	ug/L	120	(50-150)		
MS_202112020301	Heptachlor	ND	2	2.05	ug/L	102	(70-130)		
DUP_202112020302	Heptachlor Epoxide (isomer B)	ND		ND	ug/L		(0-20)		
LCS1	Heptachlor Epoxide (isomer B)		2	2.14	ug/L	107	(70-130)		
LCS2	Heptachlor Epoxide (isomer B)		2	2.23	ug/L	112	(70-130)	20	3.6
MBLK	Heptachlor Epoxide (isomer B)			<0.05	ug/L				
MRL_CHK	Heptachlor Epoxide (isomer B)		0.05	0.0540	ug/L	108	(50-150)		
MS_202112020301	Heptachlor Epoxide (isomer B)	ND	2	2.08	ug/L	104	(70-130)		
DUP_202112020302	Hexachlorobenzene	ND		ND	ug/L		(0-20)		
LCS1	Hexachlorobenzene		2	2.07	ug/L	103	(70-130)		
LCS2	Hexachlorobenzene		2	2.31	ug/L	115	(70-130)	20	11
MBLK	Hexachlorobenzene			<0.05	ug/L				
MRL_CHK	Hexachlorobenzene		0.05	0.0630	ug/L	126	(50-150)		
MS_202112020301	Hexachlorobenzene	ND	2	2.05	ug/L	103	(70-130)		
DUP_202112020302	Hexachlorocyclopentadiene	ND		ND	ug/L		(0-20)		
LCS1	Hexachlorocyclopentadiene		2	1.99	ug/L	100	(70-130)		
LCS2	Hexachlorocyclopentadiene		2	1.61	ug/L	80	(70-130)	20	<u>21</u>
MBLK	Hexachlorocyclopentadiene			<0.05	ug/L				
MRL_CHK	Hexachlorocyclopentadiene		0.05	0.0470	ug/L	94	(50-150)		
MS_202112020301	Hexachlorocyclopentadiene	ND	2	1.96	ug/L	98	(70-130)		
DUP_202112020302	Indeno(1,2,3,c,d)Pyrene	ND		ND	ug/L		(0-20)		
LCS1	Indeno(1,2,3,c,d)Pyrene		2	2.00	ug/L	100	(70-130)		
LCS2	Indeno(1,2,3,c,d)Pyrene		2	1.68	ug/L	84	(70-130)	20	17
MBLK	Indeno(1,2,3,c,d)Pyrene			<0.05	ug/L				
MRL_CHK	Indeno(1,2,3,c,d)Pyrene		0.05	0.0460	ug/L	92	(50-150)		
MS_202112020301	Indeno(1,2,3,c,d)Pyrene	ND	2	1.96	ug/L	98	(70-130)		
DUP_202112020302	Isophorone	ND		ND	ug/L		(0-20)		
LCS1	Isophorone		2	2.14	ug/L	107	(70-130)		
LCS2	Isophorone		2	1.71	ug/L	86	(70-130)	20	<u>22</u>
MBLK	Isophorone			<0.5	ug/L				
MRL_CHK	Isophorone		0.1	0.110	ug/L	110	(50-150)		
MS_202112020301	Isophorone	ND	2	2.14	ug/L	107	(70-130)		
DUP_202112020302	Lindane	ND		ND	ug/L		(0-20)		
LCS1	Lindane		2	2.08	ug/L	104	(70-130)		
LCS2	Lindane		2	2.57	ug/L	128	(70-130)	20	<u>21</u>
MBLK	Lindane			<0.04	ug/L				
MRL_CHK	Lindane		0.04	0.0440	ug/L	110	(50-150)		
MS_202112020301	Lindane	ND	2	2.08	ug/L	104	(70-130)		

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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
DUP_202112020302	Malathion			ND	ug/L		(0-20)		
LCS1	Malathion		2	2.34	ug/L	117	(70-130)		
LCS2	Malathion		2	2.48	ug/L	124	(70-130)	20	5.8
MBLK	Malathion			<0.1	ug/L				
MRL_CHK	Malathion		0.1	0.121	ug/L	121	(50-150)		
MS_202112020301	Malathion		2	2.34	ug/L	117	(70-130)		
DUP_202112020302	Methoxychlor	ND		ND	ug/L		(0-20)		
LCS1	Methoxychlor		2	2.36	ug/L	118	(70-130)		
LCS2	Methoxychlor		2	2.35	ug/L	117	(70-130)	20	0.43
MBLK	Methoxychlor			<0.1	ug/L				
MRL_CHK	Methoxychlor		0.1	0.116	ug/L	116	(50-150)		
MS_202112020301	Methoxychlor	ND	2	2.40	ug/L	120	(70-130)		
DUP_202112020302	Metolachlor	ND		ND	ug/L		(0-20)		
LCS1	Metolachlor		2	2.23	ug/L	112	(70-130)		
LCS2	Metolachlor		2	2.36	ug/L	118	(70-130)	20	5.7
MBLK	Metolachlor			<0.05	ug/L				
MRL_CHK	Metolachlor		0.05	0.0620	ug/L	124	(50-150)		
MS_202112020301	Metolachlor	ND	2	2.49	ug/L	124	(70-130)		
DUP_202112020302	Metribuzin	ND		ND	ug/L		(0-20)		
LCS1	Metribuzin		2	2.02	ug/L	101	(70-130)		
LCS2	Metribuzin		2	2.08	ug/L	104	(70-130)	20	2.9
MBLK	Metribuzin			<0.05	ug/L				
MRL_CHK	Metribuzin		0.05	0.0520	ug/L	104	(50-150)		
MS_202112020301	Metribuzin	ND	2	1.94	ug/L	97	(70-130)		
DUP_202112020302	Molinate	ND		ND	ug/L		(0-20)		
LCS1	Molinate		2	2.11	ug/L	105	(70-130)		
LCS2	Molinate		2	2.20	ug/L	110	(70-130)	20	4.2
MBLK	Molinate			<0.1	ug/L				
MRL_CHK	Molinate		0.1	0.100	ug/L	100	(50-150)		
MS_202112020301	Molinate	ND	2	2.15	ug/L	108	(70-130)		
DUP_202112020302	Naphthalene			ND	ug/L		(0-20)		
LCS1	Naphthalene		2	2.02	ug/L	101	(70-130)		
LCS2	Naphthalene		2	1.68	ug/L	84	(70-130)	20	19
MBLK	Naphthalene			<0.3	ug/L				
MRL_CHK	Naphthalene		0.1	0.112	ug/L	112	(50-150)		
MS_202112020301	Naphthalene		2	2.00	ug/L	100	(70-130)		
DUP_202112020302	Parathion			ND	ug/L		(0-20)		
LCS1	Parathion		2	2.48	ug/L	124	(70-130)		

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 1 800 566 LABS (1 800 566 5227)

