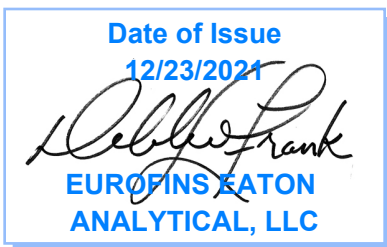


750 Royal Oaks Drive, Suite 100  
Monrovia, California 91016-3629  
Tel: (626) 386-1100  
Fax: (866) 988-3757  
1 800 566 LABS (1 800 566 5227)

## 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: 965349  
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
Enterococci	Enterolert	x	x
Escherichia coli (Enumeration)	SM 9221 B.1 SM 9221 F	x	
Fecal Coliform (P/A and Enumeration)	SM 9221 C (MTF/EC), SM 9221 E (MTF/EC)	x	x
Fecal Streptococci and Enterococci	SM 9230 B	x	x
Heterotrophic Bacteria	SM 9215 B	x	
Legionella	Legiolert®	x	
Pseudomonas aeruginosa	Idexx Pseudalart	x	
Total Coliform (P/A and Enumeration)	SM 9221A, SM 9221B, SM 9221 C	x	x
Total Coliform, Total Coliform with Chlorine Present	SM 9221 B	x	x
Total Coliform/E. coli (P/A and Enumeration, Idexx Colilert, Idexx Colilert 18, Colisure)	SM 9223	x	
Total Microcystins and Nodularins	EPA 546	X	
Yeast and Mold	SM 9610	x	
1,2,3-Trichloropropane (TCP) at 5 PPT	CA SRL 524M-TCP	x	
1,4-Dioxane	EPA 522	x	
2,3,7,8-TCDD	Modified EPA 1613 B	x	
Acrylamide	+ LCMS 2440)	x	
Algal Toxins/Microcystin	+ LCMS 3570	x	
Alkalinity	SM 2320B	x	x
Ammonia	EPA 350.1, SM 4500-NH3 H		x
Asbestos	EPA 100.2	x	x
Bicarbonate Alkalinity as HCO3	SM 2330 B	x	x
BOD/CBOD	SM 5210 B		x
Bromate	+ LCMS- 2447	x	
Carbonate as CO3	SM 2330 B	x	x
Carbonyls	EPA 556	x	x
Chemical Oxygen Demand	EPA 410.4, SM 5220D		x
Chlorinated Acids	EPA 515.4	x	
Chlorine Dioxide	Palin Test Chlordio X Plus, SM 4500-CLO2 D	x	
Chlorine, Free, Combined, Total Residual, Chloramines	SM 4500-Cl G	x	
Color	SM2120B	x	
Conductivity	EPA 120.1, SM 2510B	x	x
Corrosivity (Langelier Index), Carbonate as CO3, Hydroxide as OH Calculated	SM 2330 B	x	
Cyanide (Amenable)	SM 4500-CN G	x	x
Cyanide (Free)	SM 4500CN F	x	x
Cyanide (Total)	EPA 335.4	x	x
Cyanogen Chloride (Screen)	+ 335 Mod (WC-24467)	x	
Diquat and Paraquat	EPA 549.2	x	
DBP and HAA	SM 6251 B	x	
Dissolved Organic Carbon	SM 5310 C	x	
Dissolved Oxygen	SM 4500-O G		x
EDB/DCBP/TCP	EPA 504.1	x	
EDB/DBCP and Disinfection Byproducts	EPA 551.1	x	
EDTA and NTA	+ WC-2454	x	
Endothall	EPA 548.1, +(LCMS-2445)	x	
Fluoride	SM 4500F C	x	x
Glyphosate	EPA 547	x	
Glyphosate and AMPA	+ LCMS-3618	x	
Gross Alpha and Gross Beta	EPA 900.0	x	x
Gross Alpha coprecipitation	SM 7110 C	x	x
Hardness	SM 2340 B	x	x
Hexavalent Chromium	EPA 218.6,	x	x
Hexavalent Chromium	EPA 218.7,	x	
Hexavalent Chromium	SM 3500-Cr B		x
Inorganic Anions and DBPs	EPA 300.0	x	x
Norganic Anions and DBPs	EPA 300.1	x	
Kjeldahl Nitrogen	EPA 351.2		x
Metals	EPA 200.7, EPA200.8	x	x
Nitrosamines	EEA-Agilent 521.1 (GCMS-24250)	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x
Odor	SM2150B	x	
Organohalide Pesticides and PCB	EPA 505	x	
Ortho Phosphate	SM 4500P E	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	
Perchlorate	EPA 331.0	x	
Perchlorate (Low and High Levels)	EPA 314.0	x	
Perfluorinated Alkyl Acids	EPA 533, EPA 537, EPA 537.1	x	
PPCP and EDC	+ LCMS-2443	x	
pH	EPA 150.1 SM 4500-H+ B	x	x
Phenolics – Low Level	+WC 2493 (EPA 420.2 and EPA 420.4 MOD)	x	x
Phenylurea Pesticides/Herbicides	+ LCMS-2448	x	
Radium-226, Radium-228	GA Tech (Rad-2374)	x	
Radon-222	SM 7500RN	x	
Residue (Filterable)	SM 2540C	x	x
Residue (Non-Filterable)	SM 2540D		x
Residue (Total)	SM 2540B		x
Residue (Volatile)	EPA 160.4		x
Semi-Volatile Compounds	EPA 525.2	x	
Silica	SM 4500-SiO2 C	x	x
Sulfide	SM 4500-S D		x
Sulfite	SM 4500-SO3 B	x	x
Surfactants	SM 5540C	x	x
Taste and Odor	SM 6040 E	x	
Total Organic Carbon	SM 5310 C	x	x
Total Phenols	EPA 420.1		x
Total Phenols	EPA 420.4	x	x
Triazine Pesticides and their Degradates	+ LCMS-3617	x	
Turbidity	EPA 180.1	x	x
Uranium by ICP/MS	EPA 200.8	x	
UV 254 Organic Constituents	SM 5910B	x	
VOCs	EPA 524.2	x	
VOCs	+(GCMS 2412) by EPA 524.2 modified	x	

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

(+ ) In-House Method

**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 #: 965349  
 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 **October 20, 2021 at 1500**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical, LLC.

Sample #	Sample ID	Sample Date
202110210116	AIEA WELLS PUMPS 1&2 (260)-331-203-TP400	10/19/2021 0948
	@ICPMS @504MOD C @505_EAL	
	@525PLUS C PLUS TICS @625A_Physis C @625BN_Physis C	
	@625PAH_Physis_TICS_C @8015 Ethanol_Subbed @ML505	
	@VOASDWA C plus plus TICs C @VOA-TBA C (SUB)Gas Fraction Hydrocarbons	
	Acetone by 624.1_Subbed Alkalinity in CaCO3 units Bicarb.Alkalinity as HCO3,calc	
	Bromide by 300.0 Calcium Total ICAP Carbonate as CO3, Calculated	
	Fluoride Magnesium Total ICAP Mercury ICPMS	
	PH (H3=past HT not compliant) Potassium Total ICAP Sodium Total ICAP	
	Specific Conductance Miscellaneous Charges Total Dissolved Solid (TDS)	
	TPH 8015 Diesel and Motor Oil TPH 8015 Jet Fuel 5 TPH 8015 Jef Fuel 8	
202110210117	TRAVEL BLANK::AIEA WELLS PUMPS 1&2 (260)-331-203-TP400	10/19/2021 0948
	@504MOD TB C @VOASDWA C plus plus TICs TBC @VOA-TBA TB C	
	(SUB)Gas Fraction Hydrocarbons Acetone by 624.1_Subbed	
202110260292	AIEA WELLS PUMPS 1&2 (260)-331-203-TP400	10/25/2021 1003
	Chloride Fluoride Nitrate as Nitrogen by IC	
	Nitrite Nitrogen by IC Sulfate	

**Test Description**

- @ICPMS -- ICPMS Metals
- @504MOD C -- EPA Method 504.1
- @504MOD TB C -- EPA Method 504.1
- @505\_EAL -- Organochlorine Pesticides
- @525PLUS C PLUS TICS -- Semivolatiles by GCMS
- @625A\_Physis C -- 625 Acid Extractable in ug/L
- @625BN\_Physis C -- 625 Base Neutral Extractable in ug/L
- @625PAH\_Physis\_TICS\_C -- 625PAH in ug/L
- @8015 Ethanol\_Subbed -- Ethanol
- @ML505 -- Organochlorine Pesticides/PCBs
- @VOASDWA C plus plus TICs C -- Volatile Organics by GCMS
- @VOASDWA C plus plus TICs TBC -- Volatile Organics by GCMS

### 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 #: 965349  
 Project: RED-HILL  
 Sample Group: Red-Hill Expanded List  
 (Albuquerque+)  
 Project Manager: Debbie L Frank  
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The following samples were received from you on **October 20, 2021 at 1500**. They have been scheduled for the tests listed below each sample. If this information is incorrect, please contact your service representative. Thank you for using Eurofins Eaton Analytical, LLC.

Sample #	Sample ID	Sample Date
	@VOA-TBA C -- TBA by EPA 524.2 Modified	
	@VOA-TBA TB C -- TBA by EPA 524.2 Modified	



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: COC Rec'd 10/21/21 w/ missing samples PR

SAMPLES CHECKED AGAINST COC BY: en

SAMPLES LOGGED IN BY: en

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

SAMPLE TEMP RECEIVED AT:

Colton / No. California / Arizona

°C (Compliance: 4 ± 2 °C)

Monrovia 6.0 °C (Compliance: 4 ± 2 °C)

CONDITION OF BLUE ICE: Frozen  Partially Frozen  Thawed  Wet Ice  No Ice

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

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME: BWS HONOLULU

PROJECT CODE: RED HILL

EEA CLIENT CODE:

COC ID:

SAMPLE GROUP: RED HILL

TAT requested: rush by adv notice only

STD  1 wk  3 day  2 day  1 day

SAMPLE DATE  
10/19/21

SAMPLE TIME  
0949

SAMPLE ID  
Aiea Wells Pump 1 & 2

MATRIX  
CFW

FIELD DATA  
Red Hill

FIELD DATA  
4Q 2021

COMPLIANCE SAMPLES   
- Requires state forms

NON-COMPLIANCE SAMPLES   
REGULATION INVOLVED:

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

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

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

SAMPLER COMMENTS  
29774

Temp Blank: \_\_\_\_\_ °C

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

SEAW = Sea Water  
WW = Waste Water

BW = Bottled Water  
SW = Storm Water

SO = Soil  
SL = Sludge

O = Other - Please Identify

SIGNATURE

PRINT NAME

COMPANY/TITLE

DATE

TIME

SAMPLED BY:

RELINQUISHED BY:

RECEIVED BY:

RECEIVED BY:

Low Bailey

Low Bailey

Honolulu Board of Water Supply

Honolulu Board of Water Supply

October 19, 2021

10 October 2021

100

10/21/21

12:50



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 (866) 988-3757

Created Date & Time: 4/1/2021 4:14:16PM

Note: Sampler Please return this paper with your samples

Template: 91714



Client ID: HONOLULU



Created By: - [DSM]

Deliver By: 09/14/2021

STG: Bottle Orders

Ice Type: G

Project Code: RED-HILL Bottle Orders

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

PO#/JOB#: C20525101 exp 05312023

Description: AIEA WELLS PUMPS 1&2 (260)

**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 - 125ml poly [ no preservative ]	1	
1	@625A_Physis C	2 - 1L amber glass [ 1 ml Thio 8% ]	2	
1	@625BN_Physis C	2 - 1L amber glass [ 1 ml Thio 8% ]	2	
1	@625PAH_Physis_TICS_C	2 - 1L amber glass [ 1 ml Thio 8% ]	2	
1	TPH 8015 Diesel and Motor Oil_C, TPH 8015 Jet Fuel 5_C, TPH 8015 Jet Fuel 8_C	6 - 1L amber glass [ 1 ml Thio 8% ]	6	
1	@525PLUS C PLUS TICS	2 - 1L amber glass [ 45mg Sulfite xls+1 vial 2 ml 6N HCl ]	2	UN1789
1	Fluoride	1 - 250 ml poly [ no preservative ]	1	
1	Alkalinity in CaCO3 units, PH (H3=past HT not compliant), Specific Conductance	1 - 250ml poly [ no preservative ]	1	
1	@VOA-TBA C	4 - 40 ml VOA vial [ 25 mg AA + drop 2ml 1:1 HCL ]	4	UN1789
1	Acetone by 624_Subbed C	4 - 40ml amber glass vial [ 1 drop 8% thio+2ml BOT 1:1 HCL ]	4	UN1789
1	Acetone by 624_Subbed C TB	2 - 40ml amber glass vial [ 1 drop 8% thio+2ml BOT HCL+H2O ]	2	UN1789
1	@504MOD C	3 - 40ml amber glass vial [ 1 drop Thio (8% ) ]	3	
1	@505_EAL,@ML505	4 - 40ml amber glass vial [ 1 drop Thio (8% ) ]	4	
1	8015 Gas_C	3 - 40ml amber glass vial [ 1 drop Thio (8% ) + H2O ]	3	
1	@504MOD TB C	2 - 40ml amber glass vial [ 1 drop Thio (8% ) + H2O ]	2	
1	8015 Gas_C TB	2 - 40ml amber glass vial [ 1 drop Thio (8% ) + H2O ]	2	
1	@VOASDWA C plus plus TICs TBC	3 - 40ml amber glass vial [ 25mg AA+ H2O+10 drop 1:1 HCL ]	3	UN1789
1	@VOASDWA C plus plus TICs C	3 - 40ml amber glass vial [ 25mg Ascorbic+drop 2ml 1:1 HCL ]	3	UN1789
1	@8015 Ethanol_Subbed	4 - 40ml amber glass vial [ no preservative ]	4	
1	@ICPMS, Mercury by 245 1, TA-Irvine, Calcium Total ICAP, Magnesium Total ICAP, Mercury ICPMS, Potassium Total ICAP, Sodium Total ICAP	1 - 500ml acid poly [ 2ml HNO3 (18% ) ]	1	UN2031
1	Total Dissolved Solid (TDS)	1 - 500ml poly [ no preservative ]	1	
1	Bromide by 300 0	1 - 60mL poly [ 0.3 mL 1% EDA solution ]	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 (866) 988-3757

Created Date & Time: 9/7/2021 4:18:07AM

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: AIEA WELLS PUMPS 1&2 (260)

Template: 91714  
Created By: - [DSM]  
Deliver By: 09/14/2021  
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  
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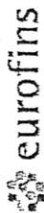
# of Sample Tests	Bottle Qty - Type [ preservative information ]	Total	UN DOT #
66		162	

Sum Tests: 66

Sum Bottles: 162

Comments





Eaton Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

IEEA Folder Number: 265749

### 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 = 608A (Observation = 6.1 °C) (Corr. Factor = 0.1 °C) (Final = 6.0 °C)

TYPE OF ICE: Real \_\_\_ Synthetic 2 No ice \_\_\_ CONDITION OF ICE: Frozen \_\_\_ Partially Frozen 2 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) <u>6.1</u> °C (Corr. Factor) <u>0.1</u> °C (Final) = <u>6.0</u> °C	2 = (Observation) <u>6.8</u> °C (Corr. Factor) <u>0.1</u> °C (Final) = <u>6.7</u> °C
3 = (Observation) <u>7.8</u> °C (Corr. Factor) <u>0.1</u> °C (Final) = <u>7.7</u> °C	4 = (Observation) <u>7.2</u> °C (Corr. Factor) <u>0.1</u> °C (Final) = <u>7.1</u> °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, Anatexin, LCMS methods using 40 ml vials, International clients:

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

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

SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
	YINDI	Eurofins Eaton Analytical	10/21/24	12:50
SIGNATURE	PRINT NAME	COMPANY/TITLE	DATE	TIME
		Eurofins Eaton Analytical		

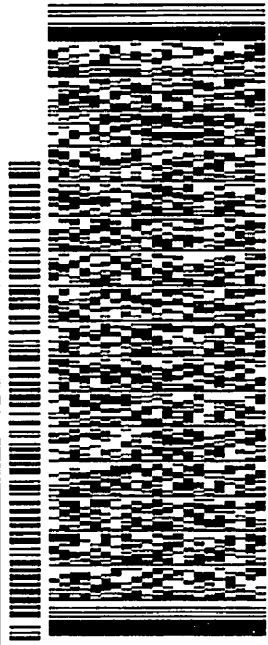
ORIGIN ID: HIKA (808) 748-5840  
 BWS CHEMLAB  
 HONOLULU BOARD OF WATER SUPPLY  
 630 S. BERETANIA ST.  
 CHEMICAL LABORATORY  
 HONOLULU, HI 96843  
 UNITED STATES US

TO C CHUCK

EUROFINS EATON ANALYTICAL, INC  
 750 ROYAL OAKS DR  
 SUITE 100  
 MONROVIA CA 91016 REF

(626) 386-1178  
 INV PO

DEPT



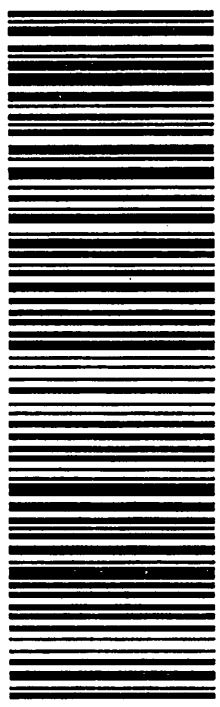
J21292107090114

56DUJ3148A/FE4A

1 of 5  
 TRK# 2851 2485 5919  
 0201  
 ## MASTER ##

WZ WHPA  
 91016  
 CA-US BUR

WED - 20 OCT 10:30A  
 PRIORITY OVERNIGHT



**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.



Eaton Analytical

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

Website: [www.EatonAnalytical.com](http://www.EatonAnalytical.com)

# CHAIN OF CUSTODY RECORD

EUROFINS EATON ANALYTICAL USE ONLY:

LOGIN COMMENTS:

SAMPLE TEMP RECEIVED AT:

(Other) IR Gun ID = \_\_\_\_\_ °C (Observation = \_\_\_\_\_ °C) (Final = \_\_\_\_\_ °C)  
 Monrovia IR Gun ID = 401 °C (Observation = 3.1 °C) (Final = 2.9 °C)

Compliance Acceptance Criteria: (Chemistry: 4 ± 2 °C) (Microbiology: < 10 °C)

TYPE OF ICE: Real  Synthetic  No Ice

Thawed  N/A

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

SAMPLES CHECKED AGAINST COC BY: JS

SAMPLES LOGGED IN BY: JS

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

TO BE COMPLETED BY SAMPLER:

COMPANY/AGENCY NAME:

ITONOLULU

PROJECT CODE:

RED-HILL

EEA CLIENT CODE:

SAMPLE GROUP:

TAT requested: rush by adv notice only

STD  1 wk  3 day  2 day  1 day

SAMPLE DATE

SAMPLE TIME

SAMPLE ID

CLIENT LAB ID

MATRIX

FIELD DATA

FIELD DATA

10/19 0948 AIEAWELLS Pumps 142  
(200)-331-203-TP400

COMPLIANCE SAMPLES

- Requires state forms

Type of samples (circle one):

ROUTINE  SPECIAL  CONFIRMATION

SEE ATTACHED KIT ORDER FOR ANALYSES

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

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

DATE

TIME

SAMPLED BY:

RELINQUISHED BY:

RECEIVED BY:

RELINQUISHED BY:

RECEIVED BY:

Chris Breck

Chris Breck

608

10/20/21 1500



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 (866) 988-3757

Created Date & Time: 9/7/2021 4:18:07AM

Note: Sampler Please return this paper with your samples

Client ID: HONOLULU

Kit #: 299748

Created By: Darius Smith - [DSM]  
Deliver By: 09/14/2021  
STG: Bottle Orders  
Ice Type: G

Project Code: RED-HILL Bottle Orders

Group Name: Red-Hill Expanded List (Albuquerque+)  
PO#/JOB#: C20525101 exp 05312023  
Description: AIEA WELLS PUMPS 1&2 (260)

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	2	
6	TPH 8015 Diesel and Motor Oil_C, TPH 8015 Jet Fuel 5_C, TPH 8015 Jet Fuel 8_C	6	
1	@525PLUS C PLUS TICS	2	UN1789
1	Fluoride	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

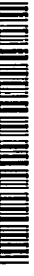
Debbie L Frank is your Eurofins Eaton Analytical, LLC Service Manager

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

Created Date & Time: 9/7/2021 4:18:07AM

Note: Sampler Please return this paper with your samples

Client ID: HONOLULU



Kit #: 299748



Project Code: RED-HILL Bottle Orders  
Group Name: Red-Hill Expanded List (Albuquerque+)  
PO#/JOB#: C20525101 exp 05312023  
Description: AIEA WELLS PUMPS 1&2 (260)

Created By: Darius Smith - [DSM]  
Deliver By: 09/14/2021  
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

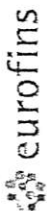
Billing Address  
Honolulu Board of Water Supply  
630 South Beretania Street  
Public Service Bldg." Room 308  
Honolulu, HI 96843  
Attn: Erwin Kawata  
Phone: 808-748-5091  
Fax: 808-550-5018

# of Sample Tests	Bottle Qty - Type [ preservative information ]	Total	UN DOT #
Sum Tests: 22		Sum Bottles: 54	

Sum Tests: 22

Sum Bottles: 54

Comments



Eaton Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

IEEA Folder Number:

*448894*  
*401*

### 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 = 321 (Observation = 321 °C) (Corr.Factor = 0.12 °C) (Final = 2.9 °C)

TYPE OF ICE: Real  Synthetic  No Ice  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:

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

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

RECEIVED BY: Chris Beach SIGNATURE PRINT NAME COMPANY/TITLE Eurofins Eaton Analytical DATE 10-20-21 TIME 1500

SAMPLES CHECKED AGAINST COG BY: Chris Beach SIGNATURE PRINT NAME COMPANY/TITLE Eurofins Eaton Analytical DATE DATE TIME



Eaton Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

HEEA 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 = 401 (Observation = 412 °C) (Corr.Factor = 20.2 °C) (Final = 410 °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	>6mm	Test	Samp ID	Bottle #	None/<6	>6mm	Test

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

RECEIVED BY: Chris Beal SIGNATURE PRINT NAME

COMPANY/TITLE: Eurofins Eaton Analytical DATE: 10.20.21 TIME: 1509

SAMPLES CHECKED AGAINST COC BY: \_\_\_\_\_ SIGNATURE PRINT NAME

COMPANY/TITLE: Eurofins Eaton Analytical 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: 19OCT21  
ACTWGT: 67.00 LB  
CAD: 100205419/NET4400  
BILL RECIPIENT

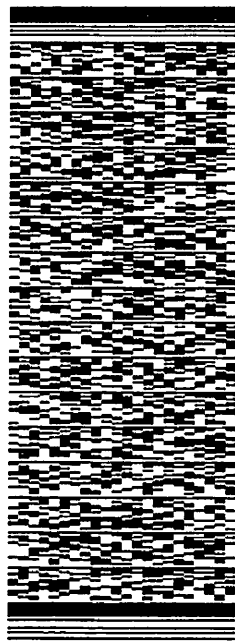
TO C CHUCK

EUROFINS EATON ANALYTICAL, INC  
750 ROYAL OAKS DR  
SUITE 100

MONROVIA CA 91016

(626) 386-1178 REF:

PO INV DEPT



56DJ3146AFE4A

3 of 5

MPS# 2851 2485 5698  
0263

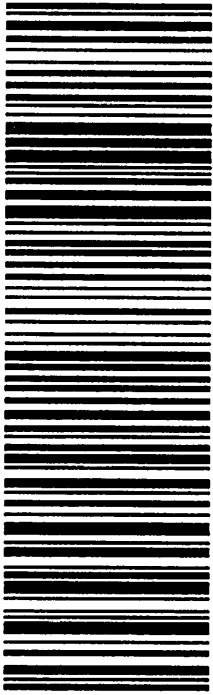
Mstr# 2851 2485 5919

0201

WED - 20 OCT 10:30A  
PRIORITY OVERNIGHT

WZ WHPA

91016  
CA-US BUR



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

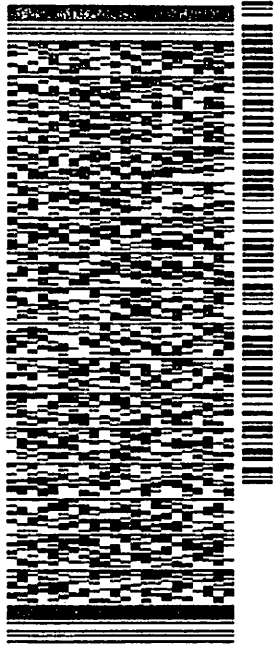
SHIP DATE: 19OCT21  
ACTWGT: 67.00 LB  
CAD: 100205419/NET4400  
BILL RECIPIENT

TO C CHUCK

EUROFINS EATON ANALYTICAL, INC  
750 ROYAL OAKS DR  
SUITE 100  
MONROVIA CA 91016

REF (626) 386-1178  
INV  
PO

DEPT



56DJ3/14BAFE4A

5 of 5

MPS# 2851 2485 7521  
0263

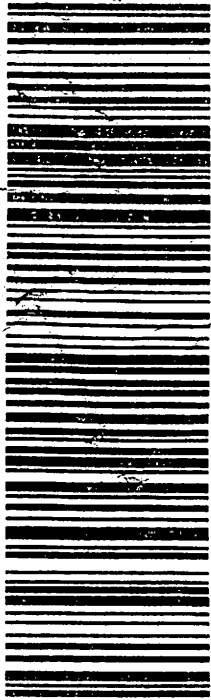
Mstr# 2851 2485 5919

0201

WED - 20 OCT 10:30A  
PRIORITY OVERNIGHT

WZ WHPA

CA-US BUR 91016



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

**Report:** 965349  
**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 624.1 are submitted by Eurofins Calscience in Irvine  
 Results for Ethanol, TPH Gasoline, Diesel, Motor Oil, Jet Fuels are submitted by Emax Laboratories  
 Results for 625 ACIDs, BNA and PAHs are submitted byPhysis Environmental Laboratories, Inc.

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.

625 SVOC Low Level  
 See Subcontractors report for TIC details

202110200359 525.2 TIC's

Compound	Est. Conc.	Retention Time
n-Hexadecanoic acid	1.8 ug/L	5.98 minutes
Unknown acid	0.9 ug/L	6.62 minutes
n-Octadecanoic acid	1.0 ug/L	6.70 minutes
Unknown amide	1.9 ug/L	7.82 minutes
Erucic acid	0.6 ug/L	8.75 minutes
Unknown amide	2.2 ug/L	10.62 minutes

202110210116 524.2 TICs

Compound Name	Estimated Retention Time	Estimated Concentration
Furfural	9.773 minutes	0.52 ug/L

202110210117 524.2 TICs

Compound Name	Estimated Retention Time	Estimated Concentration
Unknown compound	1.431 minutes	11.03 ug/L
Furfural	9.773 minutes	50.50 ug/L

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.

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

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

**Report:** 965349  
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**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

---

TBA - 524.3 1 ug/L is not reported, method decommissioned. See 524.2 at elevated RL of 2 ug/L  
ACETONE MRL elevated to 500 due to matrix artifact of preservation, project spec change  
Erwin Kawata. 021821

Sample #202110260292 moved from folder #965989. B6AN 10/29/21.

E524.2 - VOC) FB – Acetone Screen  
Travel Blank is detected for Acetone. Associated Field Sample is ND. No impact.

**Flags Legend:**

- B4 - Target analyte detected in blank at or above method acceptance criteria.
- BK - Target analyte detected in method blank above the MDL, but below the minimum reporting limit (MRL).  
Sample concentration was 10 times above the concentration in blank.
- BM - Target analyte detected in method blank above the MDL, but below the minimum reporting limit (MRL) and  
analyte not present in the sample, no impact on data.
- FB - Target analyte detected in TB > MRL but sample is ND.
- LE - MRL Check recovery was above laboratory acceptance limits.
- R7 - LFB/LFBD RPD exceeded the laboratory acceptance limit. Recovery met acceptance criteria.