Report: 973704
 Project: RED-HILL
 Group: Red-Hill Expanded List
 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	Parathion		2	2.67	ug/L	<u>133</u>	(70-130)	20	7.4
MBLK	Parathion			<0.1	ug/L				
MRL_CHK	Parathion		0.1	0.137	ug/L	137	(50-150)		
MS_202112020301	Parathion		2	2.65	ug/L	<u>132</u>	(70-130)		
DUP_202112020302	Pendimethalin			ND	ug/L		(0-20)		
LCS1	Pendimethalin		2	2.14	ug/L	107	(70-130)		
LCS2	Pendimethalin		2	2.29	ug/L	115	(70-130)	20	6.8
MBLK	Pendimethalin			<0.1	ug/L				
MRL_CHK	Pendimethalin		0.1	0.107	ug/L	107	(50-150)		
MS_202112020301	Pendimethalin		2	2.27	ug/L	114	(70-130)		
DUP_202112020302	Permethrin (mixed isomers)			ND	ug/L		(0-20)		
LCS1	Permethrin (mixed isomers)		4	4.19	ug/L	105	(70-130)		
LCS2	Permethrin (mixed isomers)		4	4.05	ug/L	101	(70-130)	20	3.4
MBLK	Permethrin (mixed isomers)			<0.2	ug/L				
MRL_CHK	Permethrin (mixed isomers)		0.2	0.255	ug/L	127	(50-150)		
MS_202112020301	Permethrin (mixed isomers)		4	4.12	ug/L	103	(70-130)		
DUP_202112020302	Perylene-d12 (S)			91.4	%	91	(70-130)		
LCS1	Perylene-d12 (S)		5	94.6	%	95	(70-130)		
LCS2	Perylene-d12 (S)		5	90.4	%	90	(70-130)		
MBLK	Perylene-d12 (S)			91.4	%	91	(70-130)		
MRL_CHK	Perylene-d12 (S)		5	81.0	%	81	(70-130)		
MS_202112020301	Perylene-d12 (S)		5	92.2	%	92	(70-130)		
DUP_202112020302	Phenanthrene	ND		ND	ug/L		(0-20)		
LCS1	Phenanthrene		2	2.08	ug/L	104	(70-130)		
LCS2	Phenanthrene		2	2.06	ug/L	103	(70-130)	20	0.97
MBLK	Phenanthrene			<0.04	ug/L				
MRL_CHK	Phenanthrene		0.02	0.0250	ug/L	125	(50-150)		
MS_202112020301	Phenanthrene	ND	2	2.06	ug/L	103	(70-130)		
DUP_202112020302	Phenanthrene-d10 (I)			97.1	%	97	(50-150)		
LCS1	Phenanthrene-d10 (I)		5	101	%	101	(50-150)		
LCS2	Phenanthrene-d10 (I)		5	92.2	%	92	(50-150)		
MBLK	Phenanthrene-d10 (I)			96.7	%	97	(50-150)		
MRL_CHK	Phenanthrene-d10 (I)		5	94.9	%	95	(50-150)		
MS_202112020301	Phenanthrene-d10 (I)		5	94.1	%	94	(50-150)		
DUP_202112020302	Propachlor	ND		ND	ug/L		(0-20)		
LCS1	Propachlor		2	2.15	ug/L	108	(70-130)		
LCS2	Propachlor		2	2.65	ug/L	<u>133</u>	(70-130)	20	<u>21</u>
MBLK	Propachlor			<0.05	ug/L				

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: 973704
 Project: RED-HILL
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 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Propachlor		0.05	0.0560	ug/L	112	(50-150)		
MS_202112020301	Propachlor	ND	2	2.21	ug/L	111	(70-130)		
DUP_202112020302	Pyrene	ND		ND	ug/L		(0-20)		
LCS1	Pyrene		2	2.22	ug/L	111	(70-130)		
LCS2	Pyrene		2	2.34	ug/L	117	(70-130)	20	5.7
MBLK	Pyrene			<0.05	ug/L				
MRL_CHK	Pyrene		0.05	0.0610	ug/L	122	(50-150)		
MS_202112020301	Pyrene	ND	2	2.22	ug/L	111	(70-130)		
DUP_202112020302	Simazine	ND		ND	ug/L		(0-20)		
LCS1	Simazine		2	2.29	ug/L	115	(70-130)		
LCS2	Simazine		2	2.88	ug/L	144	(70-130)	20	23
MBLK	Simazine			<0.05	ug/L				
MRL_CHK	Simazine		0.05	0.0600	ug/L	120	(50-150)		
MS_202112020301	Simazine	ND	2	2.16	ug/L	108	(70-130)		
DUP_202112020302	Terbacil			ND	ug/L		(0-20)		
LCS1	Terbacil		2	2.17	ug/L	108	(70-130)		
LCS2	Terbacil		2	2.33	ug/L	117	(70-130)	20	7.1
MBLK	Terbacil			<0.1	ug/L				
MRL_CHK	Terbacil		0.1	0.128	ug/L	128	(50-150)		
MS_202112020301	Terbacil		2	2.14	ug/L	107	(70-130)		
DUP_202112020302	Terbuthylazine			ND	ug/L		(0-20)		
LCS1	Terbuthylazine		2	2.16	ug/L	108	(70-130)		
LCS2	Terbuthylazine		2	2.92	ug/L	146	(70-130)	20	30
MBLK	Terbuthylazine			<0.1	ug/L				
MRL_CHK	Terbuthylazine		0.1	0.113	ug/L	113	(50-150)		
MS_202112020301	Terbuthylazine		2	2.05	ug/L	102	(70-130)		
DUP_202112020302	Thiobencarb	ND		ND	ug/L		(0-20)		
LCS1	Thiobencarb		2	2.15	ug/L	108	(70-130)		
LCS2	Thiobencarb		2	2.22	ug/L	111	(70-130)	20	3.2
MBLK	Thiobencarb			<0.2	ug/L				
MRL_CHK	Thiobencarb		0.1	0.120	ug/L	120	(50-150)		
MS_202112020301	Thiobencarb	ND	2	2.07	ug/L	103	(70-130)		
DUP_202112020302	trans-Nonachlor	ND		ND	ug/L		(0-20)		
LCS1	trans-Nonachlor		2	1.99	ug/L	100	(70-130)		
LCS2	trans-Nonachlor		2	2.11	ug/L	105	(70-130)	20	5.8
MBLK	trans-Nonachlor			<0.05	ug/L				
MRL_CHK	trans-Nonachlor		0.05	0.0540	ug/L	108	(50-150)		
MS_202112020301	trans-Nonachlor	ND	2	1.94	ug/L	97	(70-130)		

Spike recovery is already corrected for native results.

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Criteria for MS and Dup are advisory only, batch control is based on LCS. Criteria for duplicates are advisory only, unless otherwise specified in the method.

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

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

(S) - Indicates surrogate compound.

(I) - Indicates internal standard compound.

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Report: 973704
Project: RED-HILL
Group: Red-Hill Expanded List
 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
DUP_202112020302	Trifluralin	ND		ND	ug/L		(0-20)		
LCS1	Trifluralin		2	2.17	ug/L	109	(70-130)		
LCS2	Trifluralin		2	2.66	ug/L	133	(70-130)	20	20
MBLK	Trifluralin			<0.1	ug/L				
MRL_CHK	Trifluralin		0.1	0.0920	ug/L	92	(50-150)		
MS_202112020301	Trifluralin	ND	2	2.29	ug/L	114	(70-130)		
DUP_202112020302	Triphenylphosphate (S)			104	%	104	(70-130)		
LCS1	Triphenylphosphate (S)		5	105	%	105	(70-130)		
LCS2	Triphenylphosphate (S)		5	110	%	110	(70-130)		
MBLK	Triphenylphosphate (S)			104	%	104	(70-130)		
MRL_CHK	Triphenylphosphate (S)		5	104	%	104	(70-130)		
MS_202112020301	Triphenylphosphate (S)		5	105	%	105	(70-130)		

Spike recovery is already corrected for native results.

Spikes which exceed Limits and Method Blanks with positive results are highlighted by Underlining.

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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
 Erwin Kawata
 630 South Beretania Street
 Public Service Bldg.” Room 308
 Honolulu, HI 96843

Samples Received on:
 12/08/2021 1220

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
		202112070428				
		<u>HALAWA SHAFT-331-241-TP401</u>				
12/08/2021 15:05	Chloride		140	250	mg/L	2.5
12/07/2021 19:19	Nitrate as Nitrogen by IC		0.56	10	mg/L	0.10
12/07/2021 19:19	Sulfate		27	250	mg/L	1.0
		202112080692				
		<u>HALAWA SHAFT-331-241-TP401</u>				
12/12/2021 00:00	Benzoic acid		0.455		ug/L	0.2
12/09/2021 19:19	Chromium Total ICAP/MS		2.0	100	ug/L	1.0



3051 Fujita Street
Torrance, CA 90505
Tel: (310)-618-8889

Date: 12-15-2021
EMAX Batch No.: 21L086

Attn: Jackie Contreras

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

Subject: Laboratory Report
Project: 973704

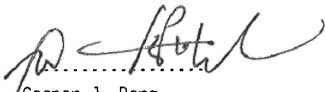
Enclosed is the Laboratory report for samples received on 12/08/21.
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
202112080692	L086-01	12/06/21	WATER	ETHANOL TPH GASOLINE
202112080693	L086-02	12/06/21	WATER	TPH TPH GASOLINE

The results are summarized on the following pages.