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

Report: 965349  
 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:  
 10/20/2021 1500

Analyzed	Analyte	Sample ID	Result	HI Limit	Units	MRL
<b>202110210116      <u>AIEA WELLS PUMPS 1&amp;2 (260)-331-203-TP400</u></b>						
10/29/2021 04:20	Alkalinity in CaCO3 units		60		mg/L	2.0
10/29/2021 11:08	Bicarb.Alkalinity as HCO3calc		73		mg/L	2.0
11/04/2021 01:02	Bromide		390		ug/L	5.0
10/22/2021 13:09	Calcium Total ICAP		21		mg/L	1.0
10/26/2021 14:42	Chlordane		0.14	2	ug/L	0.10
11/03/2021 15:15	Chromium Total ICAP/MS		1.8	100	ug/L	1.0
10/26/2021 14:42	Dieldrin		0.0340	0.2	ug/L	0.0100
10/26/2021 14:42	Dieldrin		0.034	0.2	ug/L	0.0020
10/22/2021 13:09	Magnesium Total ICAP		19		mg/L	0.10
10/29/2021 04:20	PH (H3=past HT not compliant)		7.9	8.5	Units	0.10
10/22/2021 13:09	Potassium Total ICAP		2.6		mg/L	1.0
10/22/2021 13:09	Sodium Total ICAP		45		mg/L	1.0
10/29/2021 04:20	Specific Conductance, 25 C		520	--	umho/cm	10
10/22/2021 21:26	Total Dissolved Solids (TDS)		310	500	mg/L	10
<b>202110260292      <u>AIEA WELLS PUMPS 1&amp;2 (260)-331-203-TP400</u></b>						
10/26/2021 23:14	Chloride		110	250	mg/L	2.5
11/10/2021 19:10	Fluoride		0.059	4	mg/L	0.050
10/26/2021 23:14	Nitrate as Nitrogen by IC		0.99	10	mg/L	0.25
10/26/2021 23:14	Sulfate		18	250	mg/L	2.5

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

**Report:** 965349  
**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:  
 10/20/2021 1500

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
<b><u>AIEA WELLS PUMPS 1&amp;2 (260)-331-203-TP400 (202110210116)</u></b>						<b>Sampled on 10/19/2021 0948</b>			
<b>EPA 200.8 - ICPMS Metals</b>									
10/21/21	11/03/21 15:15	1362622	1364756	(EPA 200.8)	Antimony Total ICAP/MS	ND	ug/L	1.0	1
10/21/21	11/03/21 15:15	1362622	1364756	(EPA 200.8)	Arsenic Total ICAP/MS	ND	ug/L	1.0	1
10/21/21	11/03/21 15:15	1362622	1364756	(EPA 200.8)	Beryllium Total ICAP/MS	ND	ug/L	1.0	1
10/21/21	11/03/21 15:15	1362622	1364756	(EPA 200.8)	Cadmium Total ICAP/MS	ND	ug/L	0.50	1
10/21/21	11/03/21 15:15	1362622	1364756	(EPA 200.8)	Chromium Total ICAP/MS	1.8	ug/L	1.0	1
10/21/21	11/03/21 15:15	1362622	1364756	(EPA 200.8)	Copper Total ICAP/MS	ND	ug/L	2.0	1
10/21/21	11/03/21 15:15	1362622	1364756	(EPA 200.8)	Lead Total ICAP/MS	ND	ug/L	0.50	1
10/21/21	11/03/21 15:15	1362622	1364756	(EPA 200.8)	Nickel Total ICAP/MS	ND	ug/L	5.0	1
10/21/21	11/03/21 15:15	1362622	1364756	(EPA 200.8)	Selenium Total ICAP/MS	ND	ug/L	5.0	1
10/21/21	11/03/21 15:15	1362622	1364756	(EPA 200.8)	Silver Total ICAP/MS	ND	ug/L	0.50	1
10/21/21	11/03/21 15:15	1362622	1364756	(EPA 200.8)	Thallium Total ICAP/MS	ND	ug/L	1.0	1
10/21/21	11/03/21 15:15	1362622	1364756	(EPA 200.8)	Zinc Total ICAP/MS	ND	ug/L	20	1
<b>EPA 200.7 - ICP Metals</b>									
10/21/21	10/22/21 13:09	1362622	1362719	(EPA 200.7)	Calcium Total ICAP	21	mg/L	1.0	1
10/21/21	10/22/21 13:09	1362622	1362719	(EPA 200.7)	Magnesium Total ICAP	19	mg/L	0.10	1
10/21/21	10/22/21 13:09	1362622	1362719	(EPA 200.7)	Potassium Total ICAP	2.6	mg/L	1.0	1
10/21/21	10/22/21 13:09	1362622	1362719	(EPA 200.7)	Sodium Total ICAP	45	mg/L	1.0	1
<b>EPA 200.8 - Mercury ICPMS</b>									
10/21/21	11/03/21 15:15	1362622	1364768	(EPA 200.8)	Mercury ICPMS	ND	ug/L	0.20	1
<b>SM2330B - Carbonate as CO3, Calculated</b>									
	10/29/21 22:35			(SM2330B)	Carbonate as CO3, Calculated	ND (c)	mg/L	2.0	1
<b>SM2330B - Bicarb.Alkalinity as HCO3,calc</b>									
	10/29/21 11:08			(SM2330B)	Bicarb.Alkalinity as HCO3calc	73 (c)	mg/L	2.0	1
<b>EPA 505 - Organochlorine Pesticides/PCBs</b>									
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	Alachlor (Alanex)	ND	ug/L	0.10	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	Aldrin	ND	ug/L	0.010	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	Chlordane	0.14	ug/L	0.10	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	Dieldrin	0.0340	ug/L	0.0100	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	Endrin	ND	ug/L	0.010	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	Heptachlor	ND	ug/L	0.010	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	Heptachlor Epoxide	ND	ug/L	0.010	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	Lindane (gamma-BHC)	ND	ug/L	0.010	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	Methoxychlor	ND	ug/L	0.050	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	PCB 1016 Aroclor	ND	ug/L	0.080	1

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**Report:** 965349  
**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:  
 10/20/2021 1500

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	PCB 1221 Aroclor	ND	ug/L	0.10	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	PCB 1232 Aroclor	ND	ug/L	0.10	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	PCB 1242 Aroclor	ND	ug/L	0.10	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	PCB 1248 Aroclor	ND	ug/L	0.10	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	PCB 1254 Aroclor	ND	ug/L	0.10	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	PCB 1260 Aroclor	ND	ug/L	0.10	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	Total PCBs	ND	ug/L	0.10	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	Toxaphene	ND	ug/L	0.50	1
10/25/21	10/26/21 14:42	1363186	1363439	(EPA 505)	Tetrachlorometaxylene	100	%		1
<b>EPA 505 - Organochlorine Pesticides</b>									
10/25/21	10/26/21 14:42	1363188	1366220	(EPA 505)	Aldrin	ND	ug/L	0.0020	1
10/25/21	10/26/21 14:42	1363188	1366220	(EPA 505)	Dieldrin	0.034	ug/L	0.0020	1
10/25/21	10/26/21 14:42	1363188	1366220	(EPA 505)	Toxaphene	ND	ug/L	0.10	1
10/25/21	10/26/21 14:42	1363188	1366220	(EPA 505)	Tetrachloro-m-xylene	100	%		1
<b>EPA 504.1 - EPA Method 504.1</b>									
10/27/21	10/27/21 21:29	1363644	1363689	(EPA 504.1)	1,2,3-Trichloropropane (TCP)	ND	ug/L	0.040	1
10/27/21	10/27/21 21:29	1363644	1363689	(EPA 504.1)	Dibromochloropropane (DBCP)	ND	ug/L	0.010	1
10/27/21	10/27/21 21:29	1363644	1363689	(EPA 504.1)	Ethylene Dibromide (EDB)	ND	ug/L	0.010	1
10/27/21	10/27/21 21:29	1363644	1363689	(EPA 504.1)	1,2-Dibromopropane	93	%		1
<b>EPA 525.2 - Semivolatiles by GCMS</b>									
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	2,4-DDD	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	2,4-DDE	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	2,4-DDT	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	2,4-Dinitrotoluene	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	2,6-Dinitrotoluene	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	4,4-DDD	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	4,4-DDE	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	4,4-DDT	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Acenaphthene	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Acenaphthylene	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Acetochlor	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Alachlor	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Alpha-BHC	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	alpha-Chlordane	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Anthracene	ND	ug/L	0.020	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Atrazine	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.050	1

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Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Benzo(a)pyrene	ND	ug/L	0.020	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Benzo(b)Fluoranthene	ND	ug/L	0.020	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Benzo(g,h,i)Perylene	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Benzo(k)Fluoranthene	ND	ug/L	0.020	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Beta-BHC	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Bromacil	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Butachlor	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Butylbenzylphthalate	ND	ug/L	0.50	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Caffeine by method 525mod	ND (R7)	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Chlorobenzilate	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Chloroneb	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Chlorothalonil(Draconil,Bravo)	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Chlorpyrifos (Dursban)	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Chrysene	ND	ug/L	0.020	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Delta-BHC	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Di-(2-Ethylhexyl)adipate	ND	ug/L	0.60	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Di(2-Ethylhexyl)phthalate	ND	ug/L	0.60	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Diazinon (Qualitative)	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Dibenz(a,h)Anthracene	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Dichlorvos (DDVP)	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Dieldrin	ND	ug/L	0.20	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Diethylphthalate	ND	ug/L	0.50	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Dimethoate	ND (R7)	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Dimethylphthalate	ND	ug/L	0.50	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Di-n-Butylphthalate	ND	ug/L	1.0	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Di-N-octylphthalate	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Endosulfan I (Alpha)	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Endosulfan II (Beta)	ND (LE)	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Endosulfan Sulfate	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Endrin	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Endrin Aldehyde	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	EPTC	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Fluoranthene	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Fluorene	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	gamma-Chlordane	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Heptachlor	ND	ug/L	0.040	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Heptachlor Epoxide (isomer B)	ND	ug/L	0.050	1

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10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Hexachlorobenzene	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Hexachlorocyclopentadiene	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Isophorone	ND	ug/L	0.50	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Lindane	ND	ug/L	0.040	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Malathion	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Methoxychlor	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Metolachlor	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Metribuzin	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Molinate	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Naphthalene	ND	ug/L	0.30	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Parathion	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Pendimethalin	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Permethrin (mixed isomers)	ND	ug/L	0.20	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Phenanthrene	ND	ug/L	0.040	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Propachlor	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Pyrene	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Simazine	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Terbacil	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Terbutylazine	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Thiobencarb (ELAP)	ND	ug/L	0.20	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	trans-Nonachlor	ND	ug/L	0.050	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Trifluralin	ND	ug/L	0.10	1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	94	%		1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Acenaphthene-d10	102	%		1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Chrysene-d12	113	%		1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Perylene-d12	86	%		1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Phenanthrene-d10	110	%		1
10/21/21	10/28/21 15:20	1362566	1363756	(EPA 525.2)	Triphenylphosphate	114	%		1
<b>EPA 300.0 - Disinfection ByProducts by 300.0</b>									
	11/04/21 01:02		1365492	(EPA 300.0)	Bromide	390	ug/L	5.0	1
<b>SW 8015B - (SUB)Gas Fraction Hydrocarbons</b>									
10/22/21	10/22/21 19:45			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.02	1
<b>SW 8015B - TPH 8015 Diesel and Motor Oil</b>									
10/25/21	10/26/21 23:43			(SW 8015B)	TPH Diesel	ND	mg/L	0.025	1
10/25/21	10/26/21 23:43			(SW 8015B)	TPH Motor Oil	ND	mg/L	0.05	1
<b>EPA 8015 - Jet Fuel 5 C8-C18</b>									

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10/25/21	10/26/21 23:43			(EPA 8015)	Jet Fuel 5	ND	mg/L	0.05	1
<b>EPA 625 - 625PAH in ug/L</b>									
10/22/21	11/13/21 00:00			(EPA 625)	1-Methylnaphthalene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	1-Methylphenanthrene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	2,3,5-Trimethylnaphthalene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	2,4,6-Trichlorophenol	NA	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	2,6-Dimethylnaphthalene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	2-Methylnaphthalene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Acenaphthene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Acenaphthylene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Anthracene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Benz(a)Anthracene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Benzo(a)pyrene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Benzo(b)fluoranthene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Benzo(e)pyrene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Benzo(g,h,i)perylene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Benzo(k)fluoranthene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Biphenyl	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Chrysene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Dibenz(a,h)Anthracene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Dibenzo(a,l)pyrene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Dibenzothiophene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Fluoranthene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Fluorene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Naphthalene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Pentachlorophenol	NA	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	Perylene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Phenanthrene	ND	ug/L	0.005	1
10/22/21	11/13/21 00:00			(EPA 625)	Pyrene	ND	ug/L	0.005	1
<b>EPA 8015 - Jet Fuel 8 C8-C18</b>									
	10/26/21 23:43			(EPA 8015)	Jet Fuel 8	ND	mg/L	0.05	1
<b>EPA 625 - 625 Acid Extractable in ug/L</b>									
10/22/21	11/13/21 00:00			(EPA 625)	2,4,5-Trichlorophenol	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	2,4,6-Trichlorophenol	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	2,4-Dichlorophenol	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	2,4-Dinitrophenol	ND	ug/L	0.2	1

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**Report:** 965349  
**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:  
 10/20/2021 1500

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
10/22/21	11/13/21 00:00			(EPA 625)	2,6-Dichlorophenol	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	2,6-Di-tert-butyl-4-methylphenol	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	2,6-Di-tert-butylphenol	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	2-Chlorophenol	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	2-Methylphenol	ND	ug/L	0.2	1
10/22/21	11/13/21 00:00			(EPA 625)	2-Nitrophenol	ND	ug/L	0.2	1
10/22/21	11/13/21 00:00			(EPA 625)	4,6-Dinitro-2-methylphenol	ND	ug/L	0.2	1
10/22/21	11/13/21 00:00			(EPA 625)	4-Chloro-3-methyl phenol	ND	ug/L	0.2	1
10/22/21	11/13/21 00:00			(EPA 625)	4-Methylphenol	ND	ug/L	0.2	1
10/22/21	11/13/21 00:00			(EPA 625)	4-Nitrophenol	ND	ug/L	0.2	1
10/22/21	11/13/21 00:00			(EPA 625)	6-tert-Butyl-2,4-dimethylphenol	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	Benzoic acid	ND	ug/L	0.2	1
10/22/21	11/13/21 00:00			(EPA 625)	Benzyl alcohol	ND	ug/L	0.2	1
10/22/21	11/13/21 00:00			(EPA 625)	pentachlorophenol	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	Phenol	ND	ug/L	0.2	1
10/22/21	11/13/21 00:00			(EPA 625)	p-tert-Butylphenol	ND	ug/L	0.1	1
<b>EPA 625 - 625 Base Neutral Extractable in ug/L</b>									
10/22/21	11/13/21 00:00			(EPA 625)	2-Chloronaphthalene	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	2-Nitroaniline	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	3-Nitroaniline	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	4-Bromophenylphenyl Ether	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	4-Chlorophenylphenyl Ether	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	4-Nitroaniline	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	Aniline	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	Benzidine	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	bis(2-Chloroethoxy)methane	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	bis(2-Chloroethyl)ether	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	bis(2-Chloroisopropyl) ether	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	Dibenzofuran	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	Disalicylidenepropanediamine	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	Hexachloroethane	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	Nitrobenzene	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	N-Nitrosodi-N-propylamine	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	N-Nitrosodiphenylamine	ND	ug/L	0.1	1
10/22/21	11/13/21 00:00			(EPA 625)	p-Chloroaniline	ND	ug/L	0.1	1
<b>EPA 624.1 - Acetone by 624.1</b>									
	10/25/21 17:21			(EPA 624.1)	Acetone	ND	ug/L	200	10

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Samples Received on:  
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Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
<b>SW8015C - Ethanol</b>									
	10/22/21 13:32			(SW8015C)	Ethanol	ND	ug/L	2000	1
<b>EPA 524.2 - Volatile Organics by GCMS</b>									
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5.0	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	2-Hexanone	ND	ug/L	10	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Acetone	ND (BM,FB)	ug/L	500	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Benzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Bromobenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Bromoethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Bromoform	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Chloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Chloroform (Trichloromethane)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.50	1

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 (Albuquerque+)

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Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Dibromomethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Dichloromethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3.0	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Naphthalene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	o-Xylene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Styrene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3.0	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3.0	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Toluene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Total THM	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Total xylenes	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.30	1

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10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	1,2-Dichloroethane-d4	112	%		1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	4-Bromofluorobenzene	92	%		1
10/28/21	10/28/21 18:36	1364211	1364213	(EPA 524.2)	Toluene-d8	86	%		1
<b>EPA 524.2 SIM - TBA by EPA 524.2 Modified</b>									
10/22/21	10/22/21 15:23	1362759	1362935	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2.0	1
10/22/21	10/22/21 15:23	1362759	1362935	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	106	%		1
10/22/21	10/22/21 15:23	1362759	1362935	(EPA 524.2 SIM)	4-Bromofluorobenzene	96	%		1
10/22/21	10/22/21 15:23	1362759	1362935	(EPA 524.2 SIM)	Toluene-d8	98	%		1
<b>SM 2320B - Alkalinity in CaCO3 units</b>									
	10/29/21 04:20		1364133	(SM 2320B)	Alkalinity in CaCO3 units	60	mg/L	2.0	1
<b>E160.1/SM2540C - Total Dissolved Solids (TDS)</b>									
10/22/21	10/22/21 21:26	1362608	1362921	(E160.1/SM2540C)	Total Dissolved Solids (TDS)	310	mg/L	10	1
<b>SM4500-HB - PH (H3=past HT not compliant)</b>									
	10/29/21 04:20		1364152	(SM4500-HB)	PH (H3=past HT not compliant)	7.9	Units	0.10	1
<b>SM2510B - Specific Conductance</b>									
	10/29/21 04:20		1364171	(SM2510B)	Specific Conductance, 25 C	520	umho/cm	10	1
<b>TRAVEL BLANK::AIEA WELLS PUMPS 1&amp;2 (260)-331-203-TP400 (202110210117)</b>									
<b>Sampled on 10/19/2021 0948</b>									
<b>EPA 504.1 - EPA Method 504.1</b>									
10/27/21	10/27/21 22:04	1363644	1363689	(EPA 504.1)	1,2,3-Trichloropropane (TCP)	ND	ug/L	0.040	1
10/27/21	10/27/21 22:04	1363644	1363689	(EPA 504.1)	Dibromochloropropane (DBCP)	ND	ug/L	0.010	1
10/27/21	10/27/21 22:04	1363644	1363689	(EPA 504.1)	Ethylene Dibromide (EDB)	ND	ug/L	0.010	1
10/27/21	10/27/21 22:04	1363644	1363689	(EPA 504.1)	1,2-Dibromopropane	97	%		1
<b>SW 8015B - (SUB)Gas Fraction Hydrocarbons</b>									
10/22/21	10/22/21 20:28			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.02	1
<b>EPA 624.1 - Acetone by 624.1</b>									
	10/25/21 17:48			(EPA 624.1)	Acetone	ND	ug/L	20	1
<b>EPA 524.2 - Volatile Organics by GCMS</b>									
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.50	1

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**Report:** 965349  
**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:  
 10/20/2021 1500

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5.0	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	2-Hexanone	ND	ug/L	10	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Acetone	ND (BK,FB)	ug/L	500	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Benzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Bromobenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Bromoethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Bromoform	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Chloroethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Chloroform (Trichloromethane)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Dibromomethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Dichloromethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3.0	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Naphthalene	ND	ug/L	0.50	1

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**Report:** 965349  
**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:  
 10/20/2021 1500

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	o-Xylene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Styrene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3.0	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3.0	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Toluene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Total THM	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Total xylenes	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.50	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.30	1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	1,2-Dichloroethane-d4	114	%		1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	4-Bromofluorobenzene	97	%		1
10/28/21	10/28/21 18:57	1364211	1364213	(EPA 524.2)	Toluene-d8	85	%		1
<b>EPA 524.2 SIM - TBA by EPA 524.2 Modified</b>									
10/22/21	10/22/21 15:46	1362759	1362935	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2.0	1
10/22/21	10/22/21 15:46	1362759	1362935	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	104	%		1
10/22/21	10/22/21 15:46	1362759	1362935	(EPA 524.2 SIM)	4-Bromofluorobenzene	96	%		1
10/22/21	10/22/21 15:46	1362759	1362935	(EPA 524.2 SIM)	Toluene-d8	98	%		1

**AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 (202110260292)**

**Sampled on 10/25/2021 1003**

**EPA 300.0 - Nitrate, Nitrite by EPA 300.0**

10/26/21 23:14	1363442	(EPA 300.0)	Nitrate as Nitrogen by IC	0.99	mg/L	0.25	5
10/26/21 23:14	1363442	(EPA 300.0)	Nitrite Nitrogen by IC	ND	mg/L	0.25	5

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Laboratory Data

**Report:** 965349  
**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:  
 10/20/2021 1500

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
<b>EPA 300.0 - Chloride, Sulfate by EPA 300.0</b>									
	10/26/21 23:14		1363446	(EPA 300.0)	Chloride	110	mg/L	2.5	5
	10/26/21 23:14		1363446	(EPA 300.0)	Sulfate	18 (B4)	mg/L	2.5	5
<b>SM 4500F-C - Fluoride</b>									
	11/10/21 19:10		1366396	(SM 4500F-C)	Fluoride	0.059	mg/L	0.050	1

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 (Albuquerque+)

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**ICP Metals**

**Prep Batch: 1362622 Analytical Batch: 1362719** **Analysis Date: 10/22/2021**  
 202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 Analyzed by: Y7TT

**Total Dissolved Solids (TDS)**

**Prep Batch: 1362608 Analytical Batch: 1362921** **Analysis Date: 10/22/2021**  
 202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 Analyzed by: TJ52

**TBA by EPA 524.2 Modified**

**Prep Batch: 1362759 Analytical Batch: 1362935** **Analysis Date: 10/22/2021**  
 202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 Analyzed by: PZ2J  
 202110210117 TRAVEL BLANK::AIEA WELLS PUMPS 1&2 (260)-331-2 Analyzed by: PZ2J

**Organochlorine Pesticides/PCBs**

**Prep Batch: 1363186 Analytical Batch: 1363439** **Analysis Date: 10/26/2021**  
 202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 Analyzed by: LRL

**Nitrate, Nitrite by EPA 300.0**

**Analytical Batch: 1363442** **Analysis Date: 10/26/2021**  
 202110260292 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 Analyzed by: TLH

**Chloride, Sulfate by EPA 300.0**

**Analytical Batch: 1363446** **Analysis Date: 10/26/2021**  
 202110260292 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 Analyzed by: TLH

**EPA Method 504.1**

**Prep Batch: 1363644 Analytical Batch: 1363689** **Analysis Date: 10/27/2021**  
 202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 Analyzed by: DYM  
 202110210117 TRAVEL BLANK::AIEA WELLS PUMPS 1&2 (260)-331-2 Analyzed by: DYM

**Semivolatiles by GCMS**

**Prep Batch: 1362566 Analytical Batch: 1363756** **Analysis Date: 10/28/2021**  
 202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 Analyzed by: JWC

**Alkalinity in CaCO3 units**

**Analytical Batch: 1364133** **Analysis Date: 10/29/2021**  
 202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 Analyzed by: P6LW

**PH (H3=past HT not compliant)**

**Analytical Batch: 1364152** **Analysis Date: 10/29/2021**  
 202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 Analyzed by: P6LW

**Specific Conductance**

**Analytical Batch: 1364171** **Analysis Date: 10/29/2021**  
 202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 Analyzed by: P6LW

**Volatile Organics by GCMS**

**Prep Batch: 1364211 Analytical Batch: 1364213** **Analysis Date: 10/28/2021**  
 202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400 Analyzed by: TG9W  
 202110210117 TRAVEL BLANK::AIEA WELLS PUMPS 1&2 (260)-331-2 Analyzed by: TG9W

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**Report:** 965349  
**Project:** RED-HILL  
**Group:** Red-Hill Expanded List  
(Albuquerque+)

Honolulu Board of Water Supply

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**ICPMS Metals**

**Prep Batch: 1362622 Analytical Batch: 1364756**

202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400

**Analysis Date: 11/03/2021**

Analyzed by: LUPE

**Mercury ICPMS**

**Prep Batch: 1362622 Analytical Batch: 1364768**

202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400

**Analysis Date: 11/03/2021**

Analyzed by: LUPE

**Fluoride**

**Analytical Batch: 1365430**

202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400

**Analysis Date: 11/04/2021**

Analyzed by: D5MQ

**Disinfection ByProducts by 300.0**

**Analytical Batch: 1365492**

202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400

**Analysis Date: 11/04/2021**

Analyzed by: NJR

**Organochlorine Pesticides**

**Prep Batch: 1363188 Analytical Batch: 1366220**

202110210116 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400

**Analysis Date: 10/26/2021**

Analyzed by: LRL

**Fluoride**

**Analytical Batch: 1366396**

202110260292 AIEA WELLS PUMPS 1&2 (260)-331-203-TP400

**Analysis Date: 11/10/2021**

Analyzed by: D5MQ

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Report: 965349  
 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%
<b>ICP Metals by EPA 200.7</b>									
<b>Analytical Batch: 1362719</b>					<b>Analysis Date: 10/22/2021</b>				
LCS1	Calcium Total ICAP		50	51.2	mg/L	102	(85-115)		
LCS2	Calcium Total ICAP		50	51.4	mg/L	103	(85-115)	20	0.39
MBLK	Calcium Total ICAP			<0.043087	mg/L				
MRL_CHK	Calcium Total ICAP		1	1.05	mg/L	105	(50-150)		
MS_202110200143	Calcium Total ICAP	ND	50	51.0	mg/L	101	(70-130)		
MS2_202110210645	Calcium Total ICAP	26	50	75.1	mg/L	99	(70-130)		
MSD_202110200143	Calcium Total ICAP	ND	50	51.2	mg/L	102	(70-130)	20	0.54
MSD2_202110210645	Calcium Total ICAP	26	50	75.0	mg/L	99	(70-130)	20	0.052
LCS1	Magnesium Total ICAP		20	20.2	mg/L	101	(85-115)		
LCS2	Magnesium Total ICAP		20	20.1	mg/L	101	(85-115)	20	0.50
MBLK	Magnesium Total ICAP			<0.009606	mg/L				
MRL_CHK	Magnesium Total ICAP		0.1	0.0987	mg/L	99	(50-150)		
MS_202110200143	Magnesium Total ICAP	0.13	20	20.3	mg/L	101	(70-130)		
MS2_202110210645	Magnesium Total ICAP	1.1	20	21.3	mg/L	101	(70-130)		
MSD_202110200143	Magnesium Total ICAP	0.13	20	20.4	mg/L	101	(70-130)	20	0.56
MSD2_202110210645	Magnesium Total ICAP	1.1	20	21.2	mg/L	100	(70-130)	20	0.34
LCS1	Potassium Total ICAP		20	20.4	mg/L	102	(85-115)		
LCS2	Potassium Total ICAP		20	20.4	mg/L	102	(85-115)	20	0.0
MBLK	Potassium Total ICAP			<0.233312	mg/L				
MRL_CHK	Potassium Total ICAP		1	0.681	mg/L	68	(50-150)		
MS_202110200143	Potassium Total ICAP	2.6	20	23.6	mg/L	105	(70-130)		
MS2_202110210645	Potassium Total ICAP	3.1	20	25.8	mg/L	113	(70-130)		
MSD_202110200143	Potassium Total ICAP	2.6	20	23.6	mg/L	105	(70-130)	20	0.11
MSD2_202110210645	Potassium Total ICAP	3.1	20	25.7	mg/L	113	(70-130)	20	0.26
LCS1	Sodium Total ICAP		50	51.0	mg/L	102	(85-115)		
LCS2	Sodium Total ICAP		50	50.8	mg/L	102	(85-115)	20	0.39
MBLK	Sodium Total ICAP			<0.4255	mg/L				
MRL_CHK	Sodium Total ICAP		1	0.987	mg/L	99	(50-150)		
MS_202110200143	Sodium Total ICAP	18	50	66.2	mg/L	97	(70-130)		
MS2_202110210645	Sodium Total ICAP	180	50	220	mg/L	78	(70-130)		
MSD_202110200143	Sodium Total ICAP	18	50	66.0	mg/L	97	(70-130)	20	0.33
MSD2_202110210645	Sodium Total ICAP	180	50	219	mg/L	76	(70-130)	20	0.28

**Total Dissolved Solids (TDS) by E160.1/SM2540C**

**Analytical Batch: 1362921**

**Analysis Date: 10/22/2021**

DUP_202110200365	Total Dissolved Solid (TDS)	490		494	mg/L		(0-10)	10	0.0
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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: 965349  
 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_202110210638	Total Dissolved Solid (TDS)	360		358	mg/L		(0-10)	10	0.56
LCS1	Total Dissolved Solid (TDS)		175	170	mg/L	97	(80-114)		
LCS2	Total Dissolved Solid (TDS)		700	696	mg/L	99	(80-114)		
MBLK	Total Dissolved Solid (TDS)			<5	mg/L				
MRL_CHK	Total Dissolved Solid (TDS)		10	9.00	mg/L	90	(50-150)		

**TBA by EPA 524.2 Modified by EPA 524.2 SIM**

Analytical Batch: 1362935

Analysis Date: 10/22/2021

LCS1	1,2-Dichloroethane-d4 (S)			102	%	102	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			104	%	104	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			106	%	106	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			104	%	104	(70-130)		
LCS1	4-Bromofluorobenzene (S)			96.0	%	96	(70-130)		
LCS2	4-Bromofluorobenzene (S)			94.0	%	94	(70-130)		
MBLK	4-Bromofluorobenzene (S)			94.0	%	94	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			96.0	%	96	(70-130)		
LCS1	t-Butyl Alcohol		5	5.31	ug/L	106	(70-130)		
LCS2	t-Butyl Alcohol		5	5.14	ug/L	103	(70-130)	20	3.3
MBLK	t-Butyl Alcohol			<2	ug/L				
MRL_CHK	t-Butyl Alcohol		2	2.16	ug/L	108	(50-150)		
LCS1	Toluene-d8 (S)			98.0	%	98	(70-130)		
LCS2	Toluene-d8 (S)			98.0	%	98	(70-130)		
MBLK	Toluene-d8 (S)			98.0	%	98	(70-130)		
MRL_CHK	Toluene-d8 (S)			98.0	%	98	(70-130)		

**Organochlorine Pesticides/PCBs by EPA 505**

Prep Batch: 1363186 Analytical Batch: 1363439

Analysis Date: 10/26/2021

CCCH	Alachlor (Alanex)		1	1.05	ug/L	105	(70-130)		
CCCH	Alachlor (Alanex)		1	0.982	ug/L	98	(70-130)		
CCCH	Alachlor (Alanex)		1	1.04	ug/L	104	(70-130)		
CCCH	Alachlor (Alanex)		1	0.978	ug/L	98	(70-130)		
LCS1	Alachlor (Alanex)		1	0.933	ug/L	93	(70-130)		
MBLK	Alachlor (Alanex)			<0.1	ug/L				
MRL_CHK	Alachlor (Alanex)		0.1	0.104	ug/L	104	(50-150)		
MS1_202110180295	Alachlor (Alanex)	ND	0.2	0.211	ug/L	106	(65-135)		
MS2_202110200578	Alachlor (Alanex)	ND	1	1.00	ug/L	100	(65-135)		
CCCH	Aldrin		0.1	0.108	ug/L	108	(70-130)		
CCCH	Aldrin		0.1	0.0965	ug/L	97	(70-130)		

Spike recovery is already corrected for native results.

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

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

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

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

(S) - Indicates surrogate compound.

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Report: 965349  
 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%
CCCH	Aldrin		0.1	0.107	ug/L	107	(70-130)		
CCCH	Aldrin		0.1	0.0970	ug/L	97	(70-130)		
LCS1	Aldrin		0.1	0.0903	ug/L	90	(70-130)		
MBLK	Aldrin			<0.01	ug/L				
MRL_CHK	Aldrin		0.01	0.00970	ug/L	97	(50-150)		
MS1_202110180295	Aldrin	ND	0.02	0.0181	ug/L	91	(65-135)		
MS2_202110200578	Aldrin	ND	0.1	0.100	ug/L	100	(65-135)		
CCCH	Chlordane		0.5	0.507	ug/L	101	(70-130)		
LCS1	Chlordane		0.5	0.525	ug/L	105	(70-130)		
MBLK	Chlordane			<0.1	ug/L				
MRL_CHK	Chlordane		0.1	0.0971	ug/L	97	(50-150)		
MS1_202110180295	Chlordane	ND	0.5	0.507	ug/L	101	(65-135)		
CCCH	Dieldrin		0.1	0.106	ug/L	107	(70-130)		
CCCH	Dieldrin		0.1	0.0987	ug/L	99	(70-130)		
CCCH	Dieldrin		0.1	0.105	ug/L	105	(70-130)		
CCCH	Dieldrin		0.1	0.0994	ug/L	99	(70-130)		
LCS1	Dieldrin		0.1	0.0852	ug/L	85	(70-130)		
MBLK	Dieldrin			<0.01	ug/L				
MRL_CHK	Dieldrin		0.01	0.0101	ug/L	101	(50-150)		
MS1_202110180295	Dieldrin	ND	0.02	0.0198	ug/L	99	(65-135)		
MS2_202110200578	Dieldrin	ND	0.1	0.101	ug/L	101	(65-135)		
CCCH	Endrin		0.1	0.104	ug/L	103	(70-130)		
CCCH	Endrin		0.1	0.0958	ug/L	96	(70-130)		
CCCH	Endrin		0.1	0.102	ug/L	102	(70-130)		
CCCH	Endrin		0.1	0.0957	ug/L	96	(70-130)		
LCS1	Endrin		0.1	0.0910	ug/L	91	(70-130)		
MBLK	Endrin			<0.01	ug/L				
MRL_CHK	Endrin		0.01	0.0103	ug/L	103	(50-150)		
MS1_202110180295	Endrin	ND	0.02	0.0205	ug/L	102	(65-135)		
MS2_202110200578	Endrin	ND	0.1	0.0982	ug/L	98	(65-135)		
CCCH	Heptachlor		0.1	0.103	ug/L	103	(70-130)		
CCCH	Heptachlor		0.1	0.0950	ug/L	95	(70-130)		
CCCH	Heptachlor		0.1	0.101	ug/L	101	(70-130)		
CCCH	Heptachlor		0.1	0.0933	ug/L	93	(70-130)		
LCS1	Heptachlor		0.1	0.0942	ug/L	94	(70-130)		
MBLK	Heptachlor			<0.01	ug/L				
MRL_CHK	Heptachlor		0.01	0.00990	ug/L	99	(50-150)		
MS1_202110180295	Heptachlor	ND	0.02	0.0197	ug/L	99	(65-135)		

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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: 965349  
 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_202110200578	Heptachlor	ND	0.1	0.0986	ug/L	99	(65-135)		
CCCH	Heptachlor Epoxide		0.1	0.106	ug/L	106	(70-130)		
CCCH	Heptachlor Epoxide		0.1	0.0982	ug/L	98	(70-130)		
CCCH	Heptachlor Epoxide		0.1	0.105	ug/L	105	(70-130)		
CCCH	Heptachlor Epoxide		0.1	0.0991	ug/L	99	(70-130)		
LCS1	Heptachlor Epoxide		0.1	0.0897	ug/L	90	(70-130)		
MBLK	Heptachlor Epoxide			<0.01	ug/L				
MRL_CHK	Heptachlor Epoxide		0.01	0.0110	ug/L	110	(50-150)		
MS1_202110180295	Heptachlor Epoxide	ND	0.02	0.0212	ug/L	106	(65-135)		
MS2_202110200578	Heptachlor Epoxide	ND	0.1	0.101	ug/L	100	(65-135)		
CCCH	Lindane (gamma-BHC)		0.1	0.106	ug/L	106	(70-130)		
CCCH	Lindane (gamma-BHC)		0.1	0.0985	ug/L	99	(70-130)		
CCCH	Lindane (gamma-BHC)		0.1	0.105	ug/L	105	(70-130)		
CCCH	Lindane (gamma-BHC)		0.1	0.0982	ug/L	98	(70-130)		
LCS1	Lindane (gamma-BHC)		0.1	0.0889	ug/L	89	(70-130)		
MBLK	Lindane (gamma-BHC)			<0.01	ug/L				
MRL_CHK	Lindane (gamma-BHC)		0.01	0.00990	ug/L	99	(50-150)		
MS1_202110180295	Lindane (gamma-BHC)	ND	0.02	0.0202	ug/L	101	(65-135)		
MS2_202110200578	Lindane (gamma-BHC)	ND	0.1	0.101	ug/L	101	(65-135)		
CCCH	Methoxychlor		0.5	0.506	ug/L	101	(70-130)		
CCCH	Methoxychlor		0.5	0.480	ug/L	96	(70-130)		
CCCH	Methoxychlor		0.5	0.488	ug/L	98	(70-130)		
CCCH	Methoxychlor		0.5	0.457	ug/L	91	(70-130)		
LCS1	Methoxychlor		0.5	0.483	ug/L	97	(70-130)		
MBLK	Methoxychlor			<0.05	ug/L				
MRL_CHK	Methoxychlor		0.05	0.0627	ug/L	125	(50-150)		
MS1_202110180295	Methoxychlor	ND	0.1	0.118	ug/L	118	(65-135)		
MS2_202110200578	Methoxychlor	ND	0.5	0.485	ug/L	97	(65-135)		
MBLK	PCB 1016 Aroclor			<0.08	ug/L				
MBLK	PCB 1221 Aroclor			<0.1	ug/L				
MBLK	PCB 1232 Aroclor			<0.1	ug/L				
MBLK	PCB 1242 Aroclor			<0.1	ug/L				
MBLK	PCB 1248 Aroclor			<0.1	ug/L				
MBLK	PCB 1254 Aroclor			<0.1	ug/L				
MBLK	PCB 1260 Aroclor			<0.1	ug/L				
CCCH	Tetrachlorometaxylene (S)			104	%	104	(70-130)		
CCCH	Tetrachlorometaxylene (S)			104	%	104	(70-130)		
CCCH	Tetrachlorometaxylene (S)			104	%	104	(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: 965349  
 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%
CCCH	Tetrachlorometaxylene (S)			105	%	105	(70-130)		
LCS1	Tetrachlorometaxylene (S)			103	%	103	(70-130)		
MBLK	Tetrachlorometaxylene (S)			101	%	101	(70-130)		
MRL_CHK	Tetrachlorometaxylene (S)			101	%	101	(70-130)		
MS1_202110180295	Tetrachlorometaxylene (S)			101	%	101	(70-130)		
MS2_202110200578	Tetrachlorometaxylene (S)			101	%	101	(70-130)		
CCCH	Toxaphene		2.5	2.27	ug/L	91	(70-130)		
LCS1	Toxaphene		2.5	2.36	ug/L	94	(70-130)		
MBLK	Toxaphene			<0.5	ug/L				
MRL_CHK	Toxaphene		0.5	0.448	ug/L	90	(50-150)		
MS2_202110200578	Toxaphene		2.5	2.46	ug/L	98	(65-135)		

Nitrate, Nitrite by EPA 300.0 by EPA 300.0

Analytical Batch: 1363442

Analysis Date: 10/26/2021

LCS1	Nitrate as Nitrogen by IC		2.5	2.49	mg/L	100	(90-110)		
LCS2	Nitrate as Nitrogen by IC		2.5	2.55	mg/L	102	(90-110)	20	2.4
MBLK	Nitrate as Nitrogen by IC			<0.0042	mg/L				
MRL_CHK	Nitrate as Nitrogen by IC		0.05	0.0469	mg/L	94	(50-150)		
MS_202110260107	Nitrate as Nitrogen by IC	1.2	1.3	3.74	mg/L	102	(80-120)		
MS_202110260325	Nitrate as Nitrogen by IC	ND	1.3	1.31	mg/L	103	(80-120)		
MSD_202110260107	Nitrate as Nitrogen by IC	1.2	1.3	3.76	mg/L	104	(80-120)	20	0.86
MSD_202110260325	Nitrate as Nitrogen by IC	ND	1.3	1.34	mg/L	105	(80-120)	20	2.2
LCS1	Nitrite Nitrogen by IC		1	1.03	mg/L	103	(90-110)		
LCS2	Nitrite Nitrogen by IC		1	1.03	mg/L	103	(90-110)	20	0.0
MBLK	Nitrite Nitrogen by IC			<0.0050	mg/L				
MRL_CHK	Nitrite Nitrogen by IC		0.05	0.0462	mg/L	92	(50-150)		
MS_202110260107	Nitrite Nitrogen by IC	ND	0.5	1.05	mg/L	105	(80-120)		
MS_202110260325	Nitrite Nitrogen by IC	ND	0.5	0.515	mg/L	103	(80-120)		
MSD_202110260107	Nitrite Nitrogen by IC	ND	0.5	1.06	mg/L	106	(80-120)	20	0.79
MSD_202110260325	Nitrite Nitrogen by IC	ND	0.5	0.524	mg/L	105	(80-120)	20	1.7

Chloride, Sulfate by EPA 300.0 by EPA 300.0

Analytical Batch: 1363446

Analysis Date: 10/26/2021

LCS1	Chloride		25	25.6	mg/L	102	(90-110)		
LCS2	Chloride		25	26.1	mg/L	104	(90-110)	20	1.9
MBLK	Chloride			<0.1397	mg/L				
MRL_CHK	Chloride		0.5	0.464	mg/L	93	(50-150)		
MS_202110260107	Chloride	14	13	41.2	mg/L	108	(80-120)		
MS_202110260325	Chloride	9.8	13	23.4	mg/L	109	(80-120)		

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:** 965349  
**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%
MSD_202110260107	Chloride	14	13	41.4	mg/L	109	(80-120)	20	0.61
MSD_202110260325	Chloride	9.8	13	23.7	mg/L	111	(80-120)	20	1.1
LCS1	Sulfate		50	50.8	mg/L	102	(90-110)		
LCS2	Sulfate		50	51.8	mg/L	104	(90-110)	20	2.0
MBLK	Sulfate			<0.0614	mg/L				
MRL_CHK	Sulfate		1	0.992	mg/L	99	(50-150)		
MRLLW	Sulfate		0.25	0.248	mg/L	99	(50-150)		
MS_202110260107	Sulfate	45	25	97.6	mg/L	106	(80-120)		
MS_202110260325	Sulfate	6.6	25	33.0	mg/L	105	(80-120)		
MSD_202110260107	Sulfate	45	25	98.4	mg/L	107	(80-120)	20	0.76
MSD_202110260325	Sulfate	6.6	25	33.5	mg/L	107	(80-120)	20	1.6

**EPA Method 504.1 by EPA 504.1**

**Analytical Batch: 1363689**

**Analysis Date: 10/27/2021**

CCCH	1,2,3-Trichloropropane		1.3	1.21	ug/L	97	(70-130)		
CCCM2	1,2,3-Trichloropropane		0.25	0.254	ug/L	102	(70-130)		
DUP_202110200690	1,2,3-Trichloropropane	ND		ND	ug/L		(0-20)		
LCS2	1,2,3-Trichloropropane		0.2	0.200	ug/L	100	(70-130)		
MBLK	1,2,3-Trichloropropane			<0.0133	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.05	0.0522	ug/L	104	(60-140)		
MRLLW	1,2,3-Trichloropropane		0.04	0.0397	ug/L	99	(60-140)		
MS_202110210518	1,2,3-Trichloropropane	ND	1.3	1.24	ug/L	97	(65-135)		
CCCH	1,2-Dibromo-3-chloropropane		0.25	0.244	ug/L	98	(70-130)		
CCCM2	1,2-Dibromo-3-chloropropane		0.05	0.0496	ug/L	99	(70-130)		
DUP_202110200690	1,2-Dibromo-3-chloropropane	ND		ND	ug/L		(0-20)		
LCS2	1,2-Dibromo-3-chloropropane		0.2	0.196	ug/L	98	(70-130)		
MBLK	1,2-Dibromo-3-chloropropane			<0.002	ug/L				
MRL_CHK	1,2-Dibromo-3-chloropropane		0.01	0.00940	ug/L	94	(60-140)		
MS_202110210518	1,2-Dibromo-3-chloropropane	ND	0.25	0.249	ug/L	99	(65-135)		
CCCH	1,2-Dibromoethane		0.25	0.247	ug/L	99	(70-130)		
CCCM2	1,2-Dibromoethane		0.05	0.0507	ug/L	101	(70-130)		
DUP_202110200690	1,2-Dibromoethane	ND		ND	ug/L		(0-20)		
LCS2	1,2-Dibromoethane		0.2	0.199	ug/L	100	(70-130)		
MBLK	1,2-Dibromoethane			<0.003	ug/L				
MRL_CHK	1,2-Dibromoethane		0.01	0.00970	ug/L	97	(60-140)		
MS_202110210518	1,2-Dibromoethane	ND	0.25	0.247	ug/L	99	(65-135)		
CCCH	1,2-Dibromopropane (S)		100	105	%	105	(60-140)		
CCCM2	1,2-Dibromopropane (S)		100	105	%	105	(60-140)		

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: 965349  
 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_202110200690	1,2-Dibromopropane (S)		100	99.0	%	99	(60-140)		
LCS2	1,2-Dibromopropane (S)		100	99.7	%	100	(60-140)		
MBLK	1,2-Dibromopropane (S)			95.0	%	95	(60-140)		
MRL_CHK	1,2-Dibromopropane (S)		100	99.8	%	100	(60-140)		
MRLLLW	1,2-Dibromopropane (S)		100	100	%	100	(60-140)		
MS_202110210518	1,2-Dibromopropane (S)		100	101	%	101	(60-140)		

Semivolatiles by GCMS by EPA 525.2

Prep Batch: 1362566 Analytical Batch: 1363756

Analysis Date: 10/26/2021

LCS1	1,3-Dimethyl-2-nitrobenzene (S)		5	98.4	%	98	(70-130)		
LCS2	1,3-Dimethyl-2-nitrobenzene (S)		5	98.6	%	99	(70-130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)			102	%	103	(70-130)		
MRL_CHK	1,3-Dimethyl-2-nitrobenzene (S)		5	95.3	%	95	(70-130)		
LCS1	2,4-DDD		2	2.09	ug/L	105	(70-130)		
LCS2	2,4-DDD		2	2.13	ug/L	107	(70-130)	20	1.9
MBLK	2,4-DDD			<0.1	ug/L				
MRL_CHK	2,4-DDD		0.1	0.122	ug/L	122	(50-150)		
LCS1	2,4-DDE		2	2.07	ug/L	103	(70-130)		
LCS2	2,4-DDE		2	2.07	ug/L	104	(70-130)	20	0.0
MBLK	2,4-DDE			<0.1	ug/L				
MRL_CHK	2,4-DDE		0.1	0.105	ug/L	105	(50-150)		
LCS1	2,4-DDT		2	2.12	ug/L	106	(70-130)		
LCS2	2,4-DDT		2	2.11	ug/L	106	(70-130)	20	0.47
MBLK	2,4-DDT			<0.1	ug/L				
MRL_CHK	2,4-DDT		0.1	0.0980	ug/L	98	(50-150)		
LCS1	2,4-Dinitrotoluene		2	1.83	ug/L	91	(70-130)		
LCS2	2,4-Dinitrotoluene		2	2.10	ug/L	105	(70-130)	20	14
MBLK	2,4-Dinitrotoluene			<0.1	ug/L				
MRL_CHK	2,4-Dinitrotoluene		0.1	0.103	ug/L	103	(50-150)		
LCS1	2,6-Dinitrotoluene		2	1.78	ug/L	89	(70-130)		
LCS2	2,6-Dinitrotoluene		2	2.16	ug/L	108	(70-130)	20	19
MBLK	2,6-Dinitrotoluene			<0.1	ug/L				
MRL_CHK	2,6-Dinitrotoluene		0.1	0.141	ug/L	141	(50-150)		
LCS1	4,4-DDD		2	2.19	ug/L	110	(70-130)		
LCS2	4,4-DDD		2	2.24	ug/L	112	(70-130)	20	2.3
MBLK	4,4-DDD			<0.1	ug/L				
MRL_CHK	4,4-DDD		0.1	0.108	ug/L	108	(50-150)		
LCS1	4,4-DDE		2	2.04	ug/L	102	(70-130)		

Spike recovery is already corrected for native results.

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

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

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

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

(S) - Indicates surrogate compound.

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Report: 965349  
 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	4,4-DDE		2	2.04	ug/L	102	(70-130)	20	0.0
MBLK	4,4-DDE			<0.1	ug/L				
MRL_CHK	4,4-DDE		0.1	0.111	ug/L	111	(50-150)		
LCS1	4,4-DDT		2	2.06	ug/L	103	(70-130)		
LCS2	4,4-DDT		2	2.09	ug/L	105	(70-130)	20	1.5
MBLK	4,4-DDT			<0.1	ug/L				
MRL_CHK	4,4-DDT		0.1	0.111	ug/L	111	(50-150)		
LCS1	Acenaphthene		2	2.07	ug/L	103	(70-130)		
LCS2	Acenaphthene		2	2.06	ug/L	103	(70-130)	20	0.48
MBLK	Acenaphthene			<0.1	ug/L				
MRL_CHK	Acenaphthene		0.1	0.0950	ug/L	95	(50-150)		
LCS1	Acenaphthene-d10 (I)		5	83.3	%	83	(50-150)		
LCS2	Acenaphthene-d10 (I)		5	79.8	%	80	(50-150)		
MBLK	Acenaphthene-d10 (I)			58.9	%	59	(50-150)		
MRL_CHK	Acenaphthene-d10 (I)		5	75.1	%	75	(50-150)		
LCS1	Acenaphthylene		2	1.93	ug/L	97	(70-130)		
LCS2	Acenaphthylene		2	2.03	ug/L	102	(70-130)	20	5.0
MBLK	Acenaphthylene			<0.1	ug/L				
MRL_CHK	Acenaphthylene		0.1	0.0830	ug/L	83	(50-150)		
LCS1	Acetochlor		2	2.12	ug/L	106	(70-130)		
LCS2	Acetochlor		2	2.16	ug/L	108	(70-130)	20	1.9
MBLK	Acetochlor			<0.1	ug/L				
MRL_CHK	Acetochlor		0.05	0.0540	ug/L	108	(50-150)		
LCS1	Alachlor		2	2.09	ug/L	105	(70-130)		
LCS2	Alachlor		2	2.07	ug/L	103	(70-130)	20	0.96
MBLK	Alachlor			<0.05	ug/L				
MRL_CHK	Alachlor		0.05	0.0550	ug/L	110	(50-150)		
LCS1	Alpha-BHC		2	2.04	ug/L	102	(70-130)		
LCS2	Alpha-BHC		2	2.12	ug/L	106	(70-130)	20	3.9
MBLK	Alpha-BHC			<0.1	ug/L				
MRL_CHK	Alpha-BHC		0.1	0.110	ug/L	110	(50-150)		
LCS1	alpha-Chlordane		2	2.04	ug/L	102	(70-130)		
LCS2	alpha-Chlordane		2	2.06	ug/L	103	(70-130)	20	0.98
MBLK	alpha-Chlordane			<0.05	ug/L				
MRL_CHK	alpha-Chlordane		0.05	0.0530	ug/L	106	(50-150)		
LCS1	Anthracene		2	2.06	ug/L	103	(70-130)		
LCS2	Anthracene		2	2.03	ug/L	102	(70-130)	20	1.5
MBLK	Anthracene			<0.02	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: 965349  
 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	Anthracene		0.02	0.0230	ug/L	115	(50-150)		
LCS1	Atrazine		2	2.39	ug/L	120	(70-130)		
LCS2	Atrazine		2	2.40	ug/L	120	(70-130)	20	0.42
MBLK	Atrazine			<0.05	ug/L				
MRL_CHK	Atrazine		0.05	0.0520	ug/L	104	(50-150)		
LCS1	Benz(a)Anthracene		2	2.05	ug/L	102	(70-130)		
LCS2	Benz(a)Anthracene		2	2.10	ug/L	105	(70-130)	20	2.4
MBLK	Benz(a)Anthracene			<0.05	ug/L				
MRL_CHK	Benz(a)Anthracene		0.05	0.0580	ug/L	116	(50-150)		
LCS1	Benzo(a)pyrene		2	1.88	ug/L	94	(70-130)		
LCS2	Benzo(a)pyrene		2	1.75	ug/L	88	(70-130)	20	7.2
MBLK	Benzo(a)pyrene			<0.02	ug/L				
MRL_CHK	Benzo(a)pyrene		0.02	0.0190	ug/L	95	(50-150)		
LCS1	Benzo(b)Fluoranthene		2	2.11	ug/L	106	(70-130)		
LCS2	Benzo(b)Fluoranthene		2	1.99	ug/L	99	(70-130)	20	5.8
MBLK	Benzo(b)Fluoranthene			<0.02	ug/L				
MRL_CHK	Benzo(b)Fluoranthene		0.02	0.0230	ug/L	115	(50-150)		
LCS1	Benzo(g,h,i)Perylene		2	1.60	ug/L	80	(70-130)		
LCS2	Benzo(g,h,i)Perylene		2	1.46	ug/L	73	(70-130)	20	9.2
MBLK	Benzo(g,h,i)Perylene			<0.05	ug/L				
MRL_CHK	Benzo(g,h,i)Perylene		0.05	0.0360	ug/L	72	(50-150)		
LCS1	Benzo(k)Fluoranthene		2	2.14	ug/L	107	(70-130)		
LCS2	Benzo(k)Fluoranthene		2	1.98	ug/L	99	(70-130)	20	7.8
MBLK	Benzo(k)Fluoranthene			<0.02	ug/L				
MRL_CHK	Benzo(k)Fluoranthene		0.02	0.0200	ug/L	100	(50-150)		
LCS1	Beta-BHC		2	2.09	ug/L	105	(70-130)		
LCS2	Beta-BHC		2	2.13	ug/L	106	(70-130)	20	1.9
MBLK	Beta-BHC			<0.1	ug/L				
MRL_CHK	Beta-BHC		0.1	0.107	ug/L	107	(50-150)		
LCS1	Bromacil		2	2.34	ug/L	117	(70-130)		
LCS2	Bromacil		2	2.54	ug/L	127	(70-130)	20	8.2
MBLK	Bromacil			<0.2	ug/L				
MRL_CHK	Bromacil		0.1	0.118	ug/L	118	(50-150)		
LCS1	Butachlor		2	2.26	ug/L	113	(70-130)		
LCS2	Butachlor		2	2.30	ug/L	115	(70-130)	20	1.8
MBLK	Butachlor			<0.05	ug/L				
MRL_CHK	Butachlor		0.05	0.0610	ug/L	122	(50-150)		
LCS1	Butylbenzylphthalate		2	2.22	ug/L	111	(70-130)		

Spike recovery is already corrected for native results.

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

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

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

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

(S) - Indicates surrogate compound.