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

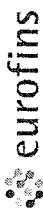
Sincerely yours,


Caspar J. Pang
Laboratory Director

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

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

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



Eaton Analytical

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

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

Folder #: 973704 Report Due: 01/07/2022

Sample ID 202112080692 Client Sample ID for reference on HALAWA SHAFT-331-241-TP401

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	EPA 8015	Jet Fuel 5 C8-C18
EPA 8015		Jet Fuel 8 C8-C18

Sample ID 202112080693 Client Sample ID for reference on TRAVEL BLANK: HALAWA SHAFT-331-241-TP401

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

Relinquished by: *Chris Bouch* Date 12/18/21 Time 15:10

Received by: _____ Date _____ Time _____

Relinquished by: _____ Date _____ Time _____

Received by: _____ Date 12/18/21 Time 17:15

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

Temp. 2.0, 3.6, 5.6

Date: 12/18/2021

210806

Submittal Form

*REPORTING REQUIREMENTS: Do Not Combine Reports with any other samples submitted under different Folder Numbers! Report & Invoice must have the Folder# 973704 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 State Certification # and Exp Date for requested tests + matrix. Samples from: HAWAII

2 day rush

Sample Date & Time Matrix 12/06/21 1004 DW Clip Code PWSID JLS

Sample Point ID: Static ID:

Sample Date & Time Matrix 12/06/21 1004 DW Clip Code PWSID JLS

Sample Point ID: Static ID:

Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others	Airbill / Tracking Number	ECN 21L086
<input type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery		Recipient <u>Juan Alejandro</u>
		Date <u>12/08/21</u> Time <u>7:15</u>

COC INSPECTION

<input checked="" type="checkbox"/> Client Name	<input checked="" type="checkbox"/> Client PM/FC	<input type="checkbox"/> Sampler Name	<input checked="" type="checkbox"/> Sampling Date/Time	<input checked="" type="checkbox"/> Sample ID	<input checked="" type="checkbox"/> Matrix
<input checked="" type="checkbox"/> Address	<input checked="" type="checkbox"/> Tel # / Fax #	<input type="checkbox"/> Courier Signature	<input checked="" type="checkbox"/> Analysis Required	<input checked="" type="checkbox"/> Preservative (if any)	<input checked="" type="checkbox"/> TAT
Safety Issues (if any)	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required	<u>MR 12/9/21</u>	
Note: _____					

PACKAGING INSPECTION

Container	<input checked="" type="checkbox"/> Cooler	<input type="checkbox"/> Box	<input type="checkbox"/> Other
Condition	<input type="checkbox"/> Custody Seal	<input type="checkbox"/> Intact	<input type="checkbox"/> Damaged
Packaging	<input checked="" type="checkbox"/> Bubble Pack	<input type="checkbox"/> Styrofoam	<input type="checkbox"/> Popcorn
Temperatures (Cool, ≤6 °C but not frozen)	<input checked="" type="checkbox"/> Cooler 1 <u>2.0</u> °C	<input checked="" type="checkbox"/> Cooler 2 <u>3.6</u> °C	<input checked="" type="checkbox"/> Cooler 3 <u>5.6</u> °C
	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 4 _____ °C
Thermometer:	<u>A - S/N 21019106</u>	<u>B - S/N 210271396</u>	<u>C - S/N 210271399</u>
	<u>12/9/21</u>		<u>D - S/N _____</u>
Comments: <input type="checkbox"/> Temperature is out of range. PM was informed IMMEDIATELY.			
Note: _____			

DISCREPANCIES

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<u>1</u>	<u>8-15</u>	<u>D22</u>		<u>NR</u>
<i>(The rest of the table is crossed out with a large diagonal line)</i>				

pH holding time requirement for water samples is 15 mins. Water samples for pH analysis are received beyond 15 minutes from sampling time. NR 12/10/21

NOTES/OBSERVATIONS:

LEGEND:

<p>Code Description- Sample Management</p> <p>D1 Analysis is not indicated in _____</p> <p>D2 Analysis mismatch COC vs label</p> <p>D3 Sample ID mismatch COC vs label</p> <p>D4 Sample ID is not indicated in _____</p> <p>D5 Container -[improper] [leaking] [broken]</p> <p>D6 Date/Time is not indicated in _____</p> <p>D7 Date/Time mismatch COC vs label</p> <p>D8 Sample listed in COC is not received</p> <p>D9 Sample received is not listed in COC</p> <p>D10 No initial/date on corrections in COC/label</p> <p>D11 Container count mismatch COC vs received</p> <p>D12 Container size mismatch COC vs received</p>	<p>Code Description-Sample Management</p> <p>D13 Out of Holding Time</p> <p>D14 Bubble is >6mm</p> <p>D15 No trip blank in cooler</p> <p>D16 Preservation not indicated in _____</p> <p>D17 Preservation mismatch COC vs label</p> <p>D18 Insufficient chemical preservative</p> <p>D19 Insufficient Sample</p> <p>D20 No filtration info for dissolved analysis</p> <p>D21 No sample for moisture determination</p> <p><u>D22 Jet Fuel 8 Analysis not indicated on label</u></p> <p>D23 _____</p> <p>D24 _____</p>	<p><input type="checkbox"/> Continue to next page.</p> <p>Code Description-Sample Management</p> <p>R1 Proceed as indicated in <input type="checkbox"/> COC <input type="checkbox"/> Label</p> <p>R2 Refer to attached instruction</p> <p>R3 Cancel the analysis</p> <p>R4 Use vial with smallest bubble first</p> <p>R5 Log-in with latest sampling date and time+1 min</p> <p>R6 Adjust pH as necessary</p> <p>R7 Filter and preserved as necessary</p> <p>R8 <u>Informed client</u></p> <p>R9 _____</p> <p>R10 _____</p> <p>R11 _____</p> <p>R12 _____</p>
----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

REVIEWS:

Sample Labeling <u>Maria Riveva</u>	SRF <u>Accepted</u>	PM <u>NR</u>
Date <u>12/9/21</u>	Date <u>12/9/21</u>	Date <u>12/10/21</u>

REPORTING CONVENTIONS

DATA QUALIFIERS:

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

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

ACRONYMS AND ABBREVIATIONS:

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

DATES

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

LABORATORY REPORT FOR
EUROFINS EATON ANALYTICAL

973704

METHOD SW8015C
ALCOHOLS BY GC

SDG#: 21L086

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 973704

SDG : 21L086

METHOD SW8015C
ALCOHOLS BY GC

One(1) water sample was received on 12/08/21 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. MEL003WB - 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. MEL003WL/MEL003WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

No matrix QC sample was provided on this SDG. Ethanol was within MS/MSD QC limits in L084-01M/L084-01S. 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 SDG NO. : 21L086
Project : 973704 Instrument ID : GCT050

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Prep. Data FN	Batch	Notes
MBLK1W	MEL003WB	1	NA	12/09/2111:17	NA	TL09004A	TL09002A	MEL003W	Method Blank
LCS1W	MEL003WL	1	NA	12/09/2111:33	NA	TL09005A	TL09002A	MEL003W	Lab Control Sample (LCS)
LCD1W	MEL003WC	1	NA	12/09/2111:46	NA	TL09006A	TL09002A	MEL003W	LCS Duplicate
202112080692	L086-01	1	NA	12/09/2112:57	NA	TL09011A	TL09002A	MEL003W	Field Sample