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Report: 965349  
 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	Butylbenzylphthalate		2	2.31	ug/L	115	(70-130)	20	3.5
MBLK	Butylbenzylphthalate			<0.5	ug/L				
MRL_CHK	Butylbenzylphthalate		0.15	0.198	ug/L	132	(50-150)		
LCS1	Caffeine by method 525mod		2	1.39	ug/L	70	(45-137)		
LCS2	Caffeine by method 525mod		2	1.79	ug/L	90	(45-137)	20	<u>25</u>
MBLK	Caffeine by method 525mod			<0.05	ug/L				
MRL_CHK	Caffeine by method 525mod		0.05	0.0350	ug/L	70	(50-150)		
LCS1	Chlorobenzilate		2	2.34	ug/L	117	(70-130)		
LCS2	Chlorobenzilate		2	2.39	ug/L	120	(70-130)	20	2.1
MBLK	Chlorobenzilate			<0.1	ug/L				
MRL_CHK	Chlorobenzilate		0.1	0.109	ug/L	109	(50-150)		
LCS1	Chloroneb		2	2.09	ug/L	105	(70-130)		
LCS2	Chloroneb		2	2.11	ug/L	105	(70-130)	20	0.95
MBLK	Chloroneb			<0.1	ug/L				
MRL_CHK	Chloroneb		0.1	0.0990	ug/L	99	(50-150)		
LCS1	Chlorothalonil(Draconil,Bravo)		2	2.34	ug/L	117	(70-130)		
LCS2	Chlorothalonil(Draconil,Bravo)		2	2.34	ug/L	117	(70-130)	20	0.0
MBLK	Chlorothalonil(Draconil,Bravo)			<0.1	ug/L				
MRL_CHK	Chlorothalonil(Draconil,Bravo)		0.05	0.0540	ug/L	108	(50-150)		
LCS1	Chlorpyrifos (Dursban)		2	2.13	ug/L	107	(70-130)		
LCS2	Chlorpyrifos (Dursban)		2	2.19	ug/L	110	(70-130)	20	2.8
MBLK	Chlorpyrifos (Dursban)			<0.05	ug/L				
MRL_CHK	Chlorpyrifos (Dursban)		0.05	0.0520	ug/L	104	(50-150)		
LCS1	Chrysene		2	2.14	ug/L	107	(70-130)		
LCS2	Chrysene		2	2.15	ug/L	107	(70-130)	20	0.47
MBLK	Chrysene			<0.02	ug/L				
MRL_CHK	Chrysene		0.02	0.0220	ug/L	110	(50-150)		
LCS1	Chrysene-d12 (I)		5	86.3	%	86	(50-150)		
LCS2	Chrysene-d12 (I)		5	86.9	%	87	(50-150)		
MBLK	Chrysene-d12 (I)			51.3	%	51	(50-150)		
MRL_CHK	Chrysene-d12 (I)		5	81.7	%	82	(50-150)		
LCS1	Delta-BHC		2	2.01	ug/L	101	(70-130)		
LCS2	Delta-BHC		2	2.11	ug/L	106	(70-130)	20	4.8
MBLK	Delta-BHC			<0.1	ug/L				
MRL_CHK	Delta-BHC		0.1	0.109	ug/L	109	(50-150)		
LCS1	Di-(2-Ethylhexyl)adipate		2	2.22	ug/L	111	(70-130)		
LCS2	Di-(2-Ethylhexyl)adipate		2	2.17	ug/L	109	(70-130)	20	2.3
MBLK	Di-(2-Ethylhexyl)adipate			<0.6	ug/L				

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.

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Report: 965349  
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 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Di-(2-Ethylhexyl)adipate		0.3	0.241	ug/L	80	(50-150)		
LCS1	Di(2-Ethylhexyl)phthalate		2	2.14	ug/L	107	(70-130)		
LCS2	Di(2-Ethylhexyl)phthalate		2	2.03	ug/L	102	(70-130)	20	5.3
MBLK	Di(2-Ethylhexyl)phthalate			<0.6	ug/L				
MRL_CHK	Di(2-Ethylhexyl)phthalate		0.6	0.557	ug/L	93	(50-150)		
LCS1	Diazinon (Qualitative)		2	1.99	ug/L	100	(15-132)		
LCS2	Diazinon (Qualitative)		2	2.00	ug/L	100	(15-132)	20	1.0
MBLK	Diazinon (Qualitative)			<0.10	ug/L				
MRL_CHK	Diazinon (Qualitative)		0.1	0.116	ug/L	116	(15-132)		
LCS1	Dibenz(a,h)Anthracene		2	1.58	ug/L	79	(70-130)		
LCS2	Dibenz(a,h)Anthracene		2	1.40	ug/L	70	(70-130)	20	12
MBLK	Dibenz(a,h)Anthracene			<0.05	ug/L				
MRL_CHK	Dibenz(a,h)Anthracene		0.05	0.0360	ug/L	72	(50-150)		
LCS1	Dichlorvos (DDVP)		2	2.36	ug/L	118	(70-130)		
LCS2	Dichlorvos (DDVP)		2	2.53	ug/L	126	(70-130)	20	6.5
MBLK	Dichlorvos (DDVP)			<0.05	ug/L				
MRL_CHK	Dichlorvos (DDVP)		0.05	0.0560	ug/L	112	(50-150)		
LCS1	Dieldrin		2	2.03	ug/L	101	(70-130)		
LCS2	Dieldrin		2	1.96	ug/L	98	(70-130)	20	3.0
MBLK	Dieldrin			<0.2	ug/L				
MRL_CHK	Dieldrin		0.1	0.110	ug/L	110	(50-150)		
LCS1	Diethylphthalate		2	2.21	ug/L	110	(70-130)		
LCS2	Diethylphthalate		2	2.23	ug/L	112	(70-130)	20	0.90
MBLK	Diethylphthalate			<0.5	ug/L				
MRL_CHK	Diethylphthalate		0.15	0.200	ug/L	133	(50-150)		
LCS1	Dimethoate		2	1.32	ug/L	66	(35-100)		
LCS2	Dimethoate		2	1.72	ug/L	86	(35-100)	20	<b>26</b>
MBLK	Dimethoate			<0.1	ug/L				
MRL_CHK	Dimethoate		0.1	0.0710	ug/L	71	(35-100)		
LCS1	Dimethylphthalate		2	2.18	ug/L	109	(70-130)		
LCS2	Dimethylphthalate		2	2.29	ug/L	114	(70-130)	20	4.5
MBLK	Dimethylphthalate			<0.5	ug/L				
MRL_CHK	Dimethylphthalate		0.3	0.328	ug/L	109	(50-150)		
LCS1	Di-n-Butylphthalate		4	4.22	ug/L	105	(70-130)		
LCS2	Di-n-Butylphthalate		4	4.20	ug/L	105	(70-130)	20	0.48
MBLK	Di-n-Butylphthalate			<1	ug/L				
MRL_CHK	Di-n-Butylphthalate		0.3	0.373	ug/L	124	(50-150)		
LCS1	Di-N-octylphthalate		2	1.97	ug/L	99	(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: 965349  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	Di-N-octylphthalate		2	1.83	ug/L	92	(70-130)	20	7.4
MBLK	Di-N-octylphthalate			<0.1	ug/L				
MRL_CHK	Di-N-octylphthalate		0.1	0.0780	ug/L	78	(50-150)		
LCS1	Endosulfan I (Alpha)		2	2.05	ug/L	103	(70-130)		
LCS2	Endosulfan I (Alpha)		2	1.98	ug/L	99	(70-130)	20	3.5
MBLK	Endosulfan I (Alpha)			<0.1	ug/L				
MRL_CHK	Endosulfan I (Alpha)		0.1	0.116	ug/L	116	(50-150)		
LCS1	Endosulfan II (Beta)		2	2.16	ug/L	108	(70-130)		
LCS2	Endosulfan II (Beta)		2	2.14	ug/L	107	(70-130)	20	0.93
MBLK	Endosulfan II (Beta)			<0.1	ug/L				
MRL_CHK	Endosulfan II (Beta)		0.1	0.151	ug/L	<b>151</b>	(50-150)		
LCS1	Endosulfan Sulfate		2	2.26	ug/L	113	(70-130)		
LCS2	Endosulfan Sulfate		2	2.22	ug/L	111	(70-130)	20	1.8
MBLK	Endosulfan Sulfate			<0.1	ug/L				
MRL_CHK	Endosulfan Sulfate		0.1	0.118	ug/L	118	(50-150)		
LCS1	Endrin		2	2.07	ug/L	103	(70-130)		
LCS2	Endrin		2	2.12	ug/L	106	(70-130)	20	2.4
MBLK	Endrin			<0.1	ug/L				
MRL_CHK	Endrin		0.1	0.112	ug/L	112	(50-150)		
LCS1	Endrin Aldehyde		2	2.13	ug/L	107	(70-130)		
LCS2	Endrin Aldehyde		2	2.25	ug/L	112	(70-130)	20	5.5
MBLK	Endrin Aldehyde			<0.1	ug/L				
MRL_CHK	Endrin Aldehyde		0.1	0.116	ug/L	116	(50-150)		
LCS1	EPTC		2	2.18	ug/L	109	(70-130)		
LCS2	EPTC		2	2.16	ug/L	108	(70-130)	20	0.92
MBLK	EPTC			<0.1	ug/L				
MRL_CHK	EPTC		0.1	0.0930	ug/L	93	(50-150)		
LCS1	Fluoranthene		2	2.15	ug/L	108	(70-130)		
LCS2	Fluoranthene		2	2.19	ug/L	110	(70-130)	20	1.8
MBLK	Fluoranthene			<0.1	ug/L				
MRL_CHK	Fluoranthene		0.05	0.0570	ug/L	114	(50-150)		
LCS1	Fluorene		2	2.12	ug/L	106	(70-130)		
LCS2	Fluorene		2	2.16	ug/L	108	(70-130)	20	1.9
MBLK	Fluorene			<0.05	ug/L				
MRL_CHK	Fluorene		0.05	0.0540	ug/L	108	(50-150)		
LCS1	gamma-Chlordane		2	2.06	ug/L	103	(70-130)		
LCS2	gamma-Chlordane		2	2.04	ug/L	102	(70-130)	20	0.49
MBLK	gamma-Chlordane			<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: 965349  
 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	gamma-Chlordane		0.05	0.0470	ug/L	94	(50-150)		
LCS1	Heptachlor		2	2.00	ug/L	100	(70-130)		
LCS2	Heptachlor		2	2.00	ug/L	100	(70-130)	20	0.0
MBLK	Heptachlor			<0.04	ug/L				
MRL_CHK	Heptachlor		0.04	0.0350	ug/L	88	(50-150)		
LCS1	Heptachlor Epoxide (isomer B)		2	1.96	ug/L	98	(70-130)		
LCS2	Heptachlor Epoxide (isomer B)		2	2.07	ug/L	103	(70-130)	20	5.0
MBLK	Heptachlor Epoxide (isomer B)			<0.05	ug/L				
MRL_CHK	Heptachlor Epoxide (isomer B)		0.05	0.0560	ug/L	112	(50-150)		
LCS1	Hexachlorobenzene		2	2.00	ug/L	100	(70-130)		
LCS2	Hexachlorobenzene		2	2.02	ug/L	101	(70-130)	20	1
MBLK	Hexachlorobenzene			<0.05	ug/L				
MRL_CHK	Hexachlorobenzene		0.05	0.0610	ug/L	122	(50-150)		
LCS1	Hexachlorocyclopentadiene		2	2.10	ug/L	105	(70-130)		
LCS2	Hexachlorocyclopentadiene		2	2.02	ug/L	101	(70-130)	20	4.4
MBLK	Hexachlorocyclopentadiene			<0.05	ug/L				
MRL_CHK	Hexachlorocyclopentadiene		0.05	0.0410	ug/L	82	(50-150)		
LCS1	Indeno(1,2,3,c,d)Pyrene		2	1.56	ug/L	78	(70-130)		
LCS2	Indeno(1,2,3,c,d)Pyrene		2	1.43	ug/L	72	(70-130)	20	8.7
MBLK	Indeno(1,2,3,c,d)Pyrene			<0.05	ug/L				
MRL_CHK	Indeno(1,2,3,c,d)Pyrene		0.05	0.0340	ug/L	68	(50-150)		
LCS1	Isophorone		2	2.15	ug/L	108	(70-130)		
LCS2	Isophorone		2	2.15	ug/L	108	(70-130)	20	0.0
MBLK	Isophorone			<0.5	ug/L				
MRL_CHK	Isophorone		0.1	0.0910	ug/L	91	(50-150)		
LCS1	Lindane		2	2.20	ug/L	110	(70-130)		
LCS2	Lindane		2	2.25	ug/L	113	(70-130)	20	2.3
MBLK	Lindane			<0.04	ug/L				
MRL_CHK	Lindane		0.04	0.0530	ug/L	133	(50-150)		
LCS1	Malathion		2	2.22	ug/L	111	(70-130)		
LCS2	Malathion		2	2.27	ug/L	114	(70-130)	20	2.2
MBLK	Malathion			<0.1	ug/L				
MRL_CHK	Malathion		0.1	0.104	ug/L	104	(50-150)		
LCS1	Methoxychlor		2	2.30	ug/L	115	(70-130)		
LCS2	Methoxychlor		2	2.27	ug/L	114	(70-130)	20	1.3
MBLK	Methoxychlor			<0.1	ug/L				
MRL_CHK	Methoxychlor		0.1	0.0970	ug/L	97	(50-150)		
LCS1	Metolachlor		2	2.19	ug/L	110	(70-130)		

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

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Report: 965349  
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 Group: Red-Hill Expanded List  
 (Albuquerque+)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	Metolachlor		2	2.24	ug/L	112	(70-130)	20	2.3
MBLK	Metolachlor			<0.05	ug/L				
MRL_CHK	Metolachlor		0.05	0.0530	ug/L	106	(50-150)		
LCS1	Metribuzin		2	2.11	ug/L	105	(70-130)		
LCS2	Metribuzin		2	2.20	ug/L	110	(70-130)	20	4.2
MBLK	Metribuzin			<0.05	ug/L				
MRL_CHK	Metribuzin		0.05	0.0480	ug/L	96	(50-150)		
LCS1	Molinate		2	2.20	ug/L	110	(70-130)		
LCS2	Molinate		2	2.25	ug/L	112	(70-130)	20	2.3
MBLK	Molinate			<0.1	ug/L				
MRL_CHK	Molinate		0.1	0.106	ug/L	106	(50-150)		
LCS1	Naphthalene		2	2.12	ug/L	106	(70-130)		
LCS2	Naphthalene		2	2.12	ug/L	106	(70-130)	20	0.0
MBLK	Naphthalene			<0.3	ug/L				
MRL_CHK	Naphthalene		0.1	0.0960	ug/L	96	(50-150)		
LCS1	Parathion		2	2.10	ug/L	105	(70-130)		
LCS2	Parathion		2	2.19	ug/L	109	(70-130)	20	4.2
MBLK	Parathion			<0.1	ug/L				
MRL_CHK	Parathion		0.1	0.112	ug/L	112	(50-150)		
LCS1	Pendimethalin		2	2.04	ug/L	102	(70-130)		
LCS2	Pendimethalin		2	2.11	ug/L	105	(70-130)	20	3.4
MBLK	Pendimethalin			<0.1	ug/L				
MRL_CHK	Pendimethalin		0.1	0.100	ug/L	100	(50-150)		
LCS1	Permethrin (mixed isomers)		4	4.20	ug/L	105	(70-130)		
LCS2	Permethrin (mixed isomers)		4	4.03	ug/L	101	(70-130)	20	4.1
MBLK	Permethrin (mixed isomers)			<0.2	ug/L				
MRL_CHK	Permethrin (mixed isomers)		0.2	0.184	ug/L	92	(50-150)		
LCS1	Perylene-d12 (S)		5	91.2	%	91	(70-130)		
LCS2	Perylene-d12 (S)		5	82.3	%	82	(70-130)		
MBLK	Perylene-d12 (S)			79.2	%	79	(70-130)		
MRL_CHK	Perylene-d12 (S)		5	94.0	%	94	(70-130)		
LCS1	Phenanthrene		2	2.08	ug/L	104	(70-130)		
LCS2	Phenanthrene		2	2.07	ug/L	103	(70-130)	20	0.48
MBLK	Phenanthrene			<0.04	ug/L				
MRL_CHK	Phenanthrene		0.02	0.0290	ug/L	145	(50-150)		
LCS1	Phenanthrene-d10 (I)		5	87.6	%	88	(50-150)		
LCS2	Phenanthrene-d10 (I)		5	86.2	%	86	(50-150)		
MBLK	Phenanthrene-d10 (I)			61.0	%	61	(50-150)		

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

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Report: 965349  
 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	Phenanthrene-d10 (I)		5	80.6	%	81	(50-150)		
LCS1	Propachlor		2	2.24	ug/L	112	(70-130)		
LCS2	Propachlor		2	2.28	ug/L	114	(70-130)	20	1.8
MBLK	Propachlor			<0.05	ug/L				
MRL_CHK	Propachlor		0.05	0.0680	ug/L	136	(50-150)		
LCS1	Pyrene		2	2.14	ug/L	107	(70-130)		
LCS2	Pyrene		2	2.22	ug/L	111	(70-130)	20	3.7
MBLK	Pyrene			<0.05	ug/L				
MRL_CHK	Pyrene		0.05	0.0600	ug/L	120	(50-150)		
LCS1	Simazine		2	2.10	ug/L	105	(70-130)		
LCS2	Simazine		2	2.27	ug/L	114	(70-130)	20	7.8
MBLK	Simazine			<0.05	ug/L				
MRL_CHK	Simazine		0.05	0.0540	ug/L	108	(50-150)		
LCS1	Terbacil		2	2.16	ug/L	108	(70-130)		
LCS2	Terbacil		2	2.48	ug/L	124	(70-130)	20	14
MBLK	Terbacil			<0.1	ug/L				
MRL_CHK	Terbacil		0.1	0.145	ug/L	145	(50-150)		
LCS1	Terbutylazine		2	2.26	ug/L	113	(70-130)		
LCS2	Terbutylazine		2	2.31	ug/L	115	(70-130)	20	2.2
MBLK	Terbutylazine			<0.1	ug/L				
MRL_CHK	Terbutylazine		0.1	0.107	ug/L	107	(50-150)		
LCS1	Thiobencarb		2	2.22	ug/L	111	(70-130)		
LCS2	Thiobencarb		2	2.26	ug/L	113	(70-130)	20	1.8
MBLK	Thiobencarb			<0.2	ug/L				
MRL_CHK	Thiobencarb		0.1	0.101	ug/L	101	(50-150)		
LCS1	trans-Nonachlor		2	2.01	ug/L	101	(70-130)		
LCS2	trans-Nonachlor		2	2.07	ug/L	103	(70-130)	20	2.9
MBLK	trans-Nonachlor			<0.05	ug/L				
MRL_CHK	trans-Nonachlor		0.05	0.0510	ug/L	102	(50-150)		
LCS1	Trifluralin		2	2.15	ug/L	107	(70-130)		
LCS2	Trifluralin		2	2.19	ug/L	109	(70-130)	20	1.8
MBLK	Trifluralin			<0.1	ug/L				
MRL_CHK	Trifluralin		0.1	0.0820	ug/L	82	(50-150)		
LCS1	Triphenylphosphate (S)		5	106	%	106	(70-130)		
LCS2	Triphenylphosphate (S)		5	109	%	109	(70-130)		
MBLK	Triphenylphosphate (S)			96.9	%	97	(70-130)		
MRL_CHK	Triphenylphosphate (S)		5	109	%	109	(70-130)		

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Report: 965349  
 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%
<b>Semivolatiles by GCMS by EPA 525.2</b>									
<b>Prep Batch: 1362566 Analytical Batch: 1363758</b>					<b>Analysis Date: 10/27/2021</b>				
MS_202110200138	1,3-Dimethyl-2-nitrobenzene (S)		5	96.2	%	96	(70-130)		
MSD_202110200138	1,3-Dimethyl-2-nitrobenzene (S)		5	97.2	%	97	(70-130)		
MS_202110200138	2,4-DDD		2	2.15	ug/L	108	(70-130)		
MSD_202110200138	2,4-DDD		2	2.12	ug/L	106	(70-130)	20	1.4
MS_202110200138	2,4-DDE		2	1.94	ug/L	97	(70-130)		
MSD_202110200138	2,4-DDE		2	1.88	ug/L	94	(70-130)	20	3.4
MS_202110200138	2,4-DDT		2	2.02	ug/L	101	(70-130)		
MSD_202110200138	2,4-DDT		2	2.00	ug/L	100	(70-130)	20	1.2
MS_202110200138	2,4-Dinitrotoluene	ND	2	2.10	ug/L	105	(70-130)		
MSD_202110200138	2,4-Dinitrotoluene	ND	2	2.21	ug/L	111	(70-130)	20	5.3
MS_202110200138	2,6-Dinitrotoluene	ND	2	2.12	ug/L	106	(70-130)		
MSD_202110200138	2,6-Dinitrotoluene	ND	2	2.26	ug/L	113	(70-130)	20	6.5
MS_202110200138	4,4-DDD	ND	2	2.15	ug/L	108	(70-130)		
MSD_202110200138	4,4-DDD	ND	2	2.10	ug/L	105	(70-130)	20	1.9
MS_202110200138	4,4-DDE	ND	2	2.10	ug/L	105	(70-130)		
MSD_202110200138	4,4-DDE	ND	2	1.99	ug/L	100	(70-130)	20	5.2
MS_202110200138	4,4-DDT	ND	2	2.20	ug/L	110	(70-130)		
MSD_202110200138	4,4-DDT	ND	2	2.15	ug/L	107	(70-130)	20	2.2
MS_202110200138	Acenaphthene	ND	2	2.00	ug/L	100	(70-130)		
MSD_202110200138	Acenaphthene	ND	2	1.97	ug/L	98	(70-130)	20	1.4
MS_202110200138	Acenaphthene-d10 (I)		5	101	%	101	(50-150)		
MSD_202110200138	Acenaphthene-d10 (I)		5	97.6	%	98	(50-150)		
MS_202110200138	Acenaphthylene	ND	2	1.88	ug/L	94	(70-130)		
MSD_202110200138	Acenaphthylene	ND	2	1.92	ug/L	96	(70-130)	20	1.9
MS_202110200138	Acetochlor	ND	2	2.04	ug/L	102	(70-130)		
MSD_202110200138	Acetochlor	ND	2	1.98	ug/L	99	(70-130)	20	2.9
MS_202110200138	Alachlor	ND	2	2.05	ug/L	103	(70-130)		
MSD_202110200138	Alachlor	ND	2	2.05	ug/L	102	(70-130)	20	0.098
MS_202110200138	Alpha-BHC	ND	2	2.16	ug/L	108	(70-130)		
MSD_202110200138	Alpha-BHC	ND	2	2.11	ug/L	106	(70-130)	20	2.2
MS_202110200138	alpha-Chlordane	ND	2	2.06	ug/L	103	(70-130)		
MSD_202110200138	alpha-Chlordane	ND	2	2.00	ug/L	100	(70-130)	20	2.7
MS_202110200138	Anthracene	ND	2	1.98	ug/L	99	(70-130)		
MSD_202110200138	Anthracene	ND	2	1.93	ug/L	97	(70-130)	20	2.4
MS_202110200138	Atrazine	ND	2	2.16	ug/L	108	(70-130)		

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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MSD_202110200138	Atrazine	ND	2	2.15	ug/L	107	(70-130)	20	0.46
MS_202110200138	Benz(a)Anthracene	ND	2	2.04	ug/L	102	(70-130)		
MSD_202110200138	Benz(a)Anthracene	ND	2	2.02	ug/L	101	(70-130)	20	0.44
MS_202110200138	Benzo(a)pyrene	ND	2	2.02	ug/L	101	(70-130)		
MSD_202110200138	Benzo(a)pyrene	ND	2	2.02	ug/L	101	(70-130)	20	0.0
MS_202110200138	Benzo(b)Fluoranthene	ND	2	2.23	ug/L	112	(70-130)		
MSD_202110200138	Benzo(b)Fluoranthene	ND	2	2.18	ug/L	109	(70-130)	20	1.8
MS_202110200138	Benzo(g,h,i)Perylene	ND	2	2.40	ug/L	120	(70-130)		
MSD_202110200138	Benzo(g,h,i)Perylene	ND	2	2.40	ug/L	120	(70-130)	20	0.42
MS_202110200138	Benzo(k)Fluoranthene	ND	2	2.29	ug/L	115	(70-130)		
MSD_202110200138	Benzo(k)Fluoranthene	ND	2	2.25	ug/L	113	(70-130)	20	1.8
MS_202110200138	Beta-BHC	ND	2	2.12	ug/L	106	(70-130)		
MSD_202110200138	Beta-BHC	ND	2	2.10	ug/L	105	(70-130)	20	0.95
MS_202110200138	Bromacil	ND	2	2.25	ug/L	113	(70-130)		
MSD_202110200138	Bromacil	ND	2	2.19	ug/L	110	(70-130)	20	2.7
MS_202110200138	Butachlor	ND	2	2.20	ug/L	110	(70-130)		
MSD_202110200138	Butachlor	ND	2	2.17	ug/L	109	(70-130)	20	1.4
MS_202110200138	Butylbenzylphthalate	ND	2	2.28	ug/L	114	(70-130)		
MSD_202110200138	Butylbenzylphthalate	ND	2	2.24	ug/L	112	(70-130)	20	1.7
MS_202110200138	Caffeine by method 525mod		2	1.55	ug/L	78	(46-144)		
MSD_202110200138	Caffeine by method 525mod		2	1.51	ug/L	76	(46-144)	20	2.8
MS_202110200138	Chlorobenzilate	ND	2	2.12	ug/L	106	(70-130)		
MSD_202110200138	Chlorobenzilate	ND	2	2.06	ug/L	103	(70-130)	20	2.7
MS_202110200138	Chloroneb	ND	2	2.10	ug/L	105	(70-130)		
MSD_202110200138	Chloroneb	ND	2	2.12	ug/L	106	(70-130)	20	0.85
MS_202110200138	Chlorothalonil(Draconil,Bravo)	ND	2	2.07	ug/L	103	(70-130)		
MSD_202110200138	Chlorothalonil(Draconil,Bravo)	ND	2	2.03	ug/L	101	(70-130)	20	2.0
MS_202110200138	Chlorpyrifos (Dursban)	ND	2	2.05	ug/L	103	(70-130)		
MSD_202110200138	Chlorpyrifos (Dursban)	ND	2	2.05	ug/L	102	(70-130)	20	0.098
MS_202110200138	Chrysene	ND	2	2.13	ug/L	106	(70-130)		
MSD_202110200138	Chrysene	ND	2	2.09	ug/L	105	(70-130)	20	1.8
MS_202110200138	Chrysene-d12 (I)		5	99.3	%	99	(50-150)		
MSD_202110200138	Chrysene-d12 (I)		5	100	%	100	(50-150)		
MS_202110200138	Delta-BHC	ND	2	1.89	ug/L	95	(70-130)		
MSD_202110200138	Delta-BHC	ND	2	1.84	ug/L	92	(70-130)	20	2.1
MS_202110200138	Di-(2-Ethylhexyl)adipate	ND	2	2.32	ug/L	116	(70-130)		
MSD_202110200138	Di-(2-Ethylhexyl)adipate	ND	2	2.22	ug/L	111	(70-130)	20	4.5
MS_202110200138	Di(2-Ethylhexyl)phthalate	ND	2	2.26	ug/L	113	(70-130)		

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Report: 965349  
 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%
MSD_202110200138	Di(2-Ethylhexyl)phthalate	ND	2	2.09	ug/L	104	(70-130)	20	7.7
MS_202110200138	Diazinon (Qualitative)	ND	2	1.96	ug/L	98	(15-132)		
MSD_202110200138	Diazinon (Qualitative)	ND	2	2.02	ug/L	101	(15-132)	20	3.1
MS_202110200138	Dibenz(a,h)Anthracene	ND	2	2.68	ug/L	<u>134</u>	(70-130)		
MSD_202110200138	Dibenz(a,h)Anthracene	ND	2	2.62	ug/L	<u>131</u>	(70-130)	20	2.4
MS_202110200138	Dichlorvos (DDVP)	ND	2	2.17	ug/L	108	(70-130)		
MSD_202110200138	Dichlorvos (DDVP)	ND	2	2.19	ug/L	110	(70-130)	20	1.1
MS_202110200138	Dieldrin	ND	2	1.96	ug/L	98	(70-130)		
MSD_202110200138	Dieldrin	ND	2	1.90	ug/L	95	(70-130)	20	2.9
MS_202110200138	Diethylphthalate	ND	2	2.18	ug/L	109	(70-130)		
MSD_202110200138	Diethylphthalate	ND	2	2.12	ug/L	106	(70-130)	20	3.0
MS_202110200138	Dimethoate	ND	2	1.44	ug/L	72	(34-111)		
MSD_202110200138	Dimethoate	ND	2	1.58	ug/L	79	(34-111)	20	9.7
MS_202110200138	Dimethylphthalate	ND	2	2.11	ug/L	106	(70-130)		
MSD_202110200138	Dimethylphthalate	ND	2	2.11	ug/L	106	(70-130)	20	0.047
MS_202110200138	Di-n-Butylphthalate	ND	4	3.96	ug/L	99	(70-130)		
MSD_202110200138	Di-n-Butylphthalate	ND	4	3.90	ug/L	98	(70-130)	20	1.6
MS_202110200138	Di-N-octylphthalate	ND	2	2.08	ug/L	104	(70-130)		
MSD_202110200138	Di-N-octylphthalate	ND	2	1.91	ug/L	95	(70-130)	20	8.5
MS_202110200138	Endosulfan I (Alpha)	ND	2	1.96	ug/L	98	(70-130)		
MSD_202110200138	Endosulfan I (Alpha)	ND	2	1.99	ug/L	100	(70-130)	20	1.4
MS_202110200138	Endosulfan II (Beta)	ND	2	2.04	ug/L	102	(70-130)		
MSD_202110200138	Endosulfan II (Beta)	ND	2	2.02	ug/L	101	(70-130)	20	0.39
MS_202110200138	Endosulfan Sulfate	ND	2	2.08	ug/L	104	(70-130)		
MSD_202110200138	Endosulfan Sulfate	ND	2	2.06	ug/L	103	(70-130)	20	0.48
MS_202110200138	Endrin	ND	2	2.12	ug/L	106	(70-130)		
MSD_202110200138	Endrin	ND	2	2.12	ug/L	106	(70-130)	20	0.19
MS_202110200138	Endrin Aldehyde	ND	2	2.02	ug/L	101	(70-130)		
MSD_202110200138	Endrin Aldehyde	ND	2	2.02	ug/L	101	(70-130)	20	0.20
MS_202110200138	EPTC	ND	2	2.01	ug/L	100	(70-130)		
MSD_202110200138	EPTC	ND	2	2.01	ug/L	101	(70-130)	20	0.15
MS_202110200138	Fluoranthene	ND	2	2.06	ug/L	103	(70-130)		
MSD_202110200138	Fluoranthene	ND	2	2.00	ug/L	100	(70-130)	20	2.7
MS_202110200138	Fluorene	ND	2	2.09	ug/L	104	(70-130)		
MSD_202110200138	Fluorene	ND	2	2.06	ug/L	103	(70-130)	20	1.4
MS_202110200138	gamma-Chlordane	ND	2	2.11	ug/L	106	(70-130)		
MSD_202110200138	gamma-Chlordane	ND	2	2.05	ug/L	102	(70-130)	20	2.9
MS_202110200138	Heptachlor	ND	2	2.11	ug/L	105	(70-130)		

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Report: 965349  
 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%
MSD_202110200138	Heptachlor	ND	2	1.98	ug/L	99	(70-130)	20	6.3
MS_202110200138	Heptachlor Epoxide (isomer B)	ND	2	2.10	ug/L	105	(70-130)		
MSD_202110200138	Heptachlor Epoxide (isomer B)	ND	2	2.09	ug/L	105	(70-130)	20	0.43
MS_202110200138	Hexachlorobenzene	ND	2	2.07	ug/L	103	(70-130)		
MSD_202110200138	Hexachlorobenzene	ND	2	2.11	ug/L	105	(70-130)	20	1.9
MS_202110200138	Hexachlorocyclopentadiene	ND	2	2.09	ug/L	104	(70-130)		
MSD_202110200138	Hexachlorocyclopentadiene	ND	2	2.10	ug/L	105	(70-130)	20	0.57
MS_202110200138	Indeno(1,2,3,c,d)Pyrene	ND	2	2.57	ug/L	128	(70-130)		
MSD_202110200138	Indeno(1,2,3,c,d)Pyrene	ND	2	2.54	ug/L	127	(70-130)	20	1.1
MS_202110200138	Isophorone	ND	2	2.09	ug/L	104	(70-130)		
MSD_202110200138	Isophorone	ND	2	2.14	ug/L	107	(70-130)	20	2.4
MS_202110200138	Lindane	ND	2	2.13	ug/L	107	(70-130)		
MSD_202110200138	Lindane	ND	2	2.14	ug/L	107	(70-130)	20	0.33
MS_202110200138	Malathion	ND	2	2.14	ug/L	107	(70-130)		
MSD_202110200138	Malathion	ND	2	2.12	ug/L	106	(70-130)	20	1.2
MS_202110200138	Methoxychlor	ND	2	2.45	ug/L	123	(70-130)		
MSD_202110200138	Methoxychlor	ND	2	2.37	ug/L	118	(70-130)	20	3.5
MS_202110200138	Metolachlor	ND	2	2.29	ug/L	114	(70-130)		
MSD_202110200138	Metolachlor	ND	2	2.23	ug/L	111	(70-130)	20	2.5
MS_202110200138	Metribuzin	ND	2	1.79	ug/L	90	(70-130)		
MSD_202110200138	Metribuzin	ND	2	1.83	ug/L	91	(70-130)	20	2.1
MS_202110200138	Molinate	ND	2	2.03	ug/L	102	(70-130)		
MSD_202110200138	Molinate	ND	2	2.00	ug/L	100	(70-130)	20	1.1
MS_202110200138	Naphthalene	ND	2	1.97	ug/L	99	(70-130)		
MSD_202110200138	Naphthalene	ND	2	1.97	ug/L	98	(70-130)	20	0.051
MS_202110200138	Parathion	ND	2	2.26	ug/L	113	(70-130)		
MSD_202110200138	Parathion	ND	2	2.23	ug/L	112	(70-130)	20	1.3
MS_202110200138	Pendimethalin	ND	2	2.20	ug/L	110	(70-130)		
MSD_202110200138	Pendimethalin	ND	2	2.15	ug/L	108	(70-130)	20	2.2
MS_202110200138	Permethrin (mixed isomers)	ND	4	4.60	ug/L	115	(70-130)		
MSD_202110200138	Permethrin (mixed isomers)	ND	4	4.33	ug/L	108	(70-130)	20	6.0
MS_202110200138	Perylene-d12 (S)		5	95.8	%	96	(70-130)		
MSD_202110200138	Perylene-d12 (S)		5	96.0	%	96	(70-130)		
MS_202110200138	Phenanthrene	ND	2	2.02	ug/L	101	(70-130)		
MSD_202110200138	Phenanthrene	ND	2	1.97	ug/L	99	(70-130)	20	2.4
MS_202110200138	Phenanthrene-d10 (I)		5	105	%	105	(50-150)		
MSD_202110200138	Phenanthrene-d10 (I)		5	104	%	104	(50-150)		
MS_202110200138	Propachlor	ND	2	2.07	ug/L	103	(70-130)		

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Report: 965349  
 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%
MSD_202110200138	Propachlor	ND	2	2.03	ug/L	102	(70-130)	20	2.0
MS_202110200138	Pyrene	ND	2	2.05	ug/L	102	(70-130)		
MSD_202110200138	Pyrene	ND	2	2.00	ug/L	100	(70-130)	20	2.5
MS_202110200138	Simazine	ND	2	2.22	ug/L	111	(70-130)		
MSD_202110200138	Simazine	ND	2	2.23	ug/L	111	(70-130)	20	0.22
MS_202110200138	Terbacil	ND	2	2.21	ug/L	111	(70-130)		
MSD_202110200138	Terbacil	ND	2	2.18	ug/L	109	(70-130)	20	1.4
MS_202110200138	Terbutylazine	ND	2	2.16	ug/L	108	(70-130)		
MSD_202110200138	Terbutylazine	ND	2	2.16	ug/L	108	(70-130)	20	0.046
MS_202110200138	Thiobencarb	ND	2	2.13	ug/L	107	(70-130)		
MSD_202110200138	Thiobencarb	ND	2	2.11	ug/L	106	(70-130)	20	1.0
MS_202110200138	trans-Nonachlor	ND	2	2.07	ug/L	104	(70-130)		
MSD_202110200138	trans-Nonachlor	ND	2	2.01	ug/L	101	(70-130)	20	3.1
MS_202110200138	Trifluralin	ND	2	2.12	ug/L	106	(70-130)		
MSD_202110200138	Trifluralin	ND	2	2.15	ug/L	108	(70-130)	20	1.2
MS_202110200138	Triphenylphosphate (S)		5	106	%	106	(70-130)		
MSD_202110200138	Triphenylphosphate (S)		5	107	%	107	(70-130)		

Alkalinity in CaCO3 units by SM 2320B

Analytical Batch: 1364133

Analysis Date: 10/28/2021

LCS1	Alkalinity in CaCO3 units		100	102	mg/L	102	(90-110)		
LCS2	Alkalinity in CaCO3 units		100	102	mg/L	102	(90-110)	20	0.0
MBLK	Alkalinity in CaCO3 units			<1	mg/L				
MRL_CHK	Alkalinity in CaCO3 units		2	2.40	mg/L	120	(50-150)		
MS_202110200467	Alkalinity in CaCO3 units	130	100	147	mg/L	<u>21</u>	(80-120)		
MS_202110270652	Alkalinity in CaCO3 units	3.9	100	70.0	mg/L	<u>66</u>	(80-120)		
MSD_202110200467	Alkalinity in CaCO3 units	130	100	146	mg/L	<u>20</u>	(80-120)	20	0.86
MSD_202110270652	Alkalinity in CaCO3 units	3.9	100	69.4	mg/L	<u>66</u>	(80-120)	20	0.92

PH (H3=past HT not compliant) by SM4500-HB

Analytical Batch: 1364152

Analysis Date: 10/29/2021

DUP_202110200467	PH (H3=past HT not compliant)	8.3		8.31	Units		(0-20)	20	0.24
DUP_202110270652	PH (H3=past HT not compliant)	6.6		6.53	Units		(0-20)	20	0.76
LCS1	PH (H3=past HT not compliant)		6	6.00	Units	100	(98-102)		
LCS2	PH (H3=past HT not compliant)		6	6.00	Units	100	(98-102)	20	0.0

Specific Conductance by SM2510B

Analytical Batch: 1364171

Analysis Date: 10/28/2021

DUP1_202110200467	Specific Conductance	980		981	umho/cm		(0-20)	20	0.0
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Report: 965349  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
DUP1_202110270652	Specific Conductance	12		11.6	umho/cm		(0-20)	20	0.0
LCS1	Specific Conductance		1000	971	umho/cm	97	(90-110)		
LCS2	Specific Conductance		1000	965	umho/cm	97	(90-110)	20	0.62
MBLK	Specific Conductance			<u>1.10</u>	umho/cm				
MRLHI	Specific Conductance		10	9.50	umho/cm	95	(50-150)		

**Volatile Organics by GCMS by EPA 524.2**  
**Analytical Batch: 1364213**

**Analysis Date: 10/28/2021**

LCS1	1,1,1,2-Tetrachloroethane		5	4.49	ug/L	90	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	4.47	ug/L	89	(70-130)	20	0.45
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,1,2-Tetrachloroethane		0.5	0.390	ug/L	78	(50-150)		
LCS1	1,1,1-Trichloroethane		5	4.16	ug/L	83	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.27	ug/L	85	(70-130)	20	2.6
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,1-Trichloroethane		0.5	0.390	ug/L	78	(50-150)		
LCS1	1,1,2,2-Tetrachloroethane		5	4.69	ug/L	94	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	5.13	ug/L	103	(70-130)	20	9.0
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,2,2-Tetrachloroethane		0.5	0.450	ug/L	90	(50-150)		
LCS1	1,1,2-Trichloroethane		5	4.63	ug/L	93	(70-130)		
LCS2	1,1,2-Trichloroethane		5	4.46	ug/L	89	(70-130)	20	3.7
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,2-Trichloroethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	1,1-Dichloroethane		5	4.23	ug/L	85	(70-130)		
LCS2	1,1-Dichloroethane		5	4.30	ug/L	86	(70-130)	20	1.6
MBLK	1,1-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethane		0.5	0.460	ug/L	92	(50-150)		
LCS1	1,1-Dichloroethylene		5	4.45	ug/L	89	(70-130)		
LCS2	1,1-Dichloroethylene		5	4.29	ug/L	86	(70-130)	20	3.7
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethylene		0.5	0.530	ug/L	106	(50-150)		
LCS1	1,1-Dichloropropene		5	4.25	ug/L	85	(70-130)		
LCS2	1,1-Dichloropropene		5	4.36	ug/L	87	(70-130)	20	2.6
MBLK	1,1-Dichloropropene			<0.5	ug/L				
MRL_CHK	1,1-Dichloropropene		0.5	0.450	ug/L	90	(50-150)		
LCS1	1,2,3-Trichlorobenzene		5	4.34	ug/L	87	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	4.56	ug/L	91	(70-130)	20	4.9

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Report: 965349  
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QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,3-Trichlorobenzene		0.5	0.380	ug/L	76	(50-150)		
LCS1	1,2,3-Trichloropropane		5	4.40	ug/L	88	(70-130)		
LCS2	1,2,3-Trichloropropane		5	4.60	ug/L	92	(70-130)	20	4.4
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.5	0.490	ug/L	98	(50-150)		
LCS1	1,2,4-Trichlorobenzene		5	4.06	ug/L	81	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	4.20	ug/L	84	(70-130)	20	3.4
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trichlorobenzene		0.5	0.360	ug/L	72	(50-150)		
LCS1	1,2,4-Trimethylbenzene		5	4.17	ug/L	83	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	4.26	ug/L	85	(70-130)	20	2.1
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trimethylbenzene		0.5	0.320	ug/L	64	(50-150)		
LCS1	1,2-Dichloroethane		5	4.64	ug/L	93	(70-130)		
LCS2	1,2-Dichloroethane		5	4.70	ug/L	94	(70-130)	20	1.3
MBLK	1,2-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,2-Dichloroethane		0.5	0.450	ug/L	90	(50-150)		
LCS1	1,2-Dichloroethane-d4 (S)		5	101	%	101	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)		5	98.4	%	98	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			109	%	109	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)		5	113	%	113	(70-130)		
MRLLW	1,2-Dichloroethane-d4 (S)		5	106	%	106	(70-130)		
LCS1	1,2-Dichloropropane		5	4.51	ug/L	90	(70-130)		
LCS2	1,2-Dichloropropane		5	4.32	ug/L	86	(70-130)	20	4.3
MBLK	1,2-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,2-Dichloropropane		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,3,5-Trimethylbenzene		5	4.15	ug/L	83	(70-130)		
LCS2	1,3,5-Trimethylbenzene		5	4.28	ug/L	86	(70-130)	20	3.1
MBLK	1,3,5-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,3,5-Trimethylbenzene		0.5	0.330	ug/L	66	(50-150)		
LCS1	1,3-Dichloropropane		5	4.55	ug/L	91	(70-130)		
LCS2	1,3-Dichloropropane		5	4.56	ug/L	91	(70-130)	20	0.22
MBLK	1,3-Dichloropropane			<0.5	ug/L				
MRL_CHK	1,3-Dichloropropane		0.5	0.420	ug/L	84	(50-150)		
LCS1	2,2-Dichloropropane		5	4.08	ug/L	82	(70-130)		
LCS2	2,2-Dichloropropane		5	4.00	ug/L	80	(70-130)	20	2.0
MBLK	2,2-Dichloropropane			<0.5	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.  
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Report: 965349  
 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	2,2-Dichloropropane		0.5	0.430	ug/L	86	(50-150)		
LCS1	2-Butanone (MEK)		50	48.4	ug/L	97	(70-130)		
LCS2	2-Butanone (MEK)		50	49.1	ug/L	98	(70-130)	20	1.4
MBLK	2-Butanone (MEK)			<5.0	ug/L				
MRL_CHK	2-Butanone (MEK)		5	5.24	ug/L	105	(50-150)		
LCS1	2-Hexanone		50	51.4	ug/L	103	(70-130)		
LCS2	2-Hexanone		50	51.1	ug/L	102	(70-130)	20	0.59
MBLK	2-Hexanone			<5.0	ug/L				
MRL_CHK	2-Hexanone		5	3.92	ug/L	78	(50-150)		
LCS1	4-Bromofluorobenzene (S)		5	96.4	%	96	(70-130)		
LCS2	4-Bromofluorobenzene (S)		5	99.0	%	99	(70-130)		
MBLK	4-Bromofluorobenzene (S)			95.6	%	96	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)		5	95.2	%	95	(70-130)		
MRLLW	4-Bromofluorobenzene (S)		5	98.2	%	98	(70-130)		
LCS1	4-Methyl-2-Pentanone (MIBK)		50	50.0	ug/L	100	(70-130)		
LCS2	4-Methyl-2-Pentanone (MIBK)		50	49.9	ug/L	100	(70-130)	20	0.20
MBLK	4-Methyl-2-Pentanone (MIBK)			<5.0	ug/L				
MRL_CHK	4-Methyl-2-Pentanone (MIBK)		5	3.98	ug/L	80	(50-150)		
LCS1	Acetone		50	49.9	ug/L	100	(70-130)		
LCS2	Acetone		50	50.3	ug/L	101	(70-130)	20	0.80
MBLK	Acetone			<10	ug/L				
MRL_CHK	Acetone		5	6.23	ug/L	125	(50-150)		
LCS1	Benzene		5	4.40	ug/L	88	(70-130)		
LCS2	Benzene		5	4.50	ug/L	90	(70-130)	20	2.3
MBLK	Benzene			<0.5	ug/L				
MRL_CHK	Benzene		0.5	0.460	ug/L	92	(50-150)		
LCS1	Bromobenzene		5	4.01	ug/L	80	(70-130)		
LCS2	Bromobenzene		5	4.09	ug/L	82	(70-130)	20	2.0
MBLK	Bromobenzene			<0.5	ug/L				
MRL_CHK	Bromobenzene		0.5	0.380	ug/L	76	(50-150)		
LCS1	Bromochloromethane		5	4.25	ug/L	85	(70-130)		
LCS2	Bromochloromethane		5	4.28	ug/L	86	(70-130)	20	0.70
MBLK	Bromochloromethane			<0.5	ug/L				
MRL_CHK	Bromochloromethane		0.5	0.470	ug/L	94	(50-150)		
LCS1	Bromodichloromethane		5	4.05	ug/L	81	(70-130)		
LCS2	Bromodichloromethane		5	4.25	ug/L	85	(70-130)	20	4.8
MBLK	Bromodichloromethane			<0.5	ug/L				
MRL_CHK	Bromodichloromethane		0.5	0.380	ug/L	76	(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: 965349  
 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	Bromoethane		5	4.43	ug/L	89	(70-130)		
LCS2	Bromoethane		5	4.41	ug/L	88	(70-130)	20	0.45
MBLK	Bromoethane			<0.5	ug/L				
MRL_CHK	Bromoethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	Bromoform		5	4.47	ug/L	89	(70-130)		
LCS2	Bromoform		5	4.45	ug/L	89	(70-130)	20	0.45
MBLK	Bromoform			<0.5	ug/L				
MRL_CHK	Bromoform		0.5	0.600	ug/L	120	(50-150)		
LCS1	Bromomethane (Methyl Bromide)		5	4.41	ug/L	88	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	4.45	ug/L	89	(70-130)	20	0.90
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
MRL_CHK	Bromomethane (Methyl Bromide)		0.5	0.480	ug/L	96	(50-150)		
LCS1	Carbon disulfide		5	3.95	ug/L	79	(70-130)		
LCS2	Carbon disulfide		5	3.82	ug/L	76	(70-130)	20	3.4
MBLK	Carbon disulfide			<0.5	ug/L				
MRL_CHK	Carbon disulfide		0.5	0.360	ug/L	72	(50-150)		
LCS1	Carbon Tetrachloride		5	4.29	ug/L	86	(70-130)		
LCS2	Carbon Tetrachloride		5	4.16	ug/L	83	(70-130)	20	3.1
MBLK	Carbon Tetrachloride			<0.5	ug/L				
MRL_CHK	Carbon Tetrachloride		0.5	0.440	ug/L	88	(50-150)		
LCS1	Chlorobenzene		5	4.45	ug/L	89	(70-130)		
LCS2	Chlorobenzene		5	4.49	ug/L	90	(70-130)	20	0.90
MBLK	Chlorobenzene			<0.5	ug/L				
MRL_CHK	Chlorobenzene		0.5	0.410	ug/L	82	(50-150)		
LCS1	Chlorodibromomethane		5	4.15	ug/L	83	(70-130)		
LCS2	Chlorodibromomethane		5	4.03	ug/L	81	(70-130)	20	2.9
MBLK	Chlorodibromomethane			<0.5	ug/L				
MRL_CHK	Chlorodibromomethane		0.5	0.360	ug/L	72	(50-150)		
LCS1	Chloroethane		5	4.08	ug/L	82	(70-130)		
LCS2	Chloroethane		5	4.36	ug/L	87	(70-130)	20	6.6
MBLK	Chloroethane			<0.5	ug/L				
MRL_CHK	Chloroethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	Chloroform (Trichloromethane)		5	4.29	ug/L	86	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	4.23	ug/L	85	(70-130)	20	1.4
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
MRL_CHK	Chloroform (Trichloromethane)		0.5	0.460	ug/L	92	(50-150)		
LCS1	Chloromethane(Methyl Chloride)		5	4.08	ug/L	82	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	4.43	ug/L	89	(70-130)	20	8.2

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: 965349  
 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	Chloromethane(Methyl Chloride)			<0.5	ug/L				
MRL_CHK	Chloromethane(Methyl Chloride)		0.5	0.440	ug/L	88	(50-150)		
LCS1	cis-1,2-Dichloroethylene		5	4.37	ug/L	87	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	4.41	ug/L	88	(70-130)	20	0.91
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	cis-1,2-Dichloroethylene		0.5	0.440	ug/L	88	(50-150)		
LCS1	cis-1,3-Dichloropropene		5	3.96	ug/L	79	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	3.96	ug/L	79	(70-130)	20	0.0
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	cis-1,3-Dichloropropene		0.5	0.340	ug/L	68	(50-150)		
LCS1	Dibromomethane		5	4.46	ug/L	89	(70-130)		
LCS2	Dibromomethane		5	4.41	ug/L	88	(70-130)	20	1.1
MBLK	Dibromomethane			<0.5	ug/L				
MRL_CHK	Dibromomethane		0.5	0.500	ug/L	100	(50-150)		
LCS1	Dichlorodifluoromethane		5	4.92	ug/L	98	(70-130)		
LCS2	Dichlorodifluoromethane		5	4.63	ug/L	93	(70-130)	20	6.1
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
MRL_CHK	Dichlorodifluoromethane		0.5	0.380	ug/L	76	(50-150)		
LCS1	Dichloromethane		5	4.36	ug/L	87	(70-130)		
LCS2	Dichloromethane		5	4.51	ug/L	90	(70-130)	20	3.4
MBLK	Dichloromethane			<0.5	ug/L				
MRL_CHK	Dichloromethane		0.5	0.530	ug/L	106	(50-150)		
LCS1	Di-isopropyl ether		5	4.13	ug/L	83	(70-130)		
LCS2	Di-isopropyl ether		5	4.25	ug/L	85	(70-130)	20	2.9
MBLK	Di-isopropyl ether			<3.0	ug/L				
MRL_CHK	Di-isopropyl ether		0.5	0.450	ug/L	90	(50-150)		
LCS1	Ethyl benzene		5	4.40	ug/L	88	(70-130)		
LCS2	Ethyl benzene		5	4.26	ug/L	85	(70-130)	20	3.2
MBLK	Ethyl benzene			<0.5	ug/L				
MRL_CHK	Ethyl benzene		0.5	0.340	ug/L	68	(50-150)		
LCS1	Hexachlorobutadiene		5	4.29	ug/L	86	(70-130)		
LCS2	Hexachlorobutadiene		5	4.31	ug/L	86	(70-130)	20	0.47
MBLK	Hexachlorobutadiene			<0.5	ug/L				
MRL_CHK	Hexachlorobutadiene		0.5	0.450	ug/L	90	(50-150)		
LCS1	Isopropylbenzene		5	4.17	ug/L	83	(70-130)		
LCS2	Isopropylbenzene		5	4.31	ug/L	86	(70-130)	20	3.3
MBLK	Isopropylbenzene			<0.5	ug/L				
MRL_CHK	Isopropylbenzene		0.5	0.360	ug/L	72	(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.  
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Report: 965349  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	m,p-Xylenes		10	8.90	ug/L	89	(70-130)		
LCS2	m,p-Xylenes		10	8.60	ug/L	86	(70-130)	20	3.4
MBLK	m,p-Xylenes			<0.5	ug/L				
MRL_CHK	m,p-Xylenes		1	0.620	ug/L	62	(50-150)		
MRL_W	m,p-Xylenes		0.5	0.380	ug/L	76	(50-150)		
LCS1	m-Dichlorobenzene (1,3-DCB)		5	4.23	ug/L	85	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	4.40	ug/L	88	(70-130)	20	3.9
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
MRL_CHK	m-Dichlorobenzene (1,3-DCB)		0.5	0.420	ug/L	84	(50-150)		
LCS1	Methyl Tert-butyl ether (MTBE)		5	4.40	ug/L	88	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	4.52	ug/L	90	(70-130)	20	2.7
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	4.10	ug/L	82	(70-130)		
LCS2	Naphthalene		5	4.34	ug/L	87	(70-130)	20	5.7
MBLK	Naphthalene			<0.5	ug/L				
MRL_CHK	Naphthalene		0.5	0.520	ug/L	104	(50-150)		
LCS1	n-Butylbenzene		5	3.92	ug/L	78	(70-130)		
LCS2	n-Butylbenzene		5	3.98	ug/L	80	(70-130)	20	1.5
MBLK	n-Butylbenzene			<0.5	ug/L				
MRL_CHK	n-Butylbenzene		0.5	0.340	ug/L	68	(50-150)		
LCS1	n-Propylbenzene		5	3.92	ug/L	78	(70-130)		
LCS2	n-Propylbenzene		5	4.04	ug/L	81	(70-130)	20	3.0
MBLK	n-Propylbenzene			<0.5	ug/L				
MRL_CHK	n-Propylbenzene		0.5	0.380	ug/L	76	(50-150)		
LCS1	o-Chlorotoluene		5	4.08	ug/L	82	(70-130)		
LCS2	o-Chlorotoluene		5	4.31	ug/L	86	(70-130)	20	5.5
MBLK	o-Chlorotoluene			<0.5	ug/L				
MRL_CHK	o-Chlorotoluene		0.5	0.360	ug/L	72	(50-150)		
LCS1	o-Dichlorobenzene (1,2-DCB)		5	4.01	ug/L	80	(70-130)		
LCS2	o-Dichlorobenzene (1,2-DCB)		5	4.14	ug/L	83	(70-130)	20	3.2
MBLK	o-Dichlorobenzene (1,2-DCB)			<0.5	ug/L				
MRL_CHK	o-Dichlorobenzene (1,2-DCB)		0.5	0.370	ug/L	74	(50-150)		
LCS1	o-Xylene		5	4.22	ug/L	84	(70-130)		
LCS2	o-Xylene		5	3.98	ug/L	80	(70-130)	20	5.8
MBLK	o-Xylene			<0.5	ug/L				
MRL_CHK	o-Xylene		0.5	0.300	ug/L	60	(50-150)		
LCS1	p-Chlorotoluene		5	4.19	ug/L	84	(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	p-Chlorotoluene		5	4.28	ug/L	86	(70-130)	20	2.1
MBLK	p-Chlorotoluene			<0.5	ug/L				
MRL_CHK	p-Chlorotoluene		0.5	0.320	ug/L	64	(50-150)		
LCS1	p-Dichlorobenzene (1,4-DCB)		5	4.40	ug/L	88	(70-130)		
LCS2	p-Dichlorobenzene (1,4-DCB)		5	4.42	ug/L	88	(70-130)	20	0.45
MBLK	p-Dichlorobenzene (1,4-DCB)			<0.5	ug/L				
MRL_CHK	p-Dichlorobenzene (1,4-DCB)		0.5	0.410	ug/L	82	(50-150)		
LCS1	p-Isopropyltoluene		5	4.13	ug/L	83	(70-130)		
LCS2	p-Isopropyltoluene		5	4.16	ug/L	83	(70-130)	20	0.72
MBLK	p-Isopropyltoluene			<0.5	ug/L				
MRL_CHK	p-Isopropyltoluene		0.5	0.330	ug/L	66	(50-150)		
LCS1	sec-Butylbenzene		5	4.10	ug/L	82	(70-130)		
LCS2	sec-Butylbenzene		5	4.22	ug/L	84	(70-130)	20	2.9
MBLK	sec-Butylbenzene			<0.5	ug/L				
MRL_CHK	sec-Butylbenzene		0.5	0.320	ug/L	64	(50-150)		
LCS1	Styrene		5	4.45	ug/L	89	(70-130)		
LCS2	Styrene		5	4.21	ug/L	84	(70-130)	20	5.5
MBLK	Styrene			<0.5	ug/L				
MRL_CHK	Styrene		0.5	0.280	ug/L	56	(50-150)		
LCS1	tert-amyl Methyl Ether		5	4.17	ug/L	83	(70-130)		
LCS2	tert-amyl Methyl Ether		5	4.20	ug/L	84	(70-130)	20	0.72
MBLK	tert-amyl Methyl Ether			<3.0	ug/L				
MRL_CHK	tert-amyl Methyl Ether		0.5	0.370	ug/L	74	(50-150)		
LCS1	tert-Butyl Ethyl Ether		5	4.11	ug/L	82	(70-130)		
LCS2	tert-Butyl Ethyl Ether		5	4.16	ug/L	83	(70-130)	20	1.2
MBLK	tert-Butyl Ethyl Ether			<3.0	ug/L				
MRL_CHK	tert-Butyl Ethyl Ether		0.5	0.400	ug/L	80	(50-150)		
LCS1	tert-Butylbenzene		5	4.05	ug/L	81	(70-130)		
LCS2	tert-Butylbenzene		5	4.05	ug/L	81	(70-130)	20	0.0
MBLK	tert-Butylbenzene			<0.5	ug/L				
MRL_CHK	tert-Butylbenzene		0.5	0.320	ug/L	64	(50-150)		
LCS1	Tetrachloroethylene (PCE)		5	4.29	ug/L	86	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.17	ug/L	83	(70-130)	20	2.8
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
MRL_CHK	Tetrachloroethylene (PCE)		0.5	0.420	ug/L	84	(50-150)		
LCS1	Toluene		5	4.33	ug/L	87	(70-130)		
LCS2	Toluene		5	4.32	ug/L	86	(70-130)	20	0.23
MBLK	Toluene			<0.5	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: 965349  
 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	Toluene		0.5	0.400	ug/L	80	(50-150)		
LCS1	Toluene-d8 (S)		5	104	%	104	(70-130)		
LCS2	Toluene-d8 (S)		5	103	%	103	(70-130)		
MBLK	Toluene-d8 (S)			88.0	%	88	(70-130)		
MRL_CHK	Toluene-d8 (S)		5	94.4	%	94	(70-130)		
MRLW	Toluene-d8 (S)		5	88.2	%	88	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	4.35	ug/L	87	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	4.43	ug/L	89	(70-130)	20	1.8
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	trans-1,2-Dichloroethylene		0.5	0.480	ug/L	96	(50-150)		
LCS1	trans-1,3-Dichloropropene		5	4.00	ug/L	80	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	4.06	ug/L	81	(70-130)	20	1.5
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	trans-1,3-Dichloropropene		0.5	0.350	ug/L	70	(50-150)		
LCS1	Trichloroethylene (TCE)		5	4.45	ug/L	89	(70-130)		
LCS2	Trichloroethylene (TCE)		5	4.34	ug/L	87	(70-130)	20	2.5
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
MRL_CHK	Trichloroethylene (TCE)		0.5	0.490	ug/L	98	(50-150)		
LCS1	Trichlorofluoromethane		5	4.32	ug/L	86	(70-130)		
LCS2	Trichlorofluoromethane		5	4.29	ug/L	86	(70-130)	20	0.70
MBLK	Trichlorofluoromethane			<0.5	ug/L				
MRL_CHK	Trichlorofluoromethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	Trichlorotrifluoroethane(Freon)		5	4.34	ug/L	87	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon)		5	4.39	ug/L	88	(70-130)	20	1.1
MBLK	Trichlorotrifluoroethane(Freon)			<0.5	ug/L				
MRL_CHK	Trichlorotrifluoroethane(Freon)		0.5	0.470	ug/L	94	(50-150)		
LCS1	Vinyl chloride (VC)		5	4.64	ug/L	93	(70-130)		
LCS2	Vinyl chloride (VC)		5	4.60	ug/L	92	(70-130)	20	0.87
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
MRL_CHK	Vinyl chloride (VC)		0.5	0.540	ug/L	108	(50-150)		
MRLW	Vinyl chloride (VC)		0.25	0.240	ug/L	96	(50-150)		