FN - Filename
% Moist - Percent Moisture

SAMPLE RESULTS

METHOD SW8015C
ALCOHOLS BY GC

```
=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 12/06/21
Project     : 973704                          Date Received: 12/08/21
Batch No.   : 21L086                          Date Extracted: NA
Sample ID   : 202112080692                   Date Analyzed: 12/09/21 12:57
Lab Samp ID: L086-01                          Dilution Factor: 1
Lab File ID: TL09011A                        Matrix          : WATER
Ext Btch ID: MEL003W                          % Moisture     : NA
Calib. Ref.: TL09002A                        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     : 973704                          Date Received: NA
Batch No.   : 21L086                          Date Extracted: NA
Sample ID   : MBLK1W                          Date Analyzed: 12/09/21 11:17
Lab Samp ID: MEL003WB                        Dilution Factor: 1
Lab File ID: TL09004A                        Matrix          : WATER
Ext Btch ID: MEL003W                          % Moisture     : NA
Calib. Ref.: TL09002A                        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: 973704
BATCH NO.: 21L086
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: MBLK1W
LAB SAMP ID: MEL003WB MEL003WL MEL003WC
LAB FILE ID: TL09004A TL09005A TL09006A
DATE EXTRACTED: NA NA NA DATE COLLECTED: NA
DATE ANALYZED: 12/09/2111:17 12/09/2111:33 12/09/2111:46 DATE RECEIVED: NA
PREP. BATCH: MEL003W MEL003W MEL003W
CALIB. REF: TL09002A TL09002A TL09002A

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	9740	97	10000	9820	98	1	60-130	30

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL
PROJECT: 973687
BATCH NO.: 21L084
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA
DILUTION FACTOR: 1 1 1
SAMPLE ID: 202112080607
LAB SAMP ID: L084-01 L084-01M L084-01S
LAB FILE ID: TL09007A TL09008A TL09009A
DATE EXTRACTED: NA NA NA DATE COLLECTED: 12/07/21
DATE ANALYZED: 12/09/2112:00 12/09/2112:14 12/09/2112:29 DATE RECEIVED: 12/08/21
PREP. BATCH: MEL003W MEL003W MEL003W
CALIB. REF: TL09002A TL09002A TL09002A

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	9750	98	10000	9810	98	1	60-130	30

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

973704

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

SDG#: 21L086

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 973704

SDG : 21L086

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

A total of two(2) water samples were received on 12/08/21 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. VG39L05B - 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. VG39L05L/VG39L05C 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 L086-01M/L086-01S. 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.

SAMPLE RESULTS

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 12/06/21 10:04
Project     : 973704                     Date Received: 12/08/21
Batch No.   : 21L086                     Date Extracted: 12/10/21 14:51
Sample ID   : 202112080692              Date Analyzed: 12/10/21 14:51
Lab Samp ID: L086-01                     Dilution Factor: 1
Lab File ID: EL10009A                    Matrix: WATER
Ext Btch ID: 21VG39L05                   % Moisture: NA
Calib. Ref.: EL10003A                    Instrument ID: 39
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0326	0.0400	82	60-140

Notes:

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

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

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

=====
Client : EUROFINS EATON ANALYTICAL Date Collected: 12/06/21 10:04
Project : 973704 Date Received: 12/08/21
Batch No. : 21L086 Date Extracted: 12/10/21 14:13
Sample ID : 202112080693 Date Analyzed: 12/10/21 14:13
Lab Samp ID: L086-02 Dilution Factor: 1
Lab File ID: EL10008A Matrix: WATER
Ext Btch ID: 21VG39L05 % Moisture: NA
Calib. Ref.: EL10003A Instrument ID: 39
=====

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)		
GASOLINE	ND	0.020	0.010		
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT	
Bromofluorobenzene	0.0305	0.0400	76	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

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 973704
BATCH NO. : 21L086
METHOD : 5030B/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : MBLK1W                             LCS1W         LCD1W
LAB SAMPLE ID : VG39L05B                         VG39L05L     VG39L05C
LAB FILE ID  : EL10005A                         EL10006A     EL10007A
DATE PREPARED : 12/10/21 12:15                 12/10/21 12:54 12/10/21 13:34
DATE ANALYZED : 12/10/21 12:15                 12/10/21 12:54 12/10/21 13:34
PREP BATCH   : 21VG39L05                       21VG39L05   21VG39L05
CALIBRATION REF: EL10003A                       EL10003A    EL10003A
  
```

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	0.489	98	0.500	0.450	90	8	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0464	116	0.0400	0.0413	103	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 : 973704
BATCH NO. : 21L086
METHOD : 5030B/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : 202112080692                       202112080692MS  202112080692MSD
LAB SAMPLE ID : L086-01                          L086-01M      L086-01S
LAB FILE ID  : EL10009A                          EL10010A      EL10011A
DATE PREPARED : 12/10/21 14:51                   12/10/21 15:30 12/10/21 16:08
DATE ANALYZED : 12/10/21 14:51                   12/10/21 15:30 12/10/21 16:08
PREP BATCH   : 21VG39L05                         21VG39L05     21VG39L05
CALIBRATION REF: EL10003A                        EL10003A      EL10003A
  
```

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	0.510	102	0.500	0.501	100	2	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0477	119	0.0400	0.0461	115	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

973704

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 21L086

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 973704

SDG : 21L086

METHOD 3520C/8015B
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 12/08/21 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. DSL008WB - 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 J8L008WL. 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 21L084-01M/21L084-01S. 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: 973704

SDG : 21L086

METHOD 3520C/8015B
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 12/08/21 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. DSL008WB - 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 DSL008WL. 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 21L084-01M/21L084-01S. 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: 973704

SDG : 21L086

METHOD 3520C/8015B PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 12/08/21 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. DSL008WB - 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 J5L008WL. 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 21L084-01M/21L084-01S. 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.

SAMPLE RESULTS

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 12/06/21 10:04
Project     : 973704                     Date Received: 12/08/21
Batch No.   : 21L086                     Date Extracted: 12/09/21 13:15
Sample ID   : 202112080692              Date Analyzed: 12/10/21 19:26
Lab Samp ID: 21L086-01                  Dilution Factor: 1
Lab File ID: LL10021A                   Matrix: WATER
Ext Btch ID: 21DSL008W                   % Moisture: NA
Calib. Ref.: LL10004A                   Instrument ID: D5
=====
  
```

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.553	0.525	105	60-130
Hexacosane	0.120	0.131	91	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 : 950ml Final Volume : 5ml
 Prepared by : JNakag/HWang Analyzed by : SDeeso

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 12/06/21 10:04
Project     : 973704                     Date Received: 12/08/21
Batch No.   : 21L086                     Date Extracted: 12/09/21 13:15
Sample ID   : 202112080692              Date Analyzed: 12/10/21 19:26
Lab Samp ID: 21L086-01                   Dilution Factor: 1
Lab File ID: LL10021A                     Matrix: WATER
Ext Btch ID: 21DSL008W                    % Moisture: NA
Calib. Ref.: LL10005A                     Instrument ID: D5
=====
    
```

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.553	0.525	105	60-130
Hexacosane	0.120	0.131	91	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 : 950ml Final Volume : 5ml
 Prepared by : JNakag/HWang Analyzed by : SDeeso

QC SUMMARIES

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 973704
BATCH NO. : 21L086
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSL008WB DSL008WL
LAB FILE ID : LL10009A LL10010A
DATE PREPARED : 12/09/21 13:15 12/09/21 13:15
DATE ANALYZED : 12/10/21 15:53 12/10/21 16:11
PREP BATCH : 21DSL008W 21DSL008W
CALIBRATION REF: LL10003A LL10003A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.37	95	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.535	107	60-130
Hexacosane	0.125	0.117	94	60-130

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 12/09/21 13:15
Project     : 973704                     Date Received: 12/09/21
Batch No.   : 21L086                     Date Extracted: 12/09/21 13:15
Sample ID   : MBLK1W                     Date Analyzed: 12/10/21 15:53
Lab Samp ID: DSL008WB                    Dilution Factor: 1
Lab File ID: LL10009A                    Matrix: WATER
Ext Btch ID: 21DSL008W                   % Moisture: NA
Calib. Ref.: LL10004A                    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	0.441	0.500	88	60-130
Hexacosane	0.106	0.125	85	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 : JNakag/HWang Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 973704
BATCH NO. : 21L086
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSL008WB J5L008WL
LAB FILE ID : LL10009A LL10011A
DATE PREPARED : 12/09/21 13:15 12/09/21 13:15
DATE ANALYZED : 12/10/21 15:53 12/10/21 16:28
PREP BATCH : 21DSL008W 21DSL008W
CALIBRATION REF: LL10004A LL10004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP5	ND	2.50	2.15	86	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.502	100	60-130
Hexacosane	0.125	0.118	94	60-130

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 12/09/21 13:15
Project     : 973704                     Date Received: 12/09/21
Batch No.   : 21L086                     Date Extracted: 12/09/21 13:15
Sample ID   : MBLK1W                     Date Analyzed: 12/10/21 15:53
Lab Samp ID: DSL008WB                    Dilution Factor: 1
Lab File ID: LL10009A                    Matrix: WATER
Ext Btch ID: 21DSL008W                   % Moisture: NA
Calib. Ref.: LL10005A                    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	0.441	0.500	88	60-130
Hexacosane	0.106	0.125	85	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 : JNakag/HWang Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 973704
BATCH NO. : 21L086
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA
DILUTION FACTOR: 1 1
SAMPLE ID : MBLK1W LCS1W
LAB SAMPLE ID : DSL008WB J8L008WL
LAB FILE ID : LL10009A LL10012A
DATE PREPARED : 12/09/21 13:15 12/09/21 13:15
DATE ANALYZED : 12/10/21 15:53 12/10/21 16:46
PREP BATCH : 21DSL008W 21DSL008W
CALIBRATION REF: LL10005A LL10005A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP8	ND	2.50	1.93	77	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.477	95	60-130
Hexacosane	0.125	0.119	95	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 973687
BATCH NO. : 21L084
METHOD : 3520C/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : 202112080607                       202112080607MSD
LAB SAMPLE ID : 21L084-01                         21L084-01S
LAB FILE ID  : LL10013A                          LL10015A
DATE PREPARED : 12/09/21 13:15                   12/09/21 13:15
DATE ANALYZED : 12/10/21 17:04                   12/10/21 17:39
PREP BATCH   : 21DSL008W                         21DSL008W
CALIBRATION REF: LL10003A                       LL10003A
  
```

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.50	2.24	90	2.50	2.03	81	10	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.502	100	0.500	0.480	96	60-130
Hexacosane	0.125	0.114	91	0.125	0.115	92	60-130

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

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 973687
BATCH NO. : 21L084
METHOD : 3520C/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : 202112080607                       202112080607MSD
LAB SAMPLE ID : 21L084-01                         21L084-01S
LAB FILE ID  : LL10013A                          LL10017A
DATE PREPARED : 12/09/21 13:15                   12/09/21 13:15
DATE ANALYZED : 12/10/21 17:04                   12/10/21 18:15
PREP BATCH   : 21DSL008W                         21DSL008W
CALIBRATION REF: LL10004A                        LL10004A
  
```

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	1.97	77	2.60	2.15	83	9	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.515	0.613	119	0.520	0.519	100	60-130
Hexacosane	0.129	0.114	89	0.130	0.120	92	60-130

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

EMAX QUALITY CONTROL DATA
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL
PROJECT : 973687
BATCH NO. : 21L084
METHOD : 3520C/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 202112080607	202112080607MS	202112080607MSD
LAB SAMPLE ID	: 21L084-01	21L084-01M	21L084-01S
LAB FILE ID	: LL10013A	LL10018A	LL10019A
DATE PREPARED	: 12/09/21 13:15	12/09/21 13:15	12/09/21 13:15
DATE ANALYZED	: 12/10/21 17:04	12/10/21 18:33	12/10/21 18:50
PREP BATCH	: 21DSL008W	21DSL008W	21DSL008W
CALIBRATION REF:	LL10005A	LL10005A	LL10005A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.60	2.46	95	2.58	2.62	102	6	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.520	0.526	101	0.515	0.523	102	60-130
Hexacosane	0.130	0.119	92	0.129	0.115	89	60-130

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

December 13, 2021

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

Project Name: Folder # 973704 Job # 1000014
 Physis Project ID: 1407003-198

Dear Debbie,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 12/8/2021. A total of 1 sample was received for analysis in accordance with the attached chain of custody (COC). Per the COC, the sample was analyzed for:

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

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

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

Regards,



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

PROJECT SAMPLE LIST

Eurofins Eaton Analytical

PHYSIS Project ID: 1407003-198

Folder # 973704 Job # 1000014

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
93064	202112080692	HALAWA SHAFT-331-241-TP401	12/6/2021	10:04	Samplewater	Not Specified

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

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

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.

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

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

TERRA
ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

Acid Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 93064-R1 202112080692 HALAWA SHAFT-331- Matrix: Samplewater											
(2,4,6-Tribromophenol)	EPA 625.1	% Recovery	59	1			Total	O-35016	06-Dec-21 10:04	09-Dec-21	08-Dec-21
(d5-Phenol)	EPA 625.1	% Recovery	26	1			Total	O-35016		09-Dec-21	12-Dec-21
2,4,5-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		09-Dec-21	12-Dec-21
2,4,6-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		09-Dec-21	12-Dec-21
2,4-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		09-Dec-21	12-Dec-21
2,4-Dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		09-Dec-21	12-Dec-21
2,6-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		09-Dec-21	12-Dec-21
2,6-Di-tert-butyl-4-methylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		09-Dec-21	12-Dec-21
2,6-Di-tert-butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		09-Dec-21	12-Dec-21
2-Chlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		09-Dec-21	12-Dec-21
2-Methyl-4,6-dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		09-Dec-21	12-Dec-21
2-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		09-Dec-21	12-Dec-21
2-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		09-Dec-21	12-Dec-21
3+4-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		09-Dec-21	12-Dec-21
4-Chloro-3-methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		09-Dec-21	12-Dec-21
4-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		09-Dec-21	12-Dec-21
6-tert-butyl-2,4-dimethylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		09-Dec-21	12-Dec-21
Benzoic Acid	EPA 625.1	µg/L	0.455	1	0.1	0.2	Total	O-35016		09-Dec-21	12-Dec-21
Benzyl Alcohol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		09-Dec-21	12-Dec-21
Pentachlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		09-Dec-21	12-Dec-21
Phenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		09-Dec-21	12-Dec-21
p-tert-Butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		09-Dec-21	12-Dec-21

Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 93064-R1 202112080692 HALAWA SHAFT-331- Matrix: Samplewater											
(d4-1,4-Dichlorobenzene)	EPA 625.1	% Recovery	62	1			Total		O-35016	09-Dec-21	08-Dec-21
2-Chloronaphthalene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
2-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
3-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
4-Bromophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
4-Chloroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
4-Chlorophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
4-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
Aniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
Benzidine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
Bis(2-Chloroethoxy) methane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
Bis(2-Chloroethyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
Bis(2-Chloroisopropyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
Dibenzofuran	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
Hexachloroethane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
Nitrobenzene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
N-Nitrosodi-n-propylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21