ICPMS Metals by EPA 200.8

Analytical Batch: 1364756

Analysis Date: 11/03/2021

LCS1	Antimony Total ICAP/MS		50	54.0	ug/L	108	(85-115)		
LCS2	Antimony Total ICAP/MS		50	54.2	ug/L	108	(85-115)	20	0.37
MBLK	Antimony Total ICAP/MS			<0.2437	ug/L				
MRL_CHK	Antimony Total ICAP/MS		1	1.03	ug/L	103	(50-150)		

Spike recovery is already corrected for native results.

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

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

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

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

(S) - Indicates surrogate compound.

(I) - Indicates internal standard compound.

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Report: 965349  
 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%
MS_202110210116	Antimony Total ICAP/MS	ND	50	54.5	ug/L	109	(70-130)		
MS2_202110260089	Antimony Total ICAP/MS	ND	50	54.7	ug/L	109	(70-130)		
MSD_202110210116	Antimony Total ICAP/MS	ND	50	56.4	ug/L	113	(70-130)	20	3.4
MSD2_202110260089	Antimony Total ICAP/MS	ND	50	53.8	ug/L	107	(70-130)	20	1.6
LCS1	Arsenic Total ICAP/MS		50	51.6	ug/L	103	(85-115)		
LCS2	Arsenic Total ICAP/MS		50	52.9	ug/L	106	(85-115)	20	2.5
MBLK	Arsenic Total ICAP/MS			<0.4134	ug/L				
MRL_CHK	Arsenic Total ICAP/MS		1	1.13	ug/L	113	(50-150)		
MS_202110210116	Arsenic Total ICAP/MS	ND	50	52.0	ug/L	104	(70-130)		
MS2_202110260089	Arsenic Total ICAP/MS	ND	50	52.8	ug/L	105	(70-130)		
MSD_202110210116	Arsenic Total ICAP/MS	ND	50	53.6	ug/L	107	(70-130)	20	3.1
MSD2_202110260089	Arsenic Total ICAP/MS	ND	50	51.8	ug/L	103	(70-130)	20	1.9
LCS1	Beryllium Total ICAP/MS		25	27.1	ug/L	108	(85-115)		
LCS2	Beryllium Total ICAP/MS		25	26.5	ug/L	106	(85-115)	20	2.2
MBLK	Beryllium Total ICAP/MS			<0.1106	ug/L				
MRL_CHK	Beryllium Total ICAP/MS		1	1.06	ug/L	106	(50-150)		
MS_202110210116	Beryllium Total ICAP/MS	ND	25	27.0	ug/L	108	(70-130)		
MS2_202110260089	Beryllium Total ICAP/MS	ND	25	26.7	ug/L	107	(70-130)		
MSD_202110210116	Beryllium Total ICAP/MS	ND	25	26.9	ug/L	108	(70-130)	20	0.43
MSD2_202110260089	Beryllium Total ICAP/MS	ND	25	26.4	ug/L	106	(70-130)	20	1.0
LCS1	Cadmium Total ICAP/MS		25	26.3	ug/L	105	(85-115)		
LCS2	Cadmium Total ICAP/MS		25	27.0	ug/L	108	(85-115)	20	2.6
MBLK	Cadmium Total ICAP/MS			<0.0546	ug/L				
MRL_CHK	Cadmium Total ICAP/MS		0.5	0.498	ug/L	100	(50-150)		
MS_202110210116	Cadmium Total ICAP/MS	ND	25	25.8	ug/L	103	(70-130)		
MS2_202110260089	Cadmium Total ICAP/MS	ND	25	25.8	ug/L	103	(70-130)		
MSD_202110210116	Cadmium Total ICAP/MS	ND	25	26.5	ug/L	106	(70-130)	20	2.6
MSD2_202110260089	Cadmium Total ICAP/MS	ND	25	25.3	ug/L	101	(70-130)	20	2.1
LCS1	Chromium Total ICAP/MS		50	51.8	ug/L	104	(85-115)		
LCS2	Chromium Total ICAP/MS		50	53.5	ug/L	107	(85-115)	20	3.2
MBLK	Chromium Total ICAP/MS			<0.580	ug/L				
MRL_CHK	Chromium Total ICAP/MS		1	1.02	ug/L	102	(50-150)		
MS_202110210116	Chromium Total ICAP/MS	1.8	50	53.5	ug/L	103	(70-130)		
MS2_202110260089	Chromium Total ICAP/MS	ND	50	52.6	ug/L	105	(70-130)		
MSD_202110210116	Chromium Total ICAP/MS	1.8	50	55.0	ug/L	106	(70-130)	20	2.7
MSD2_202110260089	Chromium Total ICAP/MS	ND	50	51.7	ug/L	103	(70-130)	20	1.8
LCS1	Copper Total ICAP/MS		50	51.8	ug/L	104	(85-115)		
LCS2	Copper Total ICAP/MS		50	53.1	ug/L	106	(85-115)	20	2.5

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: 965349  
 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	Copper Total ICAP/MS			<1.343	ug/L				
MRL_CHK	Copper Total ICAP/MS		2	2.01	ug/L	101	(50-150)		
MS_202110210116	Copper Total ICAP/MS	ND	50	50.5	ug/L	98	(70-130)		
MS2_202110260089	Copper Total ICAP/MS	17	50	66.1	ug/L	99	(70-130)		
MSD_202110210116	Copper Total ICAP/MS	ND	50	51.9	ug/L	100	(70-130)	20	2.8
MSD2_202110260089	Copper Total ICAP/MS	17	50	65.3	ug/L	97	(70-130)	20	1.2
LCS1	Lead Total ICAP/MS		50	53.8	ug/L	108	(85-115)		
LCS2	Lead Total ICAP/MS		50	55.1	ug/L	110	(85-115)	20	2.4
MBLK	Lead Total ICAP/MS			<0.0608	ug/L				
MRL_CHK	Lead Total ICAP/MS		0.5	0.509	ug/L	102	(50-150)		
MS_202110210116	Lead Total ICAP/MS	ND	50	50.6	ug/L	101	(70-130)		
MS2_202110260089	Lead Total ICAP/MS	ND	50	51.4	ug/L	103	(70-130)		
MSD_202110210116	Lead Total ICAP/MS	ND	50	51.6	ug/L	103	(70-130)	20	2.0
MSD2_202110260089	Lead Total ICAP/MS	ND	50	50.6	ug/L	101	(70-130)	20	1.4
LCS1	Nickel Total ICAP/MS		50	51.3	ug/L	103	(85-115)		
LCS2	Nickel Total ICAP/MS		50	53.0	ug/L	106	(85-115)	20	3.3
MBLK	Nickel Total ICAP/MS			<0.4959	ug/L				
MRL_CHK	Nickel Total ICAP/MS		5	5.00	ug/L	100	(50-150)		
MS_202110210116	Nickel Total ICAP/MS	ND	50	50.0	ug/L	99	(70-130)		
MS2_202110260089	Nickel Total ICAP/MS	ND	50	51.3	ug/L	101	(70-130)		
MSD_202110210116	Nickel Total ICAP/MS	ND	50	51.2	ug/L	102	(70-130)	20	2.5
MSD2_202110260089	Nickel Total ICAP/MS	ND	50	50.4	ug/L	99	(70-130)	20	1.9
LCS1	Selenium Total ICAP/MS		50	53.6	ug/L	107	(85-115)		
LCS2	Selenium Total ICAP/MS		50	54.4	ug/L	109	(85-115)	20	1.5
MBLK	Selenium Total ICAP/MS			<0.6224	ug/L				
MRL_CHK	Selenium Total ICAP/MS		5	5.13	ug/L	103	(50-150)		
MS_202110210116	Selenium Total ICAP/MS	ND	50	52.7	ug/L	104	(70-130)		
MS2_202110260089	Selenium Total ICAP/MS	ND	50	52.5	ug/L	105	(70-130)		
MSD_202110210116	Selenium Total ICAP/MS	ND	50	54.5	ug/L	107	(70-130)	20	3.3
MSD2_202110260089	Selenium Total ICAP/MS	ND	50	51.9	ug/L	104	(70-130)	20	1.2
LCS1	Silver Total ICAP/MS		25	26.0	ug/L	104	(85-115)		
LCS2	Silver Total ICAP/MS		25	26.4	ug/L	105	(85-115)	20	1.5
MBLK	Silver Total ICAP/MS			<0.1929	ug/L				
MRL_CHK	Silver Total ICAP/MS		0.5	0.445	ug/L	89	(50-150)		
MS_202110210116	Silver Total ICAP/MS	ND	25	24.6	ug/L	98	(70-130)		
MS2_202110260089	Silver Total ICAP/MS	ND	25	24.7	ug/L	98	(70-130)		
MSD_202110210116	Silver Total ICAP/MS	ND	25	25.2	ug/L	100	(70-130)	20	2.3
MSD2_202110260089	Silver Total ICAP/MS	ND	25	24.4	ug/L	97	(70-130)	20	0.69

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: 965349  
 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	Thallium Total ICAP/MS		50	51.5	ug/L	103	(85-115)		
LCS2	Thallium Total ICAP/MS		50	52.2	ug/L	104	(85-115)	20	1.4
MBLK	Thallium Total ICAP/MS			<0.1449	ug/L				
MRL_CHK	Thallium Total ICAP/MS		1	0.974	ug/L	97	(50-150)		
MS_202110210116	Thallium Total ICAP/MS	ND	50	48.2	ug/L	97	(70-130)		
MS2_202110260089	Thallium Total ICAP/MS	ND	50	48.4	ug/L	97	(70-130)		
MSD_202110210116	Thallium Total ICAP/MS	ND	50	49.3	ug/L	99	(70-130)	20	2.2
MSD2_202110260089	Thallium Total ICAP/MS	ND	50	48.5	ug/L	97	(70-130)	20	0.19
LCS1	Zinc Total ICAP/MS		50	52.3	ug/L	105	(85-115)		
LCS2	Zinc Total ICAP/MS		50	53.7	ug/L	107	(85-115)	20	2.6
MBLK	Zinc Total ICAP/MS			<10.62	ug/L				
MRL_CHK	Zinc Total ICAP/MS		20	20.3	ug/L	102	(50-150)		
MS_202110210116	Zinc Total ICAP/MS	ND	50	56.6	ug/L	99	(70-130)		
MS2_202110260089	Zinc Total ICAP/MS	ND	50	61.6	ug/L	100	(70-130)		
MSD_202110210116	Zinc Total ICAP/MS	ND	50	58.4	ug/L	103	(70-130)	20	3.2
MSD2_202110260089	Zinc Total ICAP/MS	ND	50	60.7	ug/L	99	(70-130)	20	1.5

Mercury ICPMS by EPA 200.8

Analytical Batch: 1364768

Analysis Date: 11/03/2021

LCS1	Mercury ICPMS		0.75	0.803	ug/L	107	(85-115)		
LCS2	Mercury ICPMS		0.75	0.810	ug/L	108	(85-115)	20	0.87
MBLK	Mercury ICPMS			<0.1	ug/L				
MRL_CHK	Mercury ICPMS		0.2	0.238	ug/L	119	(50-150)		
MS_202110210116	Mercury ICPMS	ND	0.75	0.770	ug/L	100	(70-130)		
MS2_202110260089	Mercury ICPMS	ND	0.75	0.741	ug/L	97	(70-130)		
MSD_202110210116	Mercury ICPMS	ND	0.75	0.805	ug/L	105	(70-130)	20	4.4
MSD2_202110260089	Mercury ICPMS	ND	0.75	0.727	ug/L	95	(70-130)	20	1.9

Fluoride by SM 4500F-C

Analytical Batch: 1365430

Analysis Date: 11/04/2021

LCS1	Fluoride		1	1.02	mg/L	102	(90-110)		
LCS2	Fluoride		1	1.03	mg/L	103	(90-110)	20	0.98
MBLK	Fluoride			<0.025	mg/L				
MRL_CHK	Fluoride		0.05	0.0522	mg/L	104	(50-150)		
MS_202110180339	Fluoride	0.64	1	1.74	mg/L	110	(80-120)		
MS_202110200165	Fluoride	0.12	1	1.13	mg/L	101	(80-120)		
MSD_202110180339	Fluoride	0.64	1	1.76	mg/L	112	(80-120)	20	1.4
MSD_202110200165	Fluoride	0.12	1	1.14	mg/L	102	(80-120)	20	0.82

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: 965349  
 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%
<b>Disinfection ByProducts by 300.0 by EPA 300.0</b>									
<b>Analytical Batch: 1365492</b>					<b>Analysis Date: 11/03/2021</b>				
LCS1	Bromide		100	99.5	ug/L	100	(90-110)		
LCS2	Bromide		100	98.1	ug/L	98	(90-110)	10	1.4
MBLK	Bromide			<2.12	ug/L				
MRL_CHK	Bromide		5	4.53	ug/L	91	(50-150)		
MS_202110271118	Bromide	46	50	94.6	ug/L	98	(80-120)		
MS_202110290111	Bromide	ND	50	51.8	ug/L	97	(80-120)		
MSD_202110271118	Bromide	46	50	93.7	ug/L	96	(80-120)	15	0.94
MSD_202110290111	Bromide	ND	50	52.2	ug/L	98	(80-120)	15	0.82
<b>Organochlorine Pesticides by EPA 505</b>									
<b>Prep Batch: 1363188 Analytical Batch: 1366220</b>					<b>Analysis Date: 10/26/2021</b>				
CCCH	Aldrin		0.1	0.108	ug/L	108	(70-130)		
CCCL	Aldrin		0.002	0.00190	ug/L	95	(50-150)		
LCS1	Aldrin		0.1	0.0903	ug/L	90	(50-150)		
MBLK	Aldrin			<0.005	ug/L				
MRL_CHK	Aldrin		0.01	0.00970	ug/L	97	(50-150)		
MS2_202110200578	Aldrin		0.1	0.100	ug/L	100	(65-135)		
CCCH	Dieldrin		0.1	0.106	ug/L	107	(70-130)		
CCCL	Dieldrin		0.002	0.00220	ug/L	110	(50-150)		
LCS1	Dieldrin		0.1	0.0852	ug/L	85	(50-150)		
MBLK	Dieldrin			<0.002	ug/L				
MRL_CHK	Dieldrin		0.01	0.0101	ug/L	101	(50-150)		
MS2_202110200578	Dieldrin		0.1	0.101	ug/L	101	(65-135)		
CCCH	Tetrachloro-m-xylene (S)			104	%	104	(70-130)		
CCCL	Tetrachloro-m-xylene (S)			100	%	100	(50-150)		
LCS1	Tetrachloro-m-xylene (S)			103	%	103	(70-130)		
MBLK	Tetrachloro-m-xylene (S)			100	%	101	(70-130)		
MRL_CHK	Tetrachloro-m-xylene (S)			101	%	101	(70-130)		
MS2_202110200578	Tetrachloro-m-xylene (S)			101	%	101	(70-130)		
CCCH	Toxaphene		2.5	2.27	ug/L	91	(70-130)		
CCCL	Toxaphene		0.1	0.0981	ug/L	98	(50-150)		
LCS1	Toxaphene		2.5	2.36	ug/L	94	(50-150)		
MBLK	Toxaphene			<0.1	ug/L				
MRL_CHK	Toxaphene		0.5	0.448	ug/L	90	(50-150)		
MS2_202110200578	Toxaphene	ND	2.5	2.46	ug/L	98	(65-135)		

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

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

**Report:** 965349  
**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%
<b>Fluoride by SM 4500F-C</b>									
<b>Analytical Batch: 1366396</b>					<b>Analysis Date: 11/10/2021</b>				
LCS1	Fluoride		1	0.992	mg/L	99	(90-110)		
LCS2	Fluoride		1	1.01	mg/L	101	(90-110)	20	1.8
MBLK	Fluoride			<0.025	mg/L				
MRL_CHK	Fluoride		0.05	0.0507	mg/L	101	(50-150)		
MS_202110260292	Fluoride	0.059	1	1.04	mg/L	99	(80-120)		
MS_202110280315	Fluoride	0.68	1	1.63	mg/L	96	(80-120)		
MSD_202110260292	Fluoride	0.059	1	1.05	mg/L	99	(80-120)	20	0.49
MSD_202110280315	Fluoride	0.68	1	1.60	mg/L	93	(80-120)	20	1.9

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.

Tel: (626) 386-1100  
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Report: 965349  
 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:  
 10/20/2021 1500

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
<b>202110210116      <u>AIEA WELLS PUMPS 1&amp;2 (260)-331-203-TP400</u></b>						
10/29/2021 04:20	Alkalinity in CaCO3 units		60		mg/L	2.0
10/29/2021 11:08	Bicarb.Alkalinity as HCO3calc		73		mg/L	2.0
11/04/2021 01:02	Bromide		390		ug/L	5.0
10/22/2021 13:09	Calcium Total ICAP		21		mg/L	1.0
10/26/2021 14:42	Chlordane		0.14	2	ug/L	0.10
11/03/2021 15:15	Chromium Total ICAP/MS		1.8	100	ug/L	1.0
10/26/2021 14:42	Dieldrin		0.0340		ug/L	0.0100
10/26/2021 14:42	Dieldrin		0.034		ug/L	0.0020
10/22/2021 13:09	Magnesium Total ICAP		19		mg/L	0.10
10/29/2021 04:20	PH (H3=past HT not compliant)		7.9		Units	0.10
10/22/2021 13:09	Potassium Total ICAP		2.6		mg/L	1.0
10/22/2021 13:09	Sodium Total ICAP		45		mg/L	1.0
10/29/2021 04:20	Specific Conductance, 25 C		520		umho/cm	10
10/22/2021 21:26	Total Dissolved Solids (TDS)		310	500	mg/L	10
<b>202110260292      <u>AIEA WELLS PUMPS 1&amp;2 (260)-331-203-TP400</u></b>						
10/26/2021 23:14	Chloride		110	250	mg/L	2.5
11/10/2021 19:10	Fluoride		0.059	4	mg/L	0.050
10/26/2021 23:14	Nitrate as Nitrogen by IC		0.99	10	mg/L	0.25
10/26/2021 23:14	Sulfate		18	250	mg/L	2.5



LABORATORIES, INC.

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

Date: 11-08-2021  
EMAX Batch No.: 21J209

Attn: Jackie Contreras

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

Subject: Laboratory Report  
Project: 965349

Enclosed is the Laboratory report for samples received on 10/22/21.  
The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
202110210116	J209-01	10/19/21	WATER	ETHANOL TPH GASOLINE TPH
202110210117	J209-02	10/19/21	WATER	TPH GASOLINE

The results are summarized on the following pages.

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

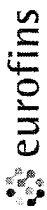
Sincerely yours,

Caspar J. Pang  
Laboratory Director

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

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

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



Eaton Analytical

Ship To:

EMAX Laboratories, Inc.  
3051 Fujita St.

Torrance, CA 90505

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

Folder #: 965349 Report Due: 11/03/2021

Sample ID: 202110210116 Client Sample ID for reference on: AIEA WELLS PUMPS 1&2 (260)-331-203-TP400

Sample type: Sample Event: Analysis Requested

Method	Prep Method	Analysis Requested
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
SW8015C		Ethanol
SW 8015B	EPA 5030C	(SUB)Gas Fraction Hydrocarbons

Sample ID: 202110210117 Client Sample ID for reference on: TRAVEL BLANK: AIEA WELLS PUMPS 1&2 (260)-331-203-TP400

Sample type: Sample Event: Analysis Requested

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

Relinquished by: [Signature] Sample Control

Received by: [Signature] Date: 10/22/21 Time: 12:00

Relinquished by: Sample Control

Received by: Date: Time:

Submittal Form

Date: 10/22/2021

\*REPORTING REQUIREMENTS: Do Not Combine Reports with any other samples submitted under different Folder Numbers! Report & Invoice must have the Folder # 965349 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

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

21 J209

Sample Date & Time Matrix 10/19/21 0948 DW PWSID JLS

Sample Point ID: Static ID:

Sample Date & Time Matrix 10/19/21 0948 DW PWSID JLS

Sample Point ID: Static ID:

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to: attn: Jackie Contreras

Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others	Airbill / Tracking Number	ECN <u>21J209</u>
<input type="checkbox"/> EMAX Courier <input checked="" type="checkbox"/> Client Delivery		Recipient <u>Juan Alejandro</u>
		Date <u>10/22/21</u> Time <u>12:00</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 type="checkbox"/> Preservative (if any)	<input 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		

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>1.4</u> °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
Thermometer:	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
	A - S/N <u>210191066</u>	B - S/N <u>210271396</u>	C - S/N _____
			D - S/N _____

Comments:  Temperature is out of range. PM was informed IMMEDIATELY.

Note: \_\_\_\_\_

**DISCREPANCIES**

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
<u>1</u>	<u>8-13</u>	<u>D22</u>		<u>N8</u>

10/22/21      MB 10/25/21

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

**NOTES/OBSERVATIONS:**

**LEGEND:**

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

**REVIEWS:**

Sample Labeling Maria Rivera      SRF Rivera      PM MB

Date 10/22/21      Date 10/22/21      Date 10/25/21

## 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

965349

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

SDG#: 21J209

## CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 965349

SDG : 21J209

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

A total of two(2) water samples were received on 10/22/21 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. VGH7J05B - 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. VGH7J05L/VGH7J05C were within LCS limits. Refer to LCS summary form for details.

#### Matrix QC Sample

No matrix QC sample was provided on this SDG.

#### Surrogate

Surrogate was added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

#### Sample Analysis

Samples were analyzed according to prescribed analytical procedures. Results were evaluated in accordance to project requirements. For this SDG, all quality control requirements were met.