N-Nitrosodiphenylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	09-Dec-21	12-Dec-21

Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Sample ID: 93064-R1 202112080692 HALAWA SHAFT-331- Matrix: Samplewater											
(d10-Acenaphthene)	EPA 625.1	% Recovery	81	1			Total	O-35016	06-Dec-21 10:04	09-Dec-21	08-Dec-21
(d10-Phenanthrene)	EPA 625.1	% Recovery	91	1			Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
(d12-Chrysene)	EPA 625.1	% Recovery	86	1			Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
(d12-Perylene)	EPA 625.1	% Recovery	94	1			Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
(d8-Naphthalene)	EPA 625.1	% Recovery	70	1			Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Benz[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Benz[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Benz[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Benzof[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Benzokjfluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	06-Dec-21 10:04	09-Dec-21	12-Dec-21

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-35016	09-Dec-21	12-Dec-21
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	09-Dec-21	12-Dec-21
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	09-Dec-21	12-Dec-21
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	09-Dec-21	12-Dec-21
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	09-Dec-21	12-Dec-21
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	09-Dec-21	12-Dec-21
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	09-Dec-21	12-Dec-21

QUALITY CONTROL REPORT

TERRA

AURA

ENVIRONMENTAL LABORATORIES, INC.

Innovative Solutions for Nature

Acid Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE
Matrix: BlankMatrix											
Sample ID: 93063-B1											
QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-35016											
Prepared: 07-Dec-21											
Analyzed: 11-Dec-21											
(2,4,6-Tribromophenol)	Total	53	1			% Recovery	100		53	44 - 159%	PASS
(d5-Phenol)	Total	58	1			% Recovery	100		58	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 %	PRECISION %	QA CODE
Matrix: BlankMatrix											
Sample ID: 93063-BS1											
QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-35016											
Prepared: 07-Dec-21											
Analyzed: 12-Dec-21											
(2,4,6-Tribromophenol)	Total	56	1			% Recovery	100	0	56	44 - 159%	PASS
(d5-Phenol)	Total	50	1			% Recovery	100	0	50	20 - 121%	PASS
2,4,5-Trichlorophenol	Total	0.869	1	0.05	0.1	µg/L	1	0	87	57 - 116%	PASS
2,4,6-Trichlorophenol	Total	0.938	1	0.05	0.1	µg/L	1	0	94	56 - 118%	PASS
2,4-Dichlorophenol	Total	0.89	1	0.05	0.1	µg/L	1	0	89	51 - 117%	PASS
2,4-Dinitrophenol	Total	0.215	1	0.1	0.2	µg/L	1	0	22	0 - 152%	PASS
2,6-Dichlorophenol	Total	0.45	1	0.05	0.1	µg/L	0.5	0	90	30 - 130%	PASS
2,6-Di-tert-butyl-4-methylphe	Total	0.84	1	0.05	0.1	µg/L	1	0	84	50 - 150%	PASS
2,6-Di-tert-butylphenol	Total	0.906	1	0.05	0.1	µg/L	1	0	91	50 - 150%	PASS
2-Chlorophenol	Total	0.801	1	0.05	0.1	µg/L	1	0	80	41 - 110%	PASS
2-Methyl-4,6-dinitrophenol	Total	0.964	1	0.1	0.2	µg/L	1	0	96	0 - 141%	PASS
2-Methylphenol	Total	0.81	1	0.1	0.2	µg/L	1	0	81	40 - 117%	PASS
2-Nitrophenol	Total	1.04	1	0.1	0.2	µg/L	1	0	104	40 - 117%	PASS
3+4-Methylphenol	Total	0.862	1	0.1	0.2	µg/L	1	0	86	0 - 130%	PASS
4-Chloro-3-methylphenol	Total	1.01	1	0.1	0.2	µg/L	1	0	101	51 - 128%	PASS
4-Nitrophenol	Total	1	1	0.1	0.2	µg/L	1	0	100	10 - 164%	PASS
6-tert-butyl-2,4-dimethylphen	Total	1.07	1	0.05	0.1	µg/L	1	0	107	50 - 150%	PASS
Benzoic Acid	Total	0.631	1	0.1	0.2	µg/L	1	0	63	2 - 145%	PASS
Benzyl Alcohol	Total	0.939	1	0.1	0.2	µg/L	1	0	94	43 - 148%	PASS
Pentachlorophenol	Total	0.417	1	0.05	0.1	µg/L	1	0	42	36 - 111%	PASS
Phenol	Total	0.685	1	0.1	0.2	µg/L	1	0	69	29 - 114%	PASS
p-tert-Butylphenol	Total	1.11	1	0.05	0.1	µg/L	1	0	111	50 - 150%	PASS

Acid Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE	
Matrix: BlankMatrix												
Sample ID: 93063-BS2												
QAQC Procedural Blank												
Method: EPA 625.1												
Batch ID: O-35016												
Prepared: 07-Dec-21												
Analyzed: 12-Dec-21												
(2,4,6-Tribromophenol)	Total	55	1			% Recovery	100	0	55	44 - 159%	PASS	2 30 PASS
(d5-Phenol)	Total	49	1			% Recovery	100	0	49	20 - 121%	PASS	2 30 PASS
2,4,5-Trichlorophenol	Total	0.843	1	0.05	0.1	µg/L	1	0	84	57 - 116%	PASS	4 30 PASS
2,4,6-Trichlorophenol	Total	0.899	1	0.05	0.1	µg/L	1	0	90	56 - 118%	PASS	4 30 PASS
2,4-Dichlorophenol	Total	0.865	1	0.05	0.1	µg/L	1	0	87	51 - 117%	PASS	3 30 PASS
2,4-Dinitrophenol	Total	0.184	1	0.1	0.2	µg/L	1	0	18	0 - 152%	PASS	20 30 PASS
2,6-Dichlorophenol	Total	0.434	1	0.05	0.1	µg/L	0.5	0	87	30 - 130%	PASS	3 30 PASS
2,6-Di-tert-butyl-4-methylphenol	Total	0.827	1	0.05	0.1	µg/L	1	0	83	50 - 150%	PASS	1 30 PASS
2,6-Di-tert-butylphenol	Total	0.899	1	0.05	0.1	µg/L	1	0	90	50 - 150%	PASS	1 30 PASS
2-Chlorophenol	Total	0.735	1	0.05	0.1	µg/L	1	0	74	41 - 110%	PASS	8 30 PASS
2-Methyl-4,6-dinitrophenol	Total	0.897	1	0.1	0.2	µg/L	1	0	90	0 - 141%	PASS	6 30 PASS
2-Methylphenol	Total	0.766	1	0.1	0.2	µg/L	1	0	77	40 - 117%	PASS	5 30 PASS
2-Nitrophenol	Total	0.989	1	0.1	0.2	µg/L	1	0	99	40 - 117%	PASS	5 30 PASS
3+4-Methylphenol	Total	0.831	1	0.1	0.2	µg/L	1	0	83	0 - 130%	PASS	4 30 PASS
4-Chloro-3-methylphenol	Total	0.971	1	0.1	0.2	µg/L	1	0	97	51 - 128%	PASS	4 30 PASS
4-Nitrophenol	Total	1.05	1	0.1	0.2	µg/L	1	0	105	10 - 164%	PASS	5 30 PASS
6-tert-butyl-2,4-dimethylphenol	Total	1.03	1	0.05	0.1	µg/L	1	0	103	50 - 150%	PASS	4 30 PASS
Benzoic Acid	Total	0.616	1	0.1	0.2	µg/L	1	0	62	2 - 145%	PASS	2 30 PASS
Benzyl Alcohol	Total	0.904	1	0.1	0.2	µg/L	1	0	90	43 - 148%	PASS	4 30 PASS
Pentachlorophenol	Total	0.444	1	0.05	0.1	µg/L	1	0	44	36 - 111%	PASS	5 30 PASS
Phenol	Total	0.658	1	0.1	0.2	µg/L	1	0	66	29 - 114%	PASS	3 30 PASS
p-tert-Butylphenol	Total	1.04	1	0.05	0.1	µg/L	1	0	104	50 - 150%	PASS	7 30 PASS

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE
Matrix: Blank											
Sample ID: 93063-B1 QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-35016											
% Recovery 100											
Prepared: 07-Dec-21 73 30 - 130% PASS											
Analyzed: 11-Dec-21											
(4-1,4-Dichlorobenzene)	Total	73	1				100				
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	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 %	PRECISION %	QA CODE