LAB CHRONICLE  
 TOTAL PETROLEUM HYDROCARBONS BY PURGE AND TRAP

Client : EUROFINS EATON ANALYTICAL  
 Project : 965349  
 SDG NO. : 21J209  
 Instrument ID : H7

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	WATER		Extraction Date/Time	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
				Analysis Date/Time	Sample Data FN					
MBLK1W	VGH7J05B	1	NA	10/22/2114:50	AJ22005A	10/22/2114:50	AJ22004A	21VGH7J05		Method Blank
LCS1W	VGH7J05L	1	NA	10/22/2115:31	AJ22006A	10/22/2115:31	AJ22004A	21VGH7J05		Lab Control Sample (LCS)
LCD1W	VGH7J05C	1	NA	10/22/2116:12	AJ22007A	10/22/2116:12	AJ22004A	21VGH7J05		LCS Duplicate
202110210116	J209-01	1	NA	10/22/2119:45	AJ22012A	10/22/2119:45	AJ22004A	21VGH7J05		Field Sample
202110210117	J209-02	1	NA	10/22/2120:28	AJ22013A	10/22/2120:28	AJ22004A	21VGH7J05		Field Sample

FN - Filename  
 % Moist - Percent Moisture

# SAMPLE RESULTS

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

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 10/19/21 09:48
Project     : 965349                         Date Received: 10/22/21
Batch No.   : 21J209                         Date Extracted: 10/22/21 19:45
Sample ID   : 202110210116                   Date Analyzed: 10/22/21 19:45
Lab Samp ID : J209-01                         Dilution Factor: 1
Lab File ID : AJ22012A                       Matrix: WATER
Ext Btch ID: 21VGH7J05                       % Moisture: NA
Calib. Ref.: AJ22004A                       Instrument ID: H7
=====

```

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	0.0327	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: 10/19/21 09:48
Project     : 965349                          Date Received: 10/22/21
Batch No.   : 21J209                          Date Extracted: 10/22/21 20:28
Sample ID   : 202110210117                   Date Analyzed: 10/22/21 20:28
Lab Samp ID : J209-02                        Dilution Factor: 1
Lab File ID : AJ22013A                       Matrix: WATER
Ext Btch ID : 21VGH7J05                      % Moisture: NA
Calib. Ref. : AJ22004A                       Instrument ID: H7
=====

```

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	0.0313	0.0400	78	60-140	

Notes:

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

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

# QC SUMMARIES

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/22/21 14:50
Project    : 965349                       Date Received: 10/22/21
Batch No.  : 21J209                       Date Extracted: 10/22/21 14:50
Sample ID  : MBLK1W                       Date Analyzed: 10/22/21 14:50
Lab Samp ID: VGH7J05B                     Dilution Factor: 1
Lab File ID: AJ22005A                     Matrix: WATER
Ext Btch ID: 21VGH7J05                   % Moisture: NA
Calib. Ref.: AJ22004A                     Instrument ID: H7
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
GASOLINE	ND	0.020	0.010	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0329	0.0400	82	60-140

Notes:

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

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



EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 965349  
BATCH NO. : 21J209  
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VGH7J05B	VGH7J05L	VGH7J05C
LAB FILE ID	: AJ22005A	AJ22006A	AJ22007A
DATE PREPARED	: 10/22/21 14:50	10/22/21 15:31	10/22/21 16:12
DATE ANALYZED	: 10/22/21 14:50	10/22/21 15:31	10/22/21 16:12
PREP BATCH	: 21VGH7J05	21VGH7J05	21VGH7J05
CALIBRATION REF:	AJ22004A	AJ22004A	AJ22004A

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	0.503	101	0.500	0.484	97	4	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0475	119	0.0400	0.0451	113	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 : 965232  
BATCH NO. : 21J194  
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 202110200690	202110200690MS	202110200690MSD
LAB SAMPLE ID	: J194-01	J194-01M	J194-01S
LAB FILE ID	: AJ22008A	AJ22009A	AJ22010A
DATE PREPARED	: 10/22/21 16:55	10/22/21 17:37	10/22/21 18:22
DATE ANALYZED	: 10/22/21 16:55	10/22/21 17:37	10/22/21 18:22
PREP BATCH	: 21VGH7J05	21VGH7J05	21VGH7J05
CALIBRATION REF:	AJ22004A	AJ22004A	AJ22004A

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	0.463	93	0.500	0.469	94	1	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0493	123	0.0400	0.0442	111	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

965349

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 21J209

## CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 965349

SDG : 21J209

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

One(1) water sample was received on 10/22/21 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. DSJ018WB - 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 DSJ018WL. 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 21J194-01M/21J194-01S. 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: 965349

SDG : 21J209

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

One(1) water sample was received on 10/22/21 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. DSJ018WB - 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 J5J018WL. 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 21J194-01M/21J194-01S. 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: 965349

SDG : 21J209

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

One(1) water sample was received on 10/22/21 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. DSJ018WB - 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 J8J018WL. 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 21J194-01M/21J194-01S. Refer to Matrix QC summary form for details.

#### Surrogate

Surrogates were added on QC and field samples. All surrogate recoveries were within QC limits. Refer to sample result summary forms for details.

#### Sample Analysis

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

LAB CHRONICLE  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL  
 Project : 965349  
 SDG NO. : 21J209  
 Instrument ID : D5

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis Date/Time	Extraction Date/Time	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
					WATER				
MBLK1W	DSJ018WB	1	NA	10/26/2120:26	10/25/2111:15	LJ26024A	LJ26018A	21DSJ018W	Method Blank
LCS1W	DSJ018WL	1	NA	10/26/2120:44	10/25/2111:15	LJ26025A	LJ26018A	21DSJ018W	Lab Control Sample (LCS)
202110210116	J209-01	1	NA	10/26/2123:43	10/25/2111:15	LJ26035A	LJ26018A	21DSJ018W	Field Sample
202110200690	J194-01	1	NA	10/26/2121:38	10/25/2111:15	LJ26028A	LJ26018A	21DSJ018W	Field Sample
202110200690MS	J194-01M	1	NA	10/26/2121:56	10/25/2111:15	LJ26029A	LJ26018A	21DSJ018W	Matrix Spike Sample (MS)
202110200690MSD	J194-01S	1	NA	10/26/2122:14	10/25/2111:15	LJ26030A	LJ26018A	21DSJ018W	MS Duplicate (MSD)

FN - Filename  
 % Moist - Percent Moisture

LAB CHRONICLE  
PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL
Project    : 965349
SDG NO.   : 21J209
Instrument ID : D5
=====

```

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis Date/Time	Extraction Date/Time	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
					WATER				
MBLK1W	DSJ018WB	1	NA	10/26/2120:26	10/25/2111:15	LJ26024A	LJ26019A	21DSJ018W	Method Blank
LCS1W	J5J018WL	1	NA	10/26/2121:02	10/25/2111:15	LJ26026A	LJ26019A	21DSJ018W	Lab Control Sample (LCS)
202110210116	J209-01	1	NA	10/26/2123:43	10/25/2111:15	LJ26035A	LJ26019A	21DSJ018W	Field Sample
202110200690	J194-01	1	NA	10/26/2121:38	10/25/2111:15	LJ26028A	LJ26019A	21DSJ018W	Field Sample
202110200690MS	J194-01M	1	NA	10/26/2122:31	10/25/2111:15	LJ26031A	LJ26019A	21DSJ018W	Matrix Spike Sample (MS)
202110200690MSD	J194-01S	1	NA	10/26/2122:50	10/25/2111:15	LJ26032A	LJ26019A	21DSJ018W	MS Duplicate (MSD)

FN - Filename  
% Moist - Percent Moisture



LAB CHRONICLE  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client       : EUROFINS EATON ANALYTICAL
Project      : 965349
SDG NO.     : 21J209
Instrument ID : D5
=====
    
```

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis Date/Time	Extraction Date/Time	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
					WATER				
MBLK1W	DSJ018WB	1	NA	10/26/2120:26	10/25/2111:15	LJ26024A	LJ26020A	21DSJ018W	Method Blank
LCS1W	J8J018WL	1	NA	10/26/2121:20	10/25/2111:15	LJ26027A	LJ26020A	21DSJ018W	Lab Control Sample (LCS)
202110210116	J209-01	1	NA	10/26/2123:43	10/25/2111:15	LJ26035A	LJ26020A	21DSJ018W	Field Sample
202110200690	J194-01	1	NA	10/26/2121:38	10/25/2111:15	LJ26028A	LJ26020A	21DSJ018W	Field Sample
202110200690MS	J194-01M	1	NA	10/26/2123:07	10/25/2111:15	LJ26033A	LJ26020A	21DSJ018W	Matrix Spike Sample (MS)
202110200690MSD	J194-01S	1	NA	10/26/2123:25	10/25/2111:15	LJ26034A	LJ26020A	21DSJ018W	MS Duplicate (MSD)

FN - Filename  
 % Moist - Percent Moisture

# SAMPLE RESULTS

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

=====  
Client : EUROFINS EATON ANALYTICAL Date Collected: 10/19/21 09:48  
Project : 965349 Date Received: 10/22/21  
Batch No. : 21J209 Date Extracted: 10/25/21 11:15  
Sample ID : 202110210116 Date Analyzed: 10/26/21 23:43  
Lab Samp ID: 21J209-01 Dilution Factor: 1  
Lab File ID: LJ26035A Matrix: WATER  
Ext Btch ID: 21DSJ018W % Moisture: NA  
Calib. Ref.: LJ26018A Instrument ID: D5  
=====

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.025	0.012
Motor Oil	ND	0.050	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.314	0.500	63	60-130
Hexacosane	0.0987	0.125	79	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/19/21 09:48
Project    : 965349                       Date Received: 10/22/21
Batch No.  : 21J209                       Date Extracted: 10/25/21 11:15
Sample ID  : 202110210116                 Date Analyzed: 10/26/21 23:43
Lab Samp ID: 21J209-01                   Dilution Factor: 1
Lab File ID: LJ26035A                     Matrix: WATER
Ext Btch ID: 21DSJ018W                    % Moisture: NA
Calib. Ref.: LJ26019A                     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	0.314	0.500	63	60-130
Hexacosane	0.0987	0.125	79	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 : HWang Analyzed by : SDeeso

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/19/21 09:48
Project     : 965349                     Date Received: 10/22/21
Batch No.   : 21J209                     Date Extracted: 10/25/21 11:15
Sample ID   : 202110210116              Date Analyzed: 10/26/21 23:43
Lab Samp ID : 21J209-01                 Dilution Factor: 1
Lab File ID : LJ26035A                  Matrix: WATER
Ext Btch ID : 21DSJ018W                 % Moisture: NA
Calib. Ref.: LJ26020A                   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	0.314	0.500	63	60-130
Hexacosane	0.0987	0.125	79	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 : HWang                          Analyzed by : SDeeso

# QC SUMMARIES

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 10/25/21 11:15
Project    : 965349                      Date Received: 10/25/21
Batch No.  : 21J209                      Date Extracted: 10/25/21 11:15
Sample ID  : MBLK1W                      Date Analyzed: 10/26/21 20:26
Lab Samp ID: DSJ018WB                   Dilution Factor: 1
Lab File ID: LJ26024A                   Matrix: WATER
Ext Btch ID: 21DSJ018W                  % Moisture: NA
Calib. Ref.: LJ26018A                   Instrument ID: D5
=====

```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
Diesel	ND	0.025	0.012
Motor Oil	ND	0.050	0.025

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.338	0.500	68	60-130
Hexacosane	0.0989	0.125	79	60-130

Notes:

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

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

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

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 965349  
BATCH NO. : 21J209  
METHOD : 3520C/8015B

MATRIX : % MOISTURE:NA  
DILUTION FACTOR: 1 1  
SAMPLE ID : MBLK1W LCS1W  
LAB SAMPLE ID : DSJ018WB DSJ018WL  
LAB FILE ID : LJ26024A LJ26025A  
DATE PREPARED : 10/25/21 11:15 10/25/21 11:15  
DATE ANALYZED : 1 1  
PREP BATCH : 21DSJ018W 21DSJ018W  
CALIBRATION REF: 1 1

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.10	84	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.347	69	60-130
Hexacosane	0.125	0.107	86	60-130

MB: Method Blank sample LCS: Lab Control Sample



EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 965349  
BATCH NO. : 21J209  
METHOD : 3520C/8015B

MATRIX : % MOISTURE:NA  
DILUTION FACTOR: 1 1  
SAMPLE ID : MBLK1W LCS1W  
LAB SAMPLE ID : DSJ018WB J5J018WL  
LAB FILE ID : LJ26024A LJ26026A  
DATE PREPARED : 10/25/21 11:15 10/25/21 11:15  
DATE ANALYZED : 1 1  
PREP BATCH : 21DSJ018W 21DSJ018W  
CALIBRATION REF: 1 1

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP5	ND	2.50	1.99	80	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.417	83	60-130
Hexacosane	0.125	0.0976	78	60-130

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 10/25/21 11:15
Project     : 965349                          Date Received: 10/25/21
Batch No.   : 21J209                          Date Extracted: 10/25/21 11:15
Sample ID   : MBLK1W                          Date Analyzed: 10/26/21 20:26
Lab Samp ID: DSJ018WB                        Dilution Factor: 1
Lab File ID: LJ26024A                        Matrix: WATER
Ext Btch ID: 21DSJ018W                      % Moisture: NA
Calib. Ref.: LJ26020A                       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	0.338	0.500	68	60-130
Hexacosane	0.0989	0.125	79	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 : HWang                          Analyzed by : SDeeso

EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 965349  
BATCH NO. : 21J209  
METHOD : 3520C/8015B

MATRIX : % MOISTURE:NA  
DILUTION FACTOR: 1 1  
SAMPLE ID : MBLK1W LCS1W  
LAB SAMPLE ID : DSJ018WB J8J018WL  
LAB FILE ID : LJ26024A LJ26027A  
DATE PREPARED : 10/25/21 11:15 10/25/21 11:15  
DATE ANALYZED : 1 1  
PREP BATCH : 21DSJ018W 21DSJ018W  
CALIBRATION REF: 1 1

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP8	ND	2.50	1.76	70	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.470	94	60-130
Hexacosane	0.125	0.103	82	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 965232  
BATCH NO. : 21J194  
METHOD : 3520C/8015B

```

=====
MATRIX      : WATER                                % MOISTURE:NA
DILUTION FACTOR: 1                                1
SAMPLE ID   : 202110200690                        202110200690MSD
LAB SAMPLE ID : 21J194-01                          21J194-01S
LAB FILE ID  : LJ26028A                            LJ26032A
DATE PREPARED : 10/25/21 11:15                    10/25/21 11:15
DATE ANALYZED : 10/26/21 21:38                    10/26/21 22:50
PREP BATCH   : 21DSJ018W                          21DSJ018W
CALIBRATION REF: LJ26019A                          LJ26019A
  
```

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.60	2.01	77	2.60	2.05	79	2	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.520	0.456	88	0.520	0.444	85	60-130
Hexacosane	0.130	0.109	84	0.130	0.106	82	60-130

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

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 965232  
BATCH NO. : 21J194  
METHOD : 3520C/8015B

```

=====
MATRIX      : WATER                                % MOISTURE:NA
DILUTION FACTOR: 1                                1
SAMPLE ID   : 202110200690                        202110200690MSD
LAB SAMPLE ID : 21J194-01                          21J194-01S
LAB FILE ID  : LJ26028A                            LJ26034A
DATE PREPARED : 10/25/21 11:15                    10/25/21 11:15
DATE ANALYZED : 10/26/21 21:38                    10/26/21 23:25
PREP BATCH   : 21DSJ018W                          21DSJ018W
CALIBRATION REF: LJ26020A                          LJ26020A
  
```

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.72	2.14	79	2.72	2.17	80	1	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.545	0.538	99	0.545	0.509	93	60-130
Hexacosane	0.136	0.105	77	0.136	0.103	76	60-130

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

965349

METHOD SW8015C  
ALCOHOLS BY GC

SDG#: 21J209

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 965349

SDG : 21J209

METHOD SW8015C  
ALCOHOLS BY GC

One(1) water sample was received on 10/22/21 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. MEJ003WB - 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. MEJ003WL/MEJ003WC 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 QC limits in J194-01M/J194-01S. Refer to Matrix QC summary form for details.

Sample Analysis

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

LAB CHRONICLE  
ALCOHOLS BY GC

```

=====
Client : EUROFINS EATON ANALYTICAL
Project : 965349
SDG NO. : 21J209
Instrument ID : GCT050
=====
  
```

Client Sample ID	Laboratory Sample ID	Dilution Factor	% Moist	Analysis DateTime	Extraction DateTime	Sample Data FN	Calibration Data FN	Prep. Batch	Notes
					WATER				

FN - Filename  
% Moist - Percent Moisture



# SAMPLE RESULTS

METHOD SW8015C  
ALCOHOLS BY GC

```
=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 10/19/21
Project     : 965349                          Date Received: 10/22/21
Batch No.   : 21J209                          Date Extracted: NA
Sample ID   : 202110210116                   Date Analyzed: 10/22/21 13:32
Lab Samp ID: J209-01                          Dilution Factor: 1
Lab File ID: TJ22011A                        Matrix          : WATER
Ext Btch ID: MEJ003W                          % Moisture      : NA
Calib. Ref.: TJ22010A                        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     : 965349                          Date Received: NA
Batch No.   : 21J209                          Date Extracted: NA
Sample ID   : MBLK1W                          Date Analyzed: 10/22/21 11:35
Lab Samp ID: MEJ003WB                        Dilution Factor: 1
Lab File ID: TJ22004A                       Matrix          : WATER
Ext Btch ID: MEJ003W                        % Moisture      : NA
Calib. Ref.: TJ22002A                       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: 965349  
BATCH NO.: 21J209  
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: MBLK1W  
LAB SAMP ID: MEJ003WB MEJ003WL MEJ003WC  
LAB FILE ID: TJ22004A TJ22005A TJ22006A  
DATE EXTRACTED: NA NA NA DATE COLLECTED: NA  
DATE ANALYZED: 10/22/2111:35 10/22/2111:48 10/22/2112:05 DATE RECEIVED: NA  
PREP. BATCH: MEJ003W MEJ003W MEJ003W  
CALIB. REF: TJ22002A TJ22002A TJ22002A

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	9900	99	10000	9350	94	6	60-130	30

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL  
PROJECT: 965232  
BATCH NO.: 21J194  
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: 202110200690  
LAB SAMP ID: J194-01 J194-01M J194-01S  
LAB FILE ID: TJ22007A TJ22008A TJ22009A  
DATE EXTRACTED: NA NA NA DATE COLLECTED: 10/18/21  
DATE ANALYZED: 10/22/2112:19 10/22/2112:32 10/22/2112:46 DATE RECEIVED: 10/21/21  
PREP. BATCH: MEJ003W MEJ003W MEJ003W  
CALIB. REF: TJ22002A TJ22002A TJ22002A

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	9410	94	10000	9740	97	3	60-130	30

December 09, 2021

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

Project Name: Folder # 965349 Job # 1000014  
 Physis Project ID: 1407003-193

Dear Debbie,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 10/22/2021. 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: 1407003-193

Folder # 965349 Job # 1000014

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
91537	202110210116	A WELLS PUMPS 1&2 (260)-331-203-TP	10/19/202	9:48	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 MS<sub>1</sub>/MS<sub>2</sub>, BS<sub>1</sub>/BS<sub>2</sub>, LCS<sub>1</sub>/LCS<sub>2</sub>, LCM<sub>1</sub>/LCM<sub>2</sub>, CRM<sub>1</sub>/CRM<sub>2</sub>, surrogate spikes and/or replicate project sample analysis (R<sub>1</sub>/R<sub>2</sub>) 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
<b>Sample ID: 91537-R1 202110210116 AIEA WELLS PUMPS 1 Matrix: Samplewater</b>											
(2,4,6-Tribromophenol)	EPA 625.1	% Recovery	47	1			Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
(d5-Phenol)	EPA 625.1	% Recovery	28	1			Total	O-33136			22-Oct-21 13-Nov-21
2,4,5-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-33136			22-Oct-21 13-Nov-21
2,4,6-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-33136			22-Oct-21 13-Nov-21
2,4-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-33136			22-Oct-21 13-Nov-21
2,4-Dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-33136			22-Oct-21 13-Nov-21
2,6-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-33136			22-Oct-21 13-Nov-21
2,6-Di-tert-butyl-4-methylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-33136			22-Oct-21 13-Nov-21
2,6-Di-tert-butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-33136			22-Oct-21 13-Nov-21
2-Chlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-33136			22-Oct-21 13-Nov-21
2-Methyl-4,6-dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-33136			22-Oct-21 13-Nov-21
2-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-33136			22-Oct-21 13-Nov-21
2-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-33136			22-Oct-21 13-Nov-21
3+4-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-33136			22-Oct-21 13-Nov-21
4-Chloro-3-methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-33136			22-Oct-21 13-Nov-21
4-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-33136			22-Oct-21 13-Nov-21
6-tert-butyl-2,4-dimethylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-33136			22-Oct-21 13-Nov-21
Benzoic Acid	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-33136			22-Oct-21 13-Nov-21
Benzyl Alcohol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-33136			22-Oct-21 13-Nov-21
Pentachlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-33136			22-Oct-21 13-Nov-21
Phenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-33136			22-Oct-21 13-Nov-21
p-tert-Butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-33136			22-Oct-21 13-Nov-21

## Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 91537-R1 202110210116 AIEA WELLS PUMPS 1 Matrix: Samplewater</b>											
(d4-1,4-Dichlorobenzene)	EPA 625.1	% Recovery	86	1			Total		O-33136	22-Oct-21	22-Oct-21
2-Chloronaphthalene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
2-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
3-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
4-Bromophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
4-Chloroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
4-Chlorophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
4-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
Aniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
Benzidine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
Bis(2-Chloroethoxy) methane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
Bis(2-Chloroethyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
Bis(2-Chloroisopropyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
Dibenzofuran	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
Hexachloroethane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
Nitrobenzene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
N-Nitrosodi-n-propylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21
N-Nitrosodiphenylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-33136	22-Oct-21	13-Nov-21



## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 91537-R1 202110210116 AIEA WELLS PUMPS 1 Matrix: Samplewater</b>											
(d10-Acenaphthene)	EPA 625.1	% Recovery	91	1			Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
(d10-Phenanthrene)	EPA 625.1	% Recovery	93	1			Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
(d12-Chrysene)	EPA 625.1	% Recovery	86	1			Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
(d12-Perylene)	EPA 625.1	% Recovery	86	1			Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
(d8-Naphthalene)	EPA 625.1	% Recovery	79	1			Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Benz[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Benz[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Benz[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Benzof[ghi]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Benzok[fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-21
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-33136	19-Oct-21	9:48	Received: 22-Oct-21 13-Nov-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-33136	22-Oct-21	13-Nov-21
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-33136	22-Oct-21	13-Nov-21
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-33136	22-Oct-21	13-Nov-21
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-33136	22-Oct-21	13-Nov-21
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-33136	22-Oct-21	13-Nov-21
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-33136	22-Oct-21	13-Nov-21
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-33136	22-Oct-21	13-Nov-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: 91536-B1											
QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-33136											
Prepared: 22-Oct-21											
Analyzed: 13-Nov-21											
(2,4,6-Tribromophenol)	Total	44	1			% Recovery	100	44	44 - 159%	PASS	
(d5-Phenol)	Total	94	1			% Recovery	100	94	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: 91536-BS1											
QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-33136											
Prepared: 22-Oct-21											
Analyzed: 13-Nov-21											
(2,4,6-Tribromophenol)	Total	50	1			% Recovery	100	0	50	44 - 159%	PASS
(d5-Phenol)	Total	67	1			% Recovery	100	0	67	20 - 121%	PASS
2,4,5-Trichlorophenol	Total	0.968	1	0.05	0.1	µg/L	1	0	97	57 - 116%	PASS
2,4,6-Trichlorophenol	Total	1.02	1	0.05	0.1	µg/L	1	0	102	56 - 118%	PASS
2,4-Dichlorophenol	Total	0.871	1	0.05	0.1	µg/L	1	0	87	51 - 117%	PASS
2,4-Dinitrophenol	Total	0.895	1	0.1	0.2	µg/L	1	0	89	0 - 152%	PASS
2,6-Dichlorophenol	Total	0.453	1	0.05	0.1	µg/L	1	0	45	30 - 130%	PASS
2,6-Di-tert-butyl-4-methylphenol	Total	0.657	1	0.05	0.1	µg/L	1	0	66	50 - 150%	PASS
2,6-Di-tert-butylphenol	Total	0.719	1	0.05	0.1	µg/L	1	0	72	50 - 150%	PASS
2-Chlorophenol	Total	0.727	1	0.05	0.1	µg/L	1	0	73	41 - 110%	PASS
2-Methyl-4,6-dinitrophenol	Total	0.991	1	0.1	0.2	µg/L	1	0	99	0 - 141%	PASS
2-Methylphenol	Total	0.81	1	0.1	0.2	µg/L	1	0	81	40 - 117%	PASS
2-Nitrophenol	Total	0.891	1	0.1	0.2	µg/L	1	0	89	40 - 117%	PASS
3+4-Methylphenol	Total	0.824	1	0.1	0.2	µg/L	1	0	82	0 - 130%	PASS
4-Chloro-3-methylphenol	Total	1.11	1	0.1	0.2	µg/L	1	0	111	51 - 128%	PASS
4-Nitrophenol	Total	0.656	1	0.1	0.2	µg/L	1	0	66	10 - 164%	PASS
6-tert-butyl-2,4-dimethylphenol	Total	0.64	1	0.05	0.1	µg/L	1	0	64	50 - 150%	PASS
Benzoic Acid	Total	0.764	1	0.1	0.2	µg/L	1	0	76	2 - 145%	PASS
Benzyl Alcohol	Total	0.816	1	0.1	0.2	µg/L	1	0	82	43 - 148%	PASS
Pentachlorophenol	Total	1.11	1	0.05	0.1	µg/L	1	0	111	36 - 111%	PASS
Phenol	Total	0.642	1	0.1	0.2	µg/L	1	0	64	29 - 114%	PASS
p-tert-Butylphenol	Total	0.89	1	0.05	0.1	µg/L	1	0	89	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: 91536-BS2												
QAQC Procedural Blank												
Method: EPA 625.1												
Batch ID: O-33136												
Prepared: 22-Oct-21												
Analyzed: 13-Nov-21												
(2,4,6-Tribromophenol)	Total	50	1			% Recovery	100	0	50	44 - 159%	PASS	0 30 PASS
(d5-Phenol)	Total	75	1			% Recovery	100	0	75	20 - 121%	PASS	11 30 PASS
2,4,5-Trichlorophenol	Total	1.03	1	0.05	0.1	µg/L	1	0	103	57 - 116%	PASS	6 30 PASS
2,4,6-Trichlorophenol	Total	1.11	1	0.05	0.1	µg/L	1	0	111	56 - 118%	PASS	8 30 PASS
2,4-Dichlorophenol	Total	0.945	1	0.05	0.1	µg/L	1	0	94	51 - 117%	PASS	8 30 PASS
2,4-Dinitrophenol	Total	1.02	1	0.1	0.2	µg/L	1	0	102	0 - 152%	PASS	12 30 PASS
2,6-Dichlorophenol	Total	0.495	1	0.05	0.1	µg/L	1	0	50	30 - 130%	PASS	11 30 PASS
2,6-Di-tert-butyl-4-methylphenol	Total	0.705	1	0.05	0.1	µg/L	1	0	70	50 - 150%	PASS	6 30 PASS
2,6-Di-tert-butylphenol	Total	0.779	1	0.05	0.1	µg/L	1	0	78	50 - 150%	PASS	8 30 PASS
2-Chlorophenol	Total	0.77	1	0.05	0.1	µg/L	1	0	77	41 - 110%	PASS	5 30 PASS
2-Methyl-4,6-dinitrophenol	Total	1.06	1	0.1	0.2	µg/L	1	0	106	0 - 141%	PASS	7 30 PASS
2-Methylphenol	Total	0.851	1	0.1	0.2	µg/L	1	0	85	40 - 117%	PASS	5 30 PASS
2-Nitrophenol	Total	1.04	1	0.1	0.2	µg/L	1	0	104	40 - 117%	PASS	16 30 PASS
3+4-Methylphenol	Total	0.884	1	0.1	0.2	µg/L	1	0	88	0 - 130%	PASS	7 30 PASS
4-Chloro-3-methylphenol	Total	1.1	1	0.1	0.2	µg/L	1	0	110	51 - 128%	PASS	1 30 PASS
4-Nitrophenol	Total	0.737	1	0.1	0.2	µg/L	1	0	74	10 - 164%	PASS	11 30 PASS
6-tert-butyl-2,4-dimethylphenol	Total	0.706	1	0.05	0.1	µg/L	1	0	71	50 - 150%	PASS	10 30 PASS
Benzoic Acid	Total	0.982	1	0.1	0.2	µg/L	1	0	98	2 - 145%	PASS	25 30 PASS
Benzyl Alcohol	Total	0.881	1	0.1	0.2	µg/L	1	0	88	43 - 148%	PASS	7 30 PASS
Pentachlorophenol	Total	1.11	1	0.05	0.1	µg/L	1	0	111	36 - 111%	PASS	0 30 PASS
Phenol	Total	0.704	1	0.1	0.2	µg/L	1	0	70	29 - 114%	PASS	9 30 PASS
p-tert-Butylphenol	Total	0.962	1	0.05	0.1	µg/L	1	0	96	50 - 150%	PASS	8 30 PASS