Sample ID: 93063-BS1 QAQC Procedural Blank Matrix: BlankMatrix											
		Method: EPA 625.1		Batch ID: O-35016		Prepared: 07-Dec-21		Analyzed: 12-Dec-21		Received:	
		Total	76	1	% Recovery	100	0	76	30 - 130%	PASS	
(o4-1,4-Dichlorobenzene)	Total	0.926	1	0.05	0.1	µg/L	1	0	93	53 - 130%	PASS
2-Chloronaphthalene	Total	1.45	1	0.05	0.1	µg/L	2	0	73	69 - 114%	PASS
2-Nitroaniline	Total	2.68	1	0.05	0.1	µg/L	2	0	134	23 - 137%	PASS
3-Nitroaniline	Total	1.02	1	0.05	0.1	µg/L	1	0	102	61 - 132%	PASS
4-Bromophenylphenyl ether	Total	0.942	1	0.05	0.1	µg/L	1	0	94	50 - 150%	PASS
4-Chloroaniline	Total	1	1	0.05	0.1	µg/L	1	0	100	63 - 130%	PASS
4-Chlorophenylphenyl ether	Total	1.47	1	0.05	0.1	µg/L	1	0	147	10 - 159%	PASS
4-Nitroaniline	Total	0.794	1	0.05	0.1	µg/L	1	0	79	50 - 150%	PASS
Aniline	Total	1.41	1	0.05	0.1	µg/L	2	0	70	0 - 125%	PASS
Benzidine	Total	0.965	1	0.05	0.1	µg/L	1	0	96	66 - 122%	PASS
Bis(2-Chloroethoxy) methane	Total	0.509	1	0.05	0.1	µg/L	1	0	51	43 - 127%	PASS
Bis(2-Chloroethyl) ether	Total	1.2	1	0.05	0.1	µg/L	1	0	120	49 - 128%	PASS
Bis(2-Chloroisopropyl) ether	Total	0.995	1	0.05	0.1	µg/L	1	0	100	50 - 150%	PASS
Dibenzofuran	Total	27.7	1	0.05	0.1	µg/L	50	0	55	50 - 150%	PASS
Disalicylidenepropylenediamine	Total	0.776	1	0.05	0.1	µg/L	1	0	78	27 - 130%	PASS
Hexachloroethane	Total	0.843	1	0.05	0.1	µg/L	1	0	84	54 - 111%	PASS
Nitrobenzene	Total	1.01	1	0.05	0.1	µg/L	1	0	101	61 - 152%	PASS
N-Nitrosodi-n-propylamine	Total	1.03	1	0.05	0.1	µg/L	1	0	103	49 - 142%	PASS

Base/Neutral Extractable Compounds

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY LIMITS	PRECISION %	QA CODE	
Matrix: Blank/Matrix												
Sample ID: 93063-BS2												
QAQC Procedural Blank												
Method: EPA 625.1												
Batch ID: O-35016												
Prepared: 07-Dec-21												
Analyzed: 12-Dec-21												
(4-1,4-Dichlorobenzene)	Total	72	1			% Recovery	100	0	72	30 - 130%	PASS	5 30 PASS
2-Chloronaphthalene	Total	0.884	1	0.05	0.1	µg/L	1	0	88	53 - 130%	PASS	6 30 PASS
2-Nitroaniline	Total	1.44	1	0.05	0.1	µg/L	2	0	72	69 - 114%	PASS	0 30 PASS
3-Nitroaniline	Total	2.67	1	0.05	0.1	µg/L	2	0	134	23 - 137%	PASS	0 30 PASS
4-Bromophenylphenyl ether	Total	0.974	1	0.05	0.1	µg/L	1	0	97	61 - 132%	PASS	5 30 PASS
4-Chloroaniline	Total	0.877	1	0.05	0.1	µg/L	1	0	88	50 - 150%	PASS	7 30 PASS
4-Chlorophenylphenyl ether	Total	0.957	1	0.05	0.1	µg/L	1	0	96	63 - 130%	PASS	4 30 PASS
4-Nitroaniline	Total	1.49	1	0.05	0.1	µg/L	1	0	149	10 - 159%	PASS	1 30 PASS
Aniline	Total	0.725	1	0.05	0.1	µg/L	1	0	73	50 - 150%	PASS	9 30 PASS
Benzidine	Total	1.45	1	0.05	0.1	µg/L	2	0	73	0 - 125%	PASS	3 30 PASS
Bis(2-Chloroethoxy) methane	Total	0.922	1	0.05	0.1	µg/L	1	0	92	66 - 122%	PASS	4 30 PASS
Bis(2-Chloroethyl) ether	Total	0.504	1	0.05	0.1	µg/L	1	0	50	43 - 127%	PASS	2 30 PASS
Bis(2-Chloroisopropyl) ether	Total	1.28	1	0.05	0.1	µg/L	1	0	128	49 - 128%	PASS	6 30 PASS
Dibenzofuran	Total	0.95	1	0.05	0.1	µg/L	1	0	95	50 - 150%	PASS	5 30 PASS
Disalicylidenepropylamine	Total	26.1	1	0.05	0.1	µg/L	50	0	52	50 - 150%	PASS	6 30 PASS
Hexachloroethane	Total	0.739	1	0.05	0.1	µg/L	1	0	74	27 - 130%	PASS	5 30 PASS
Nitrobenzene	Total	0.802	1	0.05	0.1	µg/L	1	0	80	54 - 111%	PASS	5 30 PASS
N-Nitrosodi-n-propylamine	Total	0.893	1	0.05	0.1	µg/L	1	0	89	61 - 152%	PASS	13 30 PASS
N-Nitrosodiphenylamine	Total	0.988	1	0.05	0.1	µg/L	1	0	99	49 - 142%	PASS	4 30 PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODEC
Matrix: BlankMatrix											
Sample ID: 93063-B1											
QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-35016											
Prepared: 07-Dec-21											
Analyzed: 11-Dec-21											
(d10-Acenaphthene)	Total	89	1			% Recovery	100	89	65 - 113%	PASS	
(d10-Phenanthrene)	Total	93	1			% Recovery	100	93	80 - 111%	PASS	
(d12-Chrysene)	Total	90	1			% Recovery	100	90	60 - 139%	PASS	
(d12-Perylene)	Total	93	1			% Recovery	100	93	36 - 161%	PASS	
(d8-Naphthalene)	Total	81	1			% Recovery	100	81	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					
Benzo[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,i]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 %	PRECISION %	QA CODE
									LIMITS	LIMITS	
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 %	PRECISION %	QA CODE
Matrix: BlankMatrix											
Sample ID: 93063-BS1 QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-35016											
Prepared: 07-Dec-21											
Analyzed: 12-Dec-21											
(d10-Acenaphthene)	Total	87	1			% Recovery	100	0	87	65 - 113%	PASS
(d10-Phenanthrene)	Total	96	1			% Recovery	100	0	96	80 - 111%	PASS
(d12-Chrysene)	Total	104	1			% Recovery	100	0	104	60 - 139%	PASS
(d12-Perylene)	Total	81	1			% Recovery	100	0	81	36 - 161%	PASS
(d8-Naphthalene)	Total	76	1			% Recovery	100	0	76	44 - 119%	PASS
1-Methylnaphthalene	Total	0.439	1	0.001	0.005	µg/L	0.5	0	88	49 - 117%	PASS
1-Methylphenanthrene	Total	0.514	1	0.001	0.005	µg/L	0.5	0	103	66 - 127%	PASS
2,3,5-Trimethylnaphthalene	Total	0.476	1	0.001	0.005	µg/L	0.5	0	95	57 - 120%	PASS
2,6-Dimethylnaphthalene	Total	0.469	1	0.001	0.005	µg/L	0.5	0	94	54 - 117%	PASS
2-Methylnaphthalene	Total	1.33	1	0.001	0.005	µg/L	1.5	0	89	47 - 130%	PASS
Acenaphthene	Total	1.33	1	0.001	0.005	µg/L	1.5	0	89	53 - 131%	PASS
Acenaphthylene	Total	1.49	1	0.001	0.005	µg/L	1.5	0	99	43 - 140%	PASS
Anthracene	Total	1.54	1	0.001	0.005	µg/L	1.5	0	103	58 - 135%	PASS
Benz[a]anthracene	Total	1.87	1	0.001	0.005	µg/L	1.5	0	125	55 - 145%	PASS
Benzo[a]pyrene	Total	1.67	1	0.001	0.005	µg/L	1.5	0	111	51 - 143%	PASS
Benzo[b]fluoranthene	Total	1.97	1	0.001	0.005	µg/L	1.5	0	131	46 - 165%	PASS
Benzo[e]pyrene	Total	0.485	1	0.001	0.005	µg/L	0.5	0	97	42 - 152%	PASS
Benzo[g,h,i]perylene	Total	1.68	1	0.001	0.005	µg/L	1.5	0	112	63 - 133%	PASS
Benzo[k]fluoranthene	Total	1.76	1	0.001	0.005	µg/L	1.5	0	117	56 - 145%	PASS
Biphenyl	Total	0.459	1	0.001	0.005	µg/L	0.5	0	92	56 - 119%	PASS
Chrysene	Total	1.45	1	0.001	0.005	µg/L	1.5	0	97	56 - 141%	PASS
Dibenz[a,h]anthracene	Total	2.14	1	0.001	0.005	µg/L	1.5	0	143	55 - 150%	PASS
Dibenzo[a,i]pyrene	Total	0.548	1	0.001	0.005	µg/L	0.5	0	110	50 - 150%	PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE
									LIMITS	LIMITS	
Dibenzothiophene	Total	0.515	1	0.001	0.005	µg/L	0.5	0	103	75 - 113%	PASS
Fluoranthene	Total	1.72	1	0.001	0.005	µg/L	1.5	0	115	60 - 146%	PASS
Fluorene	Total	1.49	1	0.001	0.005	µg/L	1.5	0	99	58 - 131%	PASS
Indeno[1,2,3-cd]pyrene	Total	2.14	1	0.001	0.005	µg/L	1.5	0	143	50 - 151%	PASS