## Base/Neutral Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE
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### Sample ID: 91536-B1 QAQC Procedural Blank

Matrix: Blank/Matrix

Sampled:

Received:

Method: EPA 625.1

Analyzed: 13-Nov-21

Prepared: 22-Oct-21

Batch ID: O-33136

% Recovery 100

102

PASS

(p4-1,4-Dichlorobenzene)	Total	ND	1	0.05	0.1	µg/L	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
Matrix: Blank/Matrix											
Sample ID: 91536-BS1											
QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-33136											
Prepared: 22-Oct-21											
Analyzed: 13-Nov-21											
% Recovery											
(4-1,4-Dichlorobenzene)	Total	78	1				100	0	78	30 - 130%	PASS
2-Chloronaphthalene	Total	0.908	1	0.05	0.1	µg/L	1	0	91	53 - 130%	PASS
2-Nitroaniline	Total	0.947	1	0.05	0.1	µg/L	1	0	95	69 - 114%	PASS
3-Nitroaniline	Total	0.953	1	0.05	0.1	µg/L	1	0	95	23 - 137%	PASS
4-Bromophenylphenyl ether	Total	0.896	1	0.05	0.1	µg/L	1	0	90	61 - 132%	PASS
4-Chloroaniline	Total	1.26	1	0.05	0.1	µg/L	1	0	126	50 - 150%	PASS
4-Chlorophenylphenyl ether	Total	0.928	1	0.05	0.1	µg/L	1	0	93	63 - 130%	PASS
4-Nitroaniline	Total	1.15	1	0.05	0.1	µg/L	1	0	115	10 - 159%	PASS
Aniline	Total	0.514	1	0.05	0.1	µg/L	1	0	51	50 - 150%	PASS
Benzidine	Total	1.1	1	0.05	0.1	µg/L	1	0	110	0 - 125%	PASS
Bis(2-Chloroethoxy) methane	Total	0.903	1	0.05	0.1	µg/L	1	0	90	66 - 122%	PASS
Bis(2-Chloroethyl) ether	Total	0.689	1	0.05	0.1	µg/L	1	0	69	43 - 127%	PASS
Bis(2-Chloroisopropyl) ether	Total	0.826	1	0.05	0.1	µg/L	1	0	83	49 - 128%	PASS
Dibenzofuran	Total	0.935	1	0.05	0.1	µg/L	1	0	94	50 - 150%	PASS
Disalicylidenepropylenediamine	Total	37.9	1	0.05	0.1	µg/L	30	0	126	50 - 150%	PASS
Hexachloroethane	Total	0.774	1	0.05	0.1	µg/L	1	0	77	27 - 130%	PASS
Nitrobenzene	Total	0.79	1	0.05	0.1	µg/L	1	0	79	54 - 111%	PASS
N-Nitrosodi-n-propylamine	Total	0.843	1	0.05	0.1	µg/L	1	0	84	61 - 152%	PASS
N-Nitrosodiphenylamine	Total	0.849	1	0.05	0.1	µg/L	1	0	85	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			
Sample ID: 91536-BS2														
Matrix: Blank/Matrix														
QAQC Procedural Blank														
Method: EPA 625.1														
Batch ID: O-33136														
Prepared: 22-Oct-21														
Analyzed: 13-Nov-21														
% Recovery														
(4-1,4-Dichlorobenzene)	Total	79	1				100	0	79	30 - 130%	PASS	1	30	PASS
2-Chloronaphthalene	Total	0.91	1	0.05	0.1	µg/L	1	0	91	53 - 130%	PASS	0	30	PASS
2-Nitroaniline	Total	1.03	1	0.05	0.1	µg/L	1	0	103	69 - 114%	PASS	8	30	PASS
3-Nitroaniline	Total	0.954	1	0.05	0.1	µg/L	1	0	95	23 - 137%	PASS	0	30	PASS
4-Bromophenylphenyl ether	Total	0.894	1	0.05	0.1	µg/L	1	0	89	61 - 132%	PASS	1	30	PASS
4-Chloroaniline	Total	1.26	1	0.05	0.1	µg/L	1	0	126	50 - 150%	PASS	0	30	PASS
4-Chlorophenylphenyl ether	Total	0.937	1	0.05	0.1	µg/L	1	0	94	63 - 130%	PASS	1	30	PASS
4-Nitroaniline	Total	1.19	1	0.05	0.1	µg/L	1	0	119	10 - 159%	PASS	3	30	PASS
Aniline	Total	0.503	1	0.05	0.1	µg/L	1	0	50	50 - 150%	PASS	2	30	PASS
Benzidine	Total	1.16	1	0.05	0.1	µg/L	1	0	116	0 - 125%	PASS	5	30	PASS
Bis(2-Chloroethoxy) methane	Total	0.931	1	0.05	0.1	µg/L	1	0	93	66 - 122%	PASS	3	30	PASS
Bis(2-Chloroethyl) ether	Total	0.713	1	0.05	0.1	µg/L	1	0	71	43 - 127%	PASS	3	30	PASS
Bis(2-Chloroisopropyl) ether	Total	0.834	1	0.05	0.1	µg/L	1	0	83	49 - 128%	PASS	0	30	PASS
Dibenzofuran	Total	0.936	1	0.05	0.1	µg/L	1	0	94	50 - 150%	PASS	0	30	PASS
Disalicylidenepropylamine	Total	42.1	1	0.05	0.1	µg/L	30	0	140	50 - 150%	PASS	11	30	PASS
Hexachloroethane	Total	0.793	1	0.05	0.1	µg/L	1	0	79	27 - 130%	PASS	3	30	PASS
Nitrobenzene	Total	0.822	1	0.05	0.1	µg/L	1	0	82	54 - 111%	PASS	4	30	PASS
N-Nitrosodi-n-propylamine	Total	0.96	1	0.05	0.1	µg/L	1	0	96	61 - 152%	PASS	13	30	PASS
N-Nitrosodiphenylamine	Total	0.91	1	0.05	0.1	µg/L	1	0	91	49 - 142%	PASS	7	30	PASS

## 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: 91536-B1											
QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-33136											
Prepared: 22-Oct-21											
Analyzed: 13-Nov-21											
(d10-Acenaphthene)	Total	93	1			% Recovery	100	93	65 - 113%	PASS	
(d10-Phenanthrene)	Total	93	1			% Recovery	100	93	80 - 111%	PASS	
(d12-Chrysene)	Total	87	1			% Recovery	100	87	60 - 139%	PASS	
(d12-Perylene)	Total	85	1			% Recovery	100	85	36 - 161%	PASS	
(d8-Naphthalene)	Total	89	1			% Recovery	100	89	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
							LEVEL	RESULT	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
Sample ID: 91536-BS1											
Matrix: BlankMatrix											
Sampled: Received:											
Method: EPA 625.1											
Batch ID: O-33136											
Prepared: 22-Oct-21											
Analyzed: 13-Nov-21											
(d10-Acenaphthene)	Total	79	1			% Recovery	100	0	79	65 - 113%	PASS
(d10-Phenanthrene)	Total	90	1			% Recovery	100	0	90	80 - 111%	PASS
(d12-Chrysene)	Total	92	1			% Recovery	100	0	92	60 - 139%	PASS
(d12-Perylene)	Total	88	1			% Recovery	100	0	88	36 - 161%	PASS
(d8-Naphthalene)	Total	69	1			% Recovery	100	0	69	44 - 119%	PASS
1-Methylnaphthalene	Total	0.557	1	0.001	0.005	µg/L	1	0	56	49 - 117%	PASS
1-Methylphenanthrene	Total	0.701	1	0.001	0.005	µg/L	1	0	70	66 - 127%	PASS
2,3,5-Trimethylnaphthalene	Total	0.687	1	0.001	0.005	µg/L	1	0	69	57 - 120%	PASS
2,6-Dimethylnaphthalene	Total	0.583	1	0.001	0.005	µg/L	1	0	58	54 - 117%	PASS
2-Methylnaphthalene	Total	1.04	1	0.001	0.005	µg/L	1.5	0	69	47 - 130%	PASS
Acenaphthene	Total	1.22	1	0.001	0.005	µg/L	1.5	0	81	53 - 131%	PASS
Acenaphthylene	Total	1.31	1	0.001	0.005	µg/L	1.5	0	87	43 - 140%	PASS
Anthracene	Total	1.46	1	0.001	0.005	µg/L	1.5	0	97	58 - 135%	PASS
Benz[a]anthracene	Total	1.41	1	0.001	0.005	µg/L	1.5	0	94	55 - 145%	PASS
Benzo[a]pyrene	Total	1.56	1	0.001	0.005	µg/L	1.5	0	104	51 - 143%	PASS
Benzo[b]fluoranthene	Total	1.49	1	0.001	0.005	µg/L	1.5	0	99	46 - 165%	PASS
Benzo[e]pyrene	Total	0.889	1	0.001	0.005	µg/L	1	0	89	42 - 152%	PASS
Benzo[g,h,i]perylene	Total	1.59	1	0.001	0.005	µg/L	1.5	0	106	63 - 133%	PASS
Benzo[k]fluoranthene	Total	1.37	1	0.001	0.005	µg/L	1.5	0	91	56 - 145%	PASS
Biphenyl	Total	0.686	1	0.001	0.005	µg/L	1	0	69	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	1.51	1	0.001	0.005	µg/L	1.5	0	101	55 - 150%	PASS
Dibenzo[a,l]pyrene	Total	0.496	1	0.001	0.005	µg/L	0.5	0	99	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	LIMITS	
Dibenzothiophene	Total	0.754	1	0.001	0.005	µg/L	1	0	75 - 113%	PASS	
Fluoranthene	Total	1.41	1	0.001	0.005	µg/L	1.5	0	60 - 146%	PASS	
Fluorene	Total	1.39	1	0.001	0.005	µg/L	1.5	0	58 - 131%	PASS	
Indeno[1,2,3-cd]pyrene	Total	1.55	1	0.001	0.005	µg/L	1.5	0	50 - 151%	PASS	
Naphthalene	Total	1.06	1	0.001	0.005	µg/L	1.5	0	41 - 126%	PASS	
Perylene	Total	0.875	1	0.001	0.005	µg/L	1	0	48 - 141%	PASS	
Phenanthrene	Total	1.44	1	0.001	0.005	µg/L	1.5	0	67 - 127%	PASS	
Pyrene	Total	1.39	1	0.001	0.005	µg/L	1.5	0	54 - 156%	PASS	

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODEC			
Sample ID: 91536-BS2														
Matrix: BlankMatrix														
QAQC Procedural Blank														
Method: EPA 625.1														
Batch ID: O-33136														
Prepared: 22-Oct-21														
Analyzed: 13-Nov-21														
(d10-Acenaphthene)	Total	81	1			% Recovery	100	0	81	65 - 113%	PASS	2	30	PASS
(d10-Phenanthrene)	Total	91	1			% Recovery	100	0	91	80 - 111%	PASS	1	30	PASS
(d12-Chrysene)	Total	87	1			% Recovery	100	0	87	60 - 139%	PASS	6	30	PASS
(d12-Perylene)	Total	88	1			% Recovery	100	0	88	36 - 161%	PASS	0	30	PASS
(d8-Naphthalene)	Total	70	1			% Recovery	100	0	70	44 - 119%	PASS	1	30	PASS
1-Methylnaphthalene	Total	0.56	1	0.001	0.005	µg/L	1	0	56	49 - 117%	PASS	0	30	PASS
1-Methylphenanthrene	Total	0.696	1	0.001	0.005	µg/L	1	0	70	66 - 127%	PASS	0	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.703	1	0.001	0.005	µg/L	1	0	70	57 - 120%	PASS	1	30	PASS
2,6-Dimethylnaphthalene	Total	0.596	1	0.001	0.005	µg/L	1	0	60	54 - 117%	PASS	3	30	PASS
2-Methylnaphthalene	Total	1.01	1	0.001	0.005	µg/L	1.5	0	67	47 - 130%	PASS	3	30	PASS
Acenaphthene	Total	1.23	1	0.001	0.005	µg/L	1.5	0	82	53 - 131%	PASS	1	30	PASS
Acenaphthylene	Total	1.35	1	0.001	0.005	µg/L	1.5	0	90	43 - 140%	PASS	3	30	PASS
Anthracene	Total	1.42	1	0.001	0.005	µg/L	1.5	0	95	58 - 135%	PASS	2	30	PASS
Benz[a]anthracene	Total	1.4	1	0.001	0.005	µg/L	1.5	0	93	55 - 145%	PASS	1	30	PASS
Benzo[a]pyrene	Total	1.48	1	0.001	0.005	µg/L	1.5	0	99	51 - 143%	PASS	5	30	PASS
Benzo[b]fluoranthene	Total	1.44	1	0.001	0.005	µg/L	1.5	0	96	46 - 165%	PASS	3	30	PASS
Benzo[e]pyrene	Total	0.873	1	0.001	0.005	µg/L	1	0	87	42 - 152%	PASS	2	30	PASS
Benzo[g,h,i]perylene	Total	1.54	1	0.001	0.005	µg/L	1.5	0	103	63 - 133%	PASS	3	30	PASS
Benzo[k]fluoranthene	Total	1.32	1	0.001	0.005	µg/L	1.5	0	88	56 - 145%	PASS	3	30	PASS
Biphenyl	Total	0.692	1	0.001	0.005	µg/L	1	0	69	56 - 119%	PASS	0	30	PASS
Chrysene	Total	1.36	1	0.001	0.005	µg/L	1.5	0	91	56 - 141%	PASS	6	30	PASS
Dibenz[a,h]anthracene	Total	1.51	1	0.001	0.005	µg/L	1.5	0	101	55 - 150%	PASS	0	30	PASS
Dibenzo[a,i]pyrene	Total	0.532	1	0.001	0.005	µg/L	0.5	0	106	50 - 150%	PASS	7	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	0.756	1	0.001	0.005	µg/L	1	0	76 - 113%	PASS	1 30 PASS
Fluoranthene	Total	1.38	1	0.001	0.005	µg/L	1.5	0	60 - 146%	PASS	2 30 PASS
Fluorene	Total	1.41	1	0.001	0.005	µg/L	1.5	0	58 - 131%	PASS	1 30 PASS
Indeno[1,2,3-cd]pyrene	Total	1.54	1	0.001	0.005	µg/L	1.5	0	50 - 151%	PASS	0 30 PASS
Naphthalene	Total	1.06	1	0.001	0.005	µg/L	1.5	0	41 - 126%	PASS	0 30 PASS
Perylene	Total	0.849	1	0.001	0.005	µg/L	1	0	48 - 141%	PASS	3 30 PASS
Phenanthrene	Total	1.41	1	0.001	0.005	µg/L	1.5	0	67 - 127%	PASS	2 30 PASS
Pyrene	Total	1.35	1	0.001	0.005	µg/L	1.5	0	54 - 156%	PASS	3 30 PASS

# PHYSICAL Total Ion Chromatogram RESULTS

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



**Sample ID: 91537**

RT	Area Pct	Concentration (ng/L)	Library/ID	Qual	Cas Number
35.0429	8.3018	1111	Anthracene-D10-	1719-06-8	95
10.4942	0.8085	108	Oxalic acid, cyclohexyl pentyl ester	1000309-30-6	87

Concentration estimated using the response for Anthracene-d10

**Sample ID: Lab Blank Batch O-33136**

RT	Area Pct	Concentration (ng/L)	Library/ID	Qual	Cas Number
35.0393	6.1603	1111	Anthracene-D10-	1719-06-8	96
10.4974	1.4483	261	Oxalic acid, cyclohexyl nonyl ester	1000309-31-1	87
10.1436	0.9029	163	Hydroperoxide, 1-ethylbutyl	24254-56-6	91

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 #:** 965349  
**Report Due:** 11/10/2021

**Submittal Form**

**Date:** 10/22/2021

\*REPORTING REQUIREMENTS: Do Not Combine Reports with any other samples submitted under different Folder Numbers!  
Report & Invoice must have the Folder# 965349 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

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

**Sample ID** 202110210116  
**Client Sample ID for reference onl** AIEA WELLS PUMPS 1&2 (260)-331-203-TP400

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

**Sample Date & Time Matrix** 10/19/21 0948 DW  
**Clip Code**  
**PWSID** JLS

**Sample Point ID:** Static ID:

Relinquished by: Sample Control  
Received by: Sample Control  
Relinquished by: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
Received by: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Date 10/22/21 Time 1:300  
Date 10/22/21 Time 1:300

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

Project Iteration ID: 1407003-193  
 Client Name: Eurofins Eaton Analytical  
 Project Name: Folder # 965349 Job # 1000014  
 COC Page Number: 2 of 2  
 Bottle Label Color: NA

**Sample Receipt Summary**

**Receiving Info**

1. Initials Received By: [Signature]  
 2. Date Received: 10/22/21  
 3. Time Received: 1300  
 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)
- 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): 2.3  
 Used I/R Thermometer # 1-1

**Inspection Info**

1. Initials Inspected By: [Signature]

**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:

## ANALYTICAL REPORT

Eurofins Calscience Irvine  
17461 Derian Ave  
Suite 100  
Irvine, CA 92614-5817  
Tel: (949)261-1022

Laboratory Job ID: 440-290409-1  
Laboratory Sample Delivery Group: 1000014  
Client Project/Site: Folder #: 965349

For:  
Eurofins Eaton Analytical  
750 Royal Oaks Drive  
Suite 100  
Monrovia, California 91016

Attn: Subcontract Eurofins Eaton Analytical



Authorized for release by:  
10/26/2021 12:54:46 PM

Jennifer Moffatt, Project Manager I  
(949)260-3226  
[Jennifer.Moffatt@Eurofinset.com](mailto:Jennifer.Moffatt@Eurofinset.com)

### LINKS

Review your project  
results through  
**TotalAccess**

Have a Question?



Visit us at:

[www.eurofinsus.com/Env](http://www.eurofinsus.com/Env)

*The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.*

*This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.*

*Results relate only to the items tested and the sample(s) as received by the laboratory.*



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# Sample Summary

Client: Eurofins Eaton Analytical  
Project/Site: Folder #: 965349

Job ID: 440-290409-1  
SDG: 1000014

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-290409-1	202110210116	Water	10/19/21 09:48	10/22/21 14:34
440-290409-2	202110210117	Water	10/19/21 09:48	10/22/21 14:34

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# Case Narrative

Client: Eurofins Eaton Analytical  
Project/Site: Folder #: 965349

Job ID: 440-290409-1  
SDG: 1000014

---

## Job ID: 440-290409-1

---

### Laboratory: Eurofins Calscience Irvine

#### Narrative

---

#### Job Narrative 440-290409-1

#### Comments

No additional comments.

#### Receipt

The samples were received on 10/22/2021 2:34 PM. Unless otherwise noted below, the samples arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 0.5° C.

#### GC/MS VOA

Method 624.1: The following sample was diluted due to the abundance of non-target analytes: 202110210116 (440-290409-1). Elevated reporting limits (RLs) are provided.

Method 624.1: The following sample was collected in a properly preserved vial; however, the pH was outside the required criteria when verified by the laboratory. The sample was analyzed within the 7-day holding time specified for unpreserved samples: 202110210117 (440-290409-2).

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

#### VOA Prep

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

# Client Sample Results

Client: Eurofins Eaton Analytical  
 Project/Site: Folder #: 965349

Job ID: 440-290409-1  
 SDG: 1000014

**Client Sample ID: 202110210116**

**Lab Sample ID: 440-290409-1**

Date Collected: 10/19/21 09:48

Matrix: Water

Date Received: 10/22/21 14:34

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		200	100	ug/L			10/25/21 17:21	10

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		60 - 140		10/25/21 17:21	10
4-Bromofluorobenzene (Surr)	107		60 - 140		10/25/21 17:21	10
Dibromofluoromethane (Surr)	109		60 - 140		10/25/21 17:21	10
Toluene-d8 (Surr)	105		60 - 140		10/25/21 17:21	10

**Client Sample ID: 202110210117**

**Lab Sample ID: 440-290409-2**

Date Collected: 10/19/21 09:48

Matrix: Water

Date Received: 10/22/21 14:34

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

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	10	ug/L			10/25/21 17:48	1

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	116		60 - 140		10/25/21 17:48	1
4-Bromofluorobenzene (Surr)	106		60 - 140		10/25/21 17:48	1
Dibromofluoromethane (Surr)	112		60 - 140		10/25/21 17:48	1
Toluene-d8 (Surr)	107		60 - 140		10/25/21 17:48	1

# Method Summary

Client: Eurofins Eaton Analytical  
Project/Site: Folder #: 965349

Job ID: 440-290409-1  
SDG: 1000014

Method	Method Description	Protocol	Laboratory
624.1	Volatile Organic Compounds (GC/MS)	40CFR136A	TAL IRV

**Protocol References:**

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

**Laboratory References:**

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022



# Lab Chronicle

Client: Eurofins Eaton Analytical  
Project/Site: Folder #: 965349

Job ID: 440-290409-1  
SDG: 1000014

**Client Sample ID: 202110210116**

**Lab Sample ID: 440-290409-1**

**Date Collected: 10/19/21 09:48**

**Matrix: Water**

**Date Received: 10/22/21 14:34**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		10	10 mL	10 mL	659494	10/25/21 17:21	K6MO	TAL IRV

**Client Sample ID: 202110210117**

**Lab Sample ID: 440-290409-2**

**Date Collected: 10/19/21 09:48**

**Matrix: Water**

**Date Received: 10/22/21 14:34**

Prep Type	Batch Type	Batch Method	Run	Dil Factor	Initial Amount	Final Amount	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	624.1		1	10 mL	10 mL	659494	10/25/21 17:48	K6MO	TAL IRV

**Laboratory References:**

TAL IRV = Eurofins Calscience Irvine, 17461 Derian Ave, Suite 100, Irvine, CA 92614-5817, TEL (949)261-1022

# QC Sample Results

Client: Eurofins Eaton Analytical  
 Project/Site: Folder #: 965349

Job ID: 440-290409-1  
 SDG: 1000014

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

**Lab Sample ID: MB 440-659494/4**  
**Matrix: Water**  
**Analysis Batch: 659494**

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

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Acetone	ND		20	10	ug/L			10/25/21 16:53	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	115		60 - 140					10/25/21 16:53	1
4-Bromofluorobenzene (Surr)	107		60 - 140					10/25/21 16:53	1
Dibromofluoromethane (Surr)	112		60 - 140					10/25/21 16:53	1
Toluene-d8 (Surr)	105		60 - 140					10/25/21 16:53	1

**Lab Sample ID: LCS 440-659494/1002**  
**Matrix: Water**  
**Analysis Batch: 659494**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	125	147		ug/L		118	60 - 140
Surrogate	%Recovery	Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	113		60 - 140				
4-Bromofluorobenzene (Surr)	104		60 - 140				
Dibromofluoromethane (Surr)	106		60 - 140				
Toluene-d8 (Surr)	100		60 - 140				

**Lab Sample ID: 440-290405-A-1 MS**  
**Matrix: Water**  
**Analysis Batch: 659494**

**Client Sample ID: Matrix Spike**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MS Result	MS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	ND		50.0	60.4		ug/L		121	60 - 140
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	116		60 - 140						
4-Bromofluorobenzene (Surr)	104		60 - 140						
Dibromofluoromethane (Surr)	113		60 - 140						
Toluene-d8 (Surr)	98		60 - 140						

**Lab Sample ID: 440-290405-A-1 MSD**  
**Matrix: Water**  
**Analysis Batch: 659494**

**Client Sample ID: Matrix Spike Duplicate**  
**Prep Type: Total/NA**

Analyte	Sample Result	Sample Qualifier	Spike Added	MSD Result	MSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	Limit
Acetone	ND		50.0	59.8		ug/L		120	60 - 140	1	35
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	111		60 - 140								
4-Bromofluorobenzene (Surr)	104		60 - 140								
Dibromofluoromethane (Surr)	111		60 - 140								
Toluene-d8 (Surr)	99		60 - 140								

# QC Association Summary

Client: Eurofins Eaton Analytical  
Project/Site: Folder #: 965349

Job ID: 440-290409-1  
SDG: 1000014

## GC/MS VOA

### Analysis Batch: 659494

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-290409-1	202110210116	Total/NA	Water	624.1	
440-290409-2	202110210117	Total/NA	Water	624.1	
MB 440-659494/4	Method Blank	Total/NA	Water	624.1	
LCS 440-659494/1002	Lab Control Sample	Total/NA	Water	624.1	
440-290405-A-1 MS	Matrix Spike	Total/NA	Water	624.1	
440-290405-A-1 MSD	Matrix Spike Duplicate	Total/NA	Water	624.1	

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# Definitions/Glossary

Client: Eurofins Eaton Analytical  
Project/Site: Folder #: 965349

Job ID: 440-290409-1  
SDG: 1000014

## Glossary

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

# Accreditation/Certification Summary

Client: Eurofins Eaton Analytical  
Project/Site: Folder #: 965349

Job ID: 440-290409-1  
SDG: 1000014

## Laboratory: Eurofins Calscience Irvine

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

Authority	Program	Identification Number	Expiration Date
California	State	2706	06-30-22

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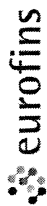
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Eaton Analytical

Ship To:

Eurofins Calscience-Irvine  
17461 Derian Avenue  
Suite 100  
Irvine, CA 92614

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

Folder #: 965349 Report Due: 11/17/2021

Sample ID: 202110210116

Client Sample ID for reference onl  
AIEA WELLS PUMPS 1&2 (260)-331-203-TP400

JLS

Sample type: Method

Prep Method

EPA 624.1 Analysis Requested

Acetone by 624.1

Sample ID: 202110210117

Client Sample ID for reference onl  
TRAVEL BLANK::AIEA WELLS PUMPS 1&2 (260)-331-203-TP400

JLS

Sample type: Method

Prep Method

EPA 624.1 Analysis Requested

Acetone by 624.1

Relinquished by: [Signature]

Sample Control

Date: 10/22/21 Time: 1434

Received by: [Signature]

Sample Control

Date: 10/22/21 Time: 1434

Relinquished by: [Signature]

Sample Control

Date: Time

Received by: [Signature]

Sample Control

Date: Time

Submittal Form

Date: 10/22/2021

\*REPORTING REQUIREMENTS: Do Not Combine Reports with any other samples submitted under different Folder Numbers!  
Report & Invoice must have the Folder # 965349 Job # 1000014

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

Reports: Jackie Contreras Sub-Contracting Administrator  
EMAIL TO: Eaton-MonroviaSubContract@eurofins.com

Eurofins Eaton Analytical, LLC 750 Royal Oaks Drive, Suite 100, Monrovia, CA 91016  
Phone (626) 386-1165 Fax (626) 386-1122

Invoices to: Eurofins Eaton Analytical, LLC  
Accounts Payable 2425 New Holland Pike, Lancaster, PA 17605

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

Samples from: HAWAII



440-290409 Chain of Custody

JLS 10/22/21

61.5 IR-90

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attr. Jackie Contreras

# Login Sample Receipt Checklist

Client: Eurofins Eaton Analytical

Job Number: 440-290409-1

SDG Number: 1000014

**Login Number: 290409**

**List Number: 1**

**Creator: Lagunas, Jorge L**

**List Source: Eurofins Calscience Irvine**

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