Naphthalene	Total	1.19	1	0.001	0.005	µg/L	1.5	0	79	41 - 126%	PASS
Perylene	Total	0.527	1	0.001	0.005	µg/L	0.5	0	105	48 - 141%	PASS
Phenanthrene	Total	1.48	1	0.001	0.005	µg/L	1.5	0	99	67 - 127%	PASS
Pyrene	Total	1.69	1	0.001	0.005	µg/L	1.5	0	113	54 - 156%	PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODEC			
Matrix: BlankMatrix														
Sample ID: 93063-BS2														
QAQC Procedural Blank														
Method: EPA 625.1														
Batch ID: O-35016														
Prepared: 07-Dec-21														
Analyzed: 12-Dec-21														
(d10-Acenaphthene)	Total	83	1			% Recovery	100	0	83	65 - 113%	PASS	5	30	PASS
(d10-Phenanthrene)	Total	92	1			% Recovery	100	0	92	80 - 111%	PASS	4	30	PASS
(d12-Chrysene)	Total	93	1			% Recovery	100	0	93	60 - 139%	PASS	11	30	PASS
(d12-Perylene)	Total	77	1			% Recovery	100	0	77	36 - 161%	PASS	5	30	PASS
(d8-Naphthalene)	Total	73	1			% Recovery	100	0	73	44 - 119%	PASS	4	30	PASS
1-Methylnaphthalene	Total	0.419	1	0.001	0.005	µg/L	0.5	0	84	49 - 117%	PASS	5	30	PASS
1-Methylphenanthrene	Total	0.493	1	0.001	0.005	µg/L	0.5	0	99	66 - 127%	PASS	4	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.453	1	0.001	0.005	µg/L	0.5	0	91	57 - 120%	PASS	4	30	PASS
2,6-Dimethylnaphthalene	Total	0.447	1	0.001	0.005	µg/L	0.5	0	89	54 - 117%	PASS	5	30	PASS
2-Methylnaphthalene	Total	1.27	1	0.001	0.005	µg/L	1.5	0	85	47 - 130%	PASS	5	30	PASS
Acenaphthene	Total	1.27	1	0.001	0.005	µg/L	1.5	0	85	53 - 131%	PASS	5	30	PASS
Acenaphthylene	Total	1.42	1	0.001	0.005	µg/L	1.5	0	95	43 - 140%	PASS	4	30	PASS
Anthracene	Total	1.47	1	0.001	0.005	µg/L	1.5	0	98	58 - 135%	PASS	5	30	PASS
Benz[a]anthracene	Total	1.68	1	0.001	0.005	µg/L	1.5	0	112	55 - 145%	PASS	11	30	PASS
Benzo[a]pyrene	Total	1.59	1	0.001	0.005	µg/L	1.5	0	106	51 - 143%	PASS	5	30	PASS
Benzo[b]fluoranthene	Total	1.81	1	0.001	0.005	µg/L	1.5	0	121	46 - 165%	PASS	8	30	PASS
Benzo[e]pyrene	Total	0.446	1	0.001	0.005	µg/L	0.5	0	89	42 - 152%	PASS	9	30	PASS
Benzo[g,h,i]perylene	Total	1.59	1	0.001	0.005	µg/L	1.5	0	106	63 - 133%	PASS	6	30	PASS
Benzo[k]fluoranthene	Total	1.67	1	0.001	0.005	µg/L	1.5	0	111	56 - 145%	PASS	5	30	PASS
Biphenyl	Total	0.438	1	0.001	0.005	µg/L	0.5	0	88	56 - 119%	PASS	4	30	PASS
Chrysene	Total	1.3	1	0.001	0.005	µg/L	1.5	0	87	56 - 141%	PASS	11	30	PASS
Dibenz[a,h]anthracene	Total	2.19	1	0.001	0.005	µg/L	1.5	0	146	55 - 150%	PASS	2	30	PASS
Dibenzo[a,i]pyrene	Total	0.626	1	0.001	0.005	µg/L	0.5	0	125	50 - 150%	PASS	13	30	PASS

Polynuclear Aromatic Hydrocarbons

QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE
								LIMITS	LIMITS	LIMITS	
Dibenzothiophene	Total	0.493	1	0.001	0.005	µg/L	0.5	0	99	75 - 113%	4 30 PASS
Fluoranthene	Total	1.65	1	0.001	0.005	µg/L	1.5	0	110	60 - 146%	4 30 PASS
Fluorene	Total	1.43	1	0.001	0.005	µg/L	1.5	0	95	58 - 131%	4 30 PASS
Indeno[1,2,3-cd]pyrene	Total	2.11	1	0.001	0.005	µg/L	1.5	0	141	50 - 151%	1 30 PASS
Naphthalene	Total	1.12	1	0.001	0.005	µg/L	1.5	0	75	41 - 126%	5 30 PASS
Perylene	Total	0.479	1	0.001	0.005	µg/L	0.5	0	96	48 - 141%	9 30 PASS
Phenanthrene	Total	1.42	1	0.001	0.005	µg/L	1.5	0	95	67 - 127%	4 30 PASS
Pyrene	Total	1.62	1	0.001	0.005	µg/L	1.5	0	108	54 - 156%	5 30 PASS

PHYSICAL Total Ion Chromatogram RESULTS

TERRA FAUNA FLORA AQUA AURA
ENVIRONMENTAL SERVICES, INC.
Innovative Solutions for a Sustainable Future

Sample ID: 93064

RT	Area Pct	Concentration (ng/L)	Library/ID	Qual	Cas Number
34.1750	5.4839	1111	Anthracene-D10-	1719-06-8	97
10.0028	0.8626	175	Cyclohexane, 1-methyl-2-propyl-	4291-79-6	92
43.4810	0.5718	116	Cyclic octaatomic sulfur	10544-50-0	95

Concentration estimated using the response for Anthracene-d10

Sample ID: Lab Blank B1_35016

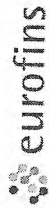
RT	Area Pct	Concentration (ng/L)	Library/ID	Qual	Cas Number
34.1774	6.2770	1111	Anthracene-D10-	1719-06-8	97
10.0057	4.0310	714	Cyclohexane, 1-methyl-2-propyl-	4291-79-6	91
11.2028	0.7379	131	Octane, 6-ethyl-2-methyl-	62016-19-7	94
11.2028	0.7155	127	Undecane, 5,7-dimethyl-	17312-83-3	94
15.8717	0.6214	110	3-Hexene, 3-ethyl-2,5-dimethyl-	62338-08-3	84
10.0091	0.6002	106	1H-Tetrazole	288-94-8	98

Concentration estimated using the response for Anthracene-d10

PERFORMANCE CHAIN OF CUSTODY

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

Innovative Solutions for Nature



Eaton Analytical

Ship To:
Physis Environmental Laboratories, Inc
1904 East Wright Circle
Anaheim, CA 92806-6028

Phone: 714-602-5320 Fax:

Folder #: 973704 Report Due: 12/31/2021

Date: 12/8/2021

Submittal Form

*REPORTING REQUIREMENTS: Do Not Combine Reports with any other samples submitted under different Folder Numbers/ Report & Invoice must have the Folder # 973704 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 State Certification # and Exp Date for requested tests + matrix.

Samples from: HAWAII

rush with TICs

Sample ID 202112080692 Client Sample ID for reference onl HALAWA SHAFT-331-241-TP401

Sample type: Sample Event: Sample ID: Static ID: JLS

Method Prep Method Analysis Requested

- EPA 625 EPA 625 EPA 625m
625 Acid Extractable in ug/L
625 Base Neutral Extractable in ug/L
625PAH in ug/L

Relinquished by: [Signature] Date 12/8/21 Time 1519
Received by: [Signature] Date 12/8/21 Time 1630
Relinquished by: Sample Control Date Time
Received by: Sample Control Date Time

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

Project Iteration ID: 1407003-198
 Client Name: Eurofins Eaton Analytical
 Project Name: Folder # 973704 Job # 1000014
 COC Page Number: 2 of 2
 Bottle Label Color: NA

Sample Receipt Summary

Receiving Info

1. Initials Received By: RGH
2. Date Received: 12/8/21
3. Time Received: 1630
4. Client Name: Eurofins
5. Courier Information: (Please circle)
 - Client
 - UPS
 - Area Fast
 - DRS
 - FedEx
 - GSO/GLS
 - Ontrac
 - PAMS
 - PHYSIS Driver:
 - i. Start Time: _____
 - ii. End Time: _____
 - iii. Total Mileage: _____
 - iv. Number of Pickups: _____
6. Container Information: (Please put the # of containers or circle none)
 - 3 Cooler
 - Styrofoam Cooler
 - Boxes
 - None
 - Carboy(s)
 - Carboy Trash Can(s)
 - Carboy Cap(s)
 - Other _____
7. What type of ice was used: (Please circle any that apply)
 - Wet Ice
 - Blue Ice
 - Dry Ice
 - Water
 - None
8. Randomly Selected Samples Temperature (°C): 4.2 Used I/R Thermometer # 1-2

Inspection Info

1. Initials Inspected By: _____

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: