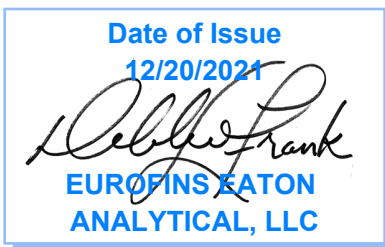


750 Royal Oaks Drive, Suite 100  
Monrovia, California 91016-3629  
Tel: (626) 386-1100  
Fax: (866) 988-3757  
1 800 566 LABS (1 800 566 5227)

## 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: 973343  
Project: INTERA  
Group: RUSH Incident Follow-up TPH (2021)

\* Accredited in accordance with TNI 2016 and ISO/IEC 17025:2017.

\* Laboratory certifies that the test results meet all **TNI 2016 and ISO/IEC 17025:2017** requirements unless noted under the individual analysis.

\* As applicable, this report consists of the cover page, State Certification List, ISO 17025 Accredited Method List, Acknowledgement of Samples Received, Comments, Hits Report, Data Report, QC Summary, QC Report and Regulatory Forms.

\* Test results relate only to the sample(s) tested.

\* Test results apply to the sample(s) as received, unless otherwise noted in the comments report (ISO/IEC 17025:2017).

\* This report shall not be reproduced except in full, without the written approval of the laboratory.

\* This report includes ISO/IEC 17025 and non-ISO 17025 accredited methods.

## STATE CERTIFICATION LIST

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

\* NELAP/TNI Recognized Accreditation Bodies

ISO/IEC 17025:2917 Accredited Method List

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

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

<https://www.eurofinsus.com/Eaton>

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

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

(+ ) In-House Method

**Acknowledgement of Samples Received**

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

Attn: Erwin Kawata  
 Phone: 808-748-5091

Client ID: HONOLULU  
 Folder #: 973343  
 Project: INTERA  
 Sample Group: RUSH Incident Follow-up TPH (2021)

Project Manager: Debbie L Frank  
 Phone: (626) 386-1149  
 PO #: C20525101 exp 05312023

The following samples were received from you on **December 07, 2021 at 1109**. 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
202112070283	BWS2253-J1-AQ	12/06/2021 1030
	Static ID: Raw+MS/MSD vol for 600/8000	
	@525PLUS PLUS TICS	@625A_Physis
	@625PAH_Physis_TICS	@8015 Ethanol_Subbed
	@VOA-TBA	(SUB)Gas Fraction Hydrocarbons
	Miscellaneous Charges	TPH 8015 Diesel and Motor Oil
	TPH 8015 Jef Fuel 8	TPH 8015 Jet Fuel 5
202112070284	TRAVEL BLANK Raw	12/06/2021 1030
	@VOASDWA plus plus TICS TB	@VOA-TBA TB
		(SUB)Gas Fraction Hydrocarbons
202112070388	RUSH Kit 306241	12/06/2021 10:30
	RUSH Sample Kit	
202112070389	RUSH Kit 306405 Saturday Delivery - supplemental Kit INTERA	12/06/2021 10:30
	RUSH Sample Kit	
202112070390	RUSH	12/06/2021 10:30
	RUSH	

**Test Description**

- @525PLUS PLUS TICS -- Semivolatiles by GCMS
- @625A\_Physis -- 625 Acid Extractable in ug/L
- @625BN\_Physis -- 625 Base Neutral Extractable in ug/L
- @625PAH\_Physis\_TICS -- 625PAH in ug/L
- @8015 Ethanol\_Subbed -- Ethanol
- @VOASDWA plus plus TICS -- Volatile Organics by GCMS
- @VOASDWA plus plus TICS TB -- Volatile Organics by GCMS
- @VOA-TBA -- TBA by EPA 524.2 Modified
- @VOA-TBA TB -- TBA by EPA 524.2 Modified





Eaton Analytical

# INTERNAL CHAIN OF CUSTODY RECORD

EEA Folder Number:

973343

## 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 RECD DAY OF COLLECTION? Yes / No

IR Gun ID = 088A (Observation = 3.3 °C) (Corr. Factor = 0.1 °C) (Final = 3.2 °C)

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

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

### Compliance Acceptance Criteria:

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

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

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

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

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

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

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

Exempt from headspace concerns: Methods 815.4, HAA(8251, 652), 605, BPME, @CH, 632LCMS, 656, 639, Anatoxin, LCMS methods using 40 ml vials, International clients:

Samp ID	Bottle #	mm	Test	Samp ID	Bottle #	mm	Test	Samp ID	Bottle #	mm	Test

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

RECEIVED BY: \_\_\_\_\_ SIGNATURE

PRINT NAME: WUD 1

COMPANY/TITLE: Eurofins Eaton Analytical

DATE: 12/2/21 TIME: 11:09

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

PRINT NAME: Eurofins Eaton Analytical

DATE: \_\_\_\_\_ TIME: \_\_\_\_\_



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: 12/3/2021 11:17:27AM

**Note: Sampler Please return this paper with your samples**

Kit #: 306405  
 Created By: Debbie L Frank - [DEB]  
 Deliver By: 12/04/2021  
 STG: Bottle Orders  
 Ice Type: W

Client ID: HONOLULU  
 Project Code: INTERA Bottle Orders  
 Group Name: RUSH Incident Follow-up TPH (2021)  
 PO#/JOB#: C20525101 exp 05312023  
 Description: Supplemental Consumer Complain

**Ship Sample Kits to**  
 INTERA Incorporated  
 41-038 A Manana Street  
 Waimanalo, HI 96795  
 Attn: Kevin Gooding- Ship INTERA  
 Phone: 808.382.6853

**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	@625PLUS-PLUS-TICS ✓	2 - 1L amber glass [ 2ml of 6N HCl ]	2	UN1789
1	@625A_Physis, @625PAH_Physis_TICS ✓	1 - 1L amber glass [ no preservative ]	1	
1	@625BN_Physis ✓	1 - 1L amber glass [ no preservative ]	1	
1	@625PAH_Physis_TICS ✓	8 - 1L amber glass [ no preservative ]	8	
1	@VOA-TBA ✓	4 - 40ml amber glass vial [ 4 drops 1:1 HCL ]	4	UN1789
1	@VOA-TBA TB ✓	2 - 40ml amber glass vial [ 4 drops of 1:1 HCL + H2O ]	2	UN1789
1	@VOASDWA plus plus TICS ✓	4 - 40ml amber glass vial [ 4drops 6N HCL (36%) ]	4	UN1789
1	Acetone by 624_Subbed ✓	4 - 40ml amber glass vial [ 4drops of 1:1 HCL ]	4	UN1789
1	@VOASDWA plus plus TICS TB ✓	2 - 40ml amber glass vial [ 4drops of 1:1 HCL + H2O ]	2	UN1789
<b>Sum Tests: 9</b>			<b>Sum Bottles: 28</b>	

**Comments**  
 Ship for Saturday delivery. if Saturday is not possible to delivery address noted, ship to local FEDEX office that does receive Saturday deliveries from the mainland. ADVISE ASAP if not available to either.  
 notify DEB with AB# and delivery location.  
 Acetone by 624 is only for use if confirmation testing is needed - do not log





Type of Delivery <input checked="" type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input type="checkbox"/> EMAX Courier <input type="checkbox"/> Client Delivery	Airbill / Tracking Number 2871 5693 3000	ECN <u>21 L052</u> Recipient <u>Jocelyne Solis-Ramus</u> Date <u>12/07/21</u> Time <u>9:00</u>
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**COC INSPECTION**

<input checked="" type="checkbox"/> Client Name	<input type="checkbox"/> Client PM/FC	<input checked="" 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 checked="" type="checkbox"/> TAT
Safety Issues (if any)	<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required		

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>1.3/0.0</u> °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Thermometer:	A - S/N <u>210191060</u>	B - S/N <u>210271396</u>	C - S/N <u>210271399</u>

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

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

**DISCREPANCIES**

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
2	18,19	D3	ID on label: Travel Blank Raw	
2	18,19	D6/D7	date on label reads 11/10/21, no time listed	

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:**

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**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><input checked="" type="checkbox"/> 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><input checked="" type="checkbox"/> D6 Date/Time is not indicated in <u>label/COC</u></p> <p><input checked="" type="checkbox"/> D7 Date/Time mismatch COC vs label</p> <p>D8 Sample listed in COC is not received</p> <p>D9 Sample received is not listed in COC</p> <p>D10 No initial/date on corrections in COC/label</p> <p>D11 Container count mismatch COC vs received</p> <p>D12 Container size mismatch COC vs received</p>	<p><b>Code Description-Sample Management</b></p> <p>D13 Out of Holding Time</p> <p>D14 Bubble is &gt;6mm</p> <p>D15 No trip blank in cooler</p> <p>D16 Preservation not indicated in _____</p> <p>D17 Preservation mismatch COC vs label</p> <p>D18 Insufficient chemical preservative</p> <p>D19 Insufficient Sample</p> <p>D20 No filtration info for dissolved analysis</p> <p>D21 No sample for moisture determination</p> <p>D22 _____</p> <p>D23 _____</p> <p>D24 _____</p>	<p><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 _____</p> <p>R9 _____</p> <p>R10 _____</p> <p>R11 _____</p> <p>R12 _____</p>
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**REVIEWS:**

Sample Labeling <u>Jocelyne Solis-Ramus</u> Date <u>12/07/21</u>	SRF _____ Date _____	PM _____ Date _____
---	-------------------------	------------------------





Eaton Analytical

**Kit Order for Honolulu Board of Water Supply**

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

750 Royal Oaks Drive, Suite 100  
 Monrovia, California 91016-3629  
 (626) 386-1100 FAX (666) 988-3757

Created Date & Time: 12/1/2021 2:12:49PM

**Note: Sampler Please return this paper with your samples**

Client ID: HONOLULU  
 Project Code: INTERA Bottle Orders  
 Group Name: RUSH Incident Follow-up TPH (2021)  
 PO#/JOB#: C20525101 exp 05312023  
 Description: Consumer Complaint

Kit #: 306241

Created By: Debbie L Frank - [DEB]  
 Deliver By: 12/02/2021  
 STG: Bottle Orders

Ice Type: W  
 Pre Registered

**Ship Sample Kits to**  
 INTERA Incorporated  
 41-038 A Manana Street  
 Waimanalo, HI 96795  
 Attn: Kevin Gooding- Ship INTERA  
 Phone: 808.382.6853

**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	TPH 8015 Diesel and Motor Oil, TPH 8015 Jet Fuel 8 <del>100</del>	5	
1	TPH 8015 Jet Fuel 5 <del>100</del>	4	
1	8015 Gas Travel Blank <del>100</del>	2	UN1789
1	@8015 Ethanol_Subbed <del>100</del>	4	
1	8015 Gas <del>100</del>	4	

**Sum Tests: 5**

**Sum Bottles: 19**

**Comments**

Extra Volume for randomly selected Batch QC. Sample may not be chosen for batch QC.

Sampler - RUSH testing Ship direct to the 8015 testing lab. with note on COC to Bill and repot to EEA-monrovia

EMAX  
 Richard M. Beauvil  
 Project Manager/Safety Officer  
 3051 Fujita Street  
 Torrance, CA 90505  
 Tel: 310-618-8889 X118  
 rbeauvil@emaxlabs.com

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

**Report:** 973343  
**Project:** INTERA  
**Group:** RUSH Incident Follow-up TPH (2021)

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

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**Folder Comments**

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

Results for Acetone are submitted by Eurofins Calscience in Irvine CA CA Cert 2706 6-30-22

Results for 625 PAHs, BNA and ACIDs are submitted by Physis Environmental Laboratoires, Inc.

Subcontracted Data -- Please review Subcontractor's report in full. EEA enters Subcontractor data into EEA system for archive tracking purposes of final result. EEA reports results to 2 sigfig. See subcontractor's report for Qualifier definition.

ND reporting (subcontract lab reports)

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

Tentatively Identified compounds (TIC).

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

@625mod (Low Level SVOCs by GCMS (PAH/BNA - Base/Neutral/Acid Extractables)  
See subcontractor's report. Physis reports TICs in addendum report titled Total Ion Chromatogram.

@524.2 (VOC by GCMS)

202112070283	524.2	TICs	None Detected
202112070284	524.2	TICs	None Detected

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

Report: 973343  
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**Honolulu Board of Water Supply**  
Erwin Kawata  
630 South Beretania Street  
Public Service Bldg." Room 308  
Honolulu, HI 96843

Samples Received on:  
12/07/2021 1109

Analyzed	Analyte	Sample ID	Result	HI Limit	Units	MRL
12/12/2021 00:00	Benzoic acid	<b><u>BWS2253-J1-AQ</u></b>	0.47		ug/L	0.2

Tel: (626) 386-1100  
 Fax: (866) 988-3757  
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 Group: RUSH Incident Follow-up TPH (2021)

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

Samples Received on:  
 12/07/2021 1109

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
<b>BWS2253-J1-AQ (202112070283)</b>						<b>Sampled on 12/06/2021 1030</b>			
Static ID: Raw+MS/MSD vol for 600/8000									
<b>EPA 525.2 - Semivolatiles by GCMS</b>									
12/08/21	12/12/21 19:03	1372227	1374135	(EPA 525.2)	Benz(a)Anthracene	ND	ug/L	0.050	1
12/08/21	12/12/21 19:03	1372227	1374135	(EPA 525.2)	1,3-Dimethyl-2-nitrobenzene	94	%		1
12/08/21	12/12/21 19:03	1372227	1374135	(EPA 525.2)	Acenaphthene-d10	89	%		1
12/08/21	12/12/21 19:03	1372227	1374135	(EPA 525.2)	Chrysene-d12	89	%		1
12/08/21	12/12/21 19:03	1372227	1374135	(EPA 525.2)	Perylene-d12	92	%		1
12/08/21	12/12/21 19:03	1372227	1374135	(EPA 525.2)	Phenanthrene-d10	93	%		1
12/08/21	12/12/21 19:03	1372227	1374135	(EPA 525.2)	Triphenylphosphate	103	%		1
<b>SW 8015B - (SUB)Gas Fraction Hydrocarbons</b>									
12/07/21	12/07/21 15:46			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.02	1
<b>SW 8015B - TPH 8015 Diesel and Motor Oil</b>									
12/07/21	12/08/21 18:25			(SW 8015B)	TPH Diesel	ND	mg/L	0.027	1
12/07/21	12/08/21 18:25			(SW 8015B)	TPH Motor Oil	ND	mg/L	0.055	1
<b>EPA 8015 - Jet Fuel 5 C8-C18</b>									
12/07/21	12/08/21 18:25			(EPA 8015)	Jet Fuel 5	ND	mg/L	0.055	1
<b>EPA 625 - 625PAH in ug/L</b>									
12/07/21	12/12/21 00:00			(EPA 625)	1-Methylnaphthalene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	1-Methylphenanthrene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	2,3,5-Trimethylnaphthalene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	2,4,6-Trichlorophenol	NA	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	2,6-Dimethylnaphthalene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	2-Methylnaphthalene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Acenaphthene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Acenaphthylene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Anthracene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Benz(a)Anthracene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Benzo(a)pyrene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Benzo(b)fluoranthene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Benzo(e)pyrene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Benzo(g,h,i)perylene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Benzo(k)fluoranthene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Biphenyl	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Chrysene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Dibenz(a,h)Anthracene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Dibenzo(a,l)pyrene	ND	ug/L	0.005	1

Rounding on totals after summation.  
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12/07/21	12/12/21 00:00			(EPA 625)	Dibenzothiophene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Fluoranthene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Fluorene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Indeno(1,2,3,c,d)Pyrene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Naphthalene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Pentachlorophenol	NA	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	Perylene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Phenanthrene	ND	ug/L	0.005	1
12/07/21	12/12/21 00:00			(EPA 625)	Pyrene	ND	ug/L	0.005	1
<b>EPA 8015 - Jet Fuel 8 C8-C18</b>									
	12/08/21 18:25			(EPA 8015)	Jet Fuel 8	ND	mg/L	0.055	1
<b>EPA 625 - 625 Acid Extractable in ug/L</b>									
12/07/21	12/12/21 00:00			(EPA 625)	2,4,5-Trichlorophenol	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	2,4,6-Trichlorophenol	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	2,4-Dichlorophenol	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	2,4-Dinitrophenol	ND	ug/L	0.2	1
12/07/21	12/12/21 00:00			(EPA 625)	2,6-Dichlorophenol	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	2,6-Di-tert-butyl-4-methylphenol	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	2,6-Di-tert-butylphenol	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	2-Chlorophenol	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	2-Methylphenol	ND	ug/L	0.2	1
12/07/21	12/12/21 00:00			(EPA 625)	2-Nitrophenol	ND	ug/L	0.2	1
12/07/21	12/12/21 00:00			(EPA 625)	4,6-Dinitro-2-methylphenol	ND	ug/L	0.2	1
12/07/21	12/12/21 00:00			(EPA 625)	4-Chloro-3-methyl phenol	ND	ug/L	0.2	1
12/07/21	12/12/21 00:00			(EPA 625)	4-Methylphenol	ND	ug/L	0.2	1
12/07/21	12/12/21 00:00			(EPA 625)	4-Nitrophenol	ND	ug/L	0.2	1
12/07/21	12/12/21 00:00			(EPA 625)	6-tert-Butyl-2,4-dimethylphenol	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	Benzoic acid	0.47	ug/L	0.2	1
12/07/21	12/12/21 00:00			(EPA 625)	Benzyl alcohol	ND	ug/L	0.2	1
12/07/21	12/12/21 00:00			(EPA 625)	pentachlorophenol	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	Phenol	ND	ug/L	0.2	1
12/07/21	12/12/21 00:00			(EPA 625)	p-tert-Butylphenol	ND	ug/L	0.1	1
<b>EPA 625 - 625 Base Neutral Extractable in ug/L</b>									
12/07/21	12/12/21 00:00			(EPA 625)	2-Chloronaphthalene	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	2-Nitroaniline	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	3-Nitroaniline	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	4-Bromophenylphenyl Ether	ND	ug/L	0.1	1

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12/07/21	12/12/21 00:00			(EPA 625)	4-Chlorophenylphenyl Ether	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	4-Nitroaniline	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	Aniline	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	Benzidine	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	bis(2-Chloroethoxy)methane	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	bis(2-Chloroethyl)ether	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	bis(2-Chloroisopropyl) ether	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	Dibenzofuran	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	Disalicylidenepropanediamine	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	Hexachloroethane	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	Nitrobenzene	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	N-Nitrosodi-N-propylamine	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	N-Nitrosodiphenylamine	ND	ug/L	0.1	1
12/07/21	12/12/21 00:00			(EPA 625)	p-Chloroaniline	ND	ug/L	0.1	1
<b>EPA 624.1 - Acetone by 624.1</b>									
	12/09/21 16:58			(EPA 624.1)	Acetone	ND	ug/L	20	1
<b>SW8015C - Ethanol</b>									
	12/07/21 14:29			(SW8015C)	Ethanol	ND	ug/L	2000	1
<b>EPA 524.2 - Volatile Organics by GCMS</b>									
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5.0	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	2-Hexanone	ND	ug/L	10	1

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12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Acetone	ND	ug/L	10	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Benzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Bromobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Bromoethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Bromoform	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Chloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Chloroform (Trichloromethane)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Dibromomethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Dichloromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3.0	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Naphthalene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	o-Xylene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.50	1

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12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Styrene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3.0	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3.0	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Toluene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Total THM	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Total xylenes	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.30	1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	1,2-Dichloroethane-d4	97	%		1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	4-Bromofluorobenzene	102	%		1
12/09/21	12/09/21 17:27	1372837	1372838	(EPA 524.2)	Toluene-d8	93	%		1

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

12/09/21	12/09/21 01:48	1372522	1372525	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2.0	1
12/09/21	12/09/21 01:48	1372522	1372525	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	114	%		1
12/09/21	12/09/21 01:48	1372522	1372525	(EPA 524.2 SIM)	4-Bromofluorobenzene	92	%		1
12/09/21	12/09/21 01:48	1372522	1372525	(EPA 524.2 SIM)	Toluene-d8	102	%		1

**TRAVEL BLANK Raw (202112070284)**

Sampled on 12/06/2021 1030

**SW 8015B - (SUB)Gas Fraction Hydrocarbons**

12/07/21	12/07/21 15:10			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.02	1
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**EPA 524.2 - Volatile Organics by GCMS**

12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,1,1,2-Tetrachloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,1,1-Trichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,1,2,2-Tetrachloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,1,2-Trichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,1-Dichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,1-Dichloroethylene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,1-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,2,3-Trichlorobenzene	ND	ug/L	0.50	1

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

**Report:** 973343  
**Project:** INTERA  
**Group:** RUSH Incident Follow-up TPH (2021)

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

Samples Received on:  
 12/07/2021 1109

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,2,3-Trichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,2,4-Trichlorobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,2,4-Trimethylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,2-Dichloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,2-Dichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,3,5-Trimethylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,3-Dichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	2,2-Dichloropropane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	2-Butanone (MEK)	ND	ug/L	5.0	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	2-Hexanone	ND	ug/L	10	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	4-Methyl-2-Pentanone (MIBK)	ND	ug/L	5.0	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Acetone	ND	ug/L	10	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Benzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Bromobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Bromochloromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Bromodichloromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Bromoethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Bromoform	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Bromomethane (Methyl Bromide)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Carbon disulfide	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Carbon Tetrachloride	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Chlorobenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Chlorodibromomethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Chloroethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Chloroform (Trichloromethane)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Chloromethane(Methyl Chloride)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	cis-1,2-Dichloroethylene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	cis-1,3-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Dibromomethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Dichlorodifluoromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Dichloromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Di-isopropyl ether	ND	ug/L	3.0	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Ethyl benzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Hexachlorobutadiene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Isopropylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	m,p-Xylenes	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	m-Dichlorobenzene (1,3-DCB)	ND	ug/L	0.50	1

Rounding on totals after summation.  
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**Report:** 973343  
**Project:** INTERA  
**Group:** RUSH Incident Follow-up TPH (2021)

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

Samples Received on:  
 12/07/2021 1109

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Methyl Tert-butyl ether (MTBE)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Naphthalene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	n-Butylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	n-Propylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	o-Chlorotoluene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	o-Dichlorobenzene (1,2-DCB)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	o-Xylene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	p-Chlorotoluene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	p-Dichlorobenzene (1,4-DCB)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	p-Isopropyltoluene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	sec-Butylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Styrene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	tert-amyl Methyl Ether	ND	ug/L	3.0	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	tert-Butyl Ethyl Ether	ND	ug/L	3.0	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	tert-Butylbenzene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Tetrachloroethylene (PCE)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Toluene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Total 1,3-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Total THM	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Total xylenes	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	trans-1,2-Dichloroethylene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	trans-1,3-Dichloropropene	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Trichloroethylene (TCE)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Trichlorofluoromethane	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Trichlorotrifluoroethane(Freon 113)	ND	ug/L	0.50	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Vinyl chloride (VC)	ND	ug/L	0.30	1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	1,2-Dichloroethane-d4	102	%		1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	4-Bromofluorobenzene	102	%		1
12/09/21	12/09/21 17:49	1372837	1372838	(EPA 524.2)	Toluene-d8	95	%		1
<b>EPA 524.2 SIM - TBA by EPA 524.2 Modified</b>									
12/09/21	12/09/21 02:11	1372522	1372525	(EPA 524.2 SIM)	t-Butyl Alcohol	ND	ug/L	2.0	1
12/09/21	12/09/21 02:11	1372522	1372525	(EPA 524.2 SIM)	1,2-Dichloroethane-d4	116	%		1
12/09/21	12/09/21 02:11	1372522	1372525	(EPA 524.2 SIM)	4-Bromofluorobenzene	94	%		1
12/09/21	12/09/21 02:11	1372522	1372525	(EPA 524.2 SIM)	Toluene-d8	100	%		1

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**Report:** 973343  
**Project:** INTERA  
**Group:** RUSH Incident Follow-up TPH (2021)

Honolulu Board of Water Supply

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**TBA by EPA 524.2 Modified**

**Prep Batch: 1372522 Analytical Batch: 1372525**

202112070283 BWS2253-J1-AQ  
202112070284 TRAVEL BLANK Raw

**Analysis Date: 12/09/2021**

Analyzed by: KCP  
Analyzed by: KCP

**Volatile Organics by GCMS**

**Prep Batch: 1372837 Analytical Batch: 1372838**

202112070283 BWS2253-J1-AQ  
202112070284 TRAVEL BLANK Raw

**Analysis Date: 12/09/2021**

Analyzed by: KCP  
Analyzed by: KCP

**Semivolatiles by GCMS**

**Prep Batch: 1372227 Analytical Batch: 1374135**

202112070283 BWS2253-J1-AQ

**Analysis Date: 12/12/2021**

Analyzed by: PAC

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 1 800 566 LABS (1 800 566 5227)

Report: 973343  
 Project: INTERA  
 Group: RUSH Incident Follow-up TPH (2021)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
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**TBA by EPA 524.2 Modified by EPA 524.2 SIM**

Analytical Batch: 1372525

Analysis Date: 12/08/2021

LCS1	1,2-Dichloroethane-d4 (S)			112	%	112	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)			110	%	110	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			114	%	114	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)			114	%	114	(70-130)		
LCS1	4-Bromofluorobenzene (S)			94.0	%	94	(70-130)		
LCS2	4-Bromofluorobenzene (S)			94.0	%	94	(70-130)		
MBLK	4-Bromofluorobenzene (S)			90.0	%	90	(70-130)		
MRL_CHK	4-Bromofluorobenzene (S)			94.0	%	94	(70-130)		
LCS1	t-Butyl Alcohol		5	6.45	ug/L	129	(70-130)		
LCS2	t-Butyl Alcohol		5	6.18	ug/L	123	(70-130)	20	4.3
MBLK	t-Butyl Alcohol			<2	ug/L				
MRL_CHK	t-Butyl Alcohol		2	2.56	ug/L	128	(50-150)		
LCS1	Toluene-d8 (S)			98.0	%	98	(70-130)		
LCS2	Toluene-d8 (S)			100	%	100	(70-130)		
MBLK	Toluene-d8 (S)			102	%	102	(70-130)		
MRL_CHK	Toluene-d8 (S)			102	%	102	(70-130)		

**Volatile Organics by GCMS by EPA 524.2**

Analytical Batch: 1372838

Analysis Date: 12/09/2021

LCS1	1,1,1,2-Tetrachloroethane		5	5.07	ug/L	101	(70-130)		
LCS2	1,1,1,2-Tetrachloroethane		5	5.00	ug/L	100	(70-130)	20	1.4
MBLK	1,1,1,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,1,2-Tetrachloroethane		0.5	0.440	ug/L	88	(50-150)		
LCS1	1,1,1-Trichloroethane		5	4.86	ug/L	97	(70-130)		
LCS2	1,1,1-Trichloroethane		5	4.93	ug/L	99	(70-130)	20	1.4
MBLK	1,1,1-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,1-Trichloroethane		0.5	0.460	ug/L	92	(50-150)		
LCS1	1,1,2,2-Tetrachloroethane		5	5.16	ug/L	103	(70-130)		
LCS2	1,1,2,2-Tetrachloroethane		5	4.91	ug/L	98	(70-130)	20	5.0
MBLK	1,1,2,2-Tetrachloroethane			<0.5	ug/L				
MRL_CHK	1,1,2,2-Tetrachloroethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,1,2-Trichloroethane		5	4.87	ug/L	97	(70-130)		
LCS2	1,1,2-Trichloroethane		5	4.80	ug/L	96	(70-130)	20	1.5
MBLK	1,1,2-Trichloroethane			<0.5	ug/L				
MRL_CHK	1,1,2-Trichloroethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,1-Dichloroethane		5	4.94	ug/L	99	(70-130)		

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: 973343  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	1,1-Dichloroethane		5	4.98	ug/L	100	(70-130)	20	0.81
MBLK	1,1-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethane		0.5	0.540	ug/L	108	(50-150)		
LCS1	1,1-Dichloroethylene		5	5.37	ug/L	107	(70-130)		
LCS2	1,1-Dichloroethylene		5	5.26	ug/L	105	(70-130)	20	2.1
MBLK	1,1-Dichloroethylene			<0.5	ug/L				
MRL_CHK	1,1-Dichloroethylene		0.5	0.600	ug/L	120	(50-150)		
LCS1	1,1-Dichloropropene		5	5.16	ug/L	103	(70-130)		
LCS2	1,1-Dichloropropene		5	5.06	ug/L	101	(70-130)	20	2.0
MBLK	1,1-Dichloropropene			<0.5	ug/L				
MRL_CHK	1,1-Dichloropropene		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,2,3-Trichlorobenzene		5	4.93	ug/L	99	(70-130)		
LCS2	1,2,3-Trichlorobenzene		5	4.97	ug/L	99	(70-130)	20	0.81
MBLK	1,2,3-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,3-Trichlorobenzene		0.5	0.530	ug/L	106	(50-150)		
LCS1	1,2,3-Trichloropropane		5	5.00	ug/L	100	(70-130)		
LCS2	1,2,3-Trichloropropane		5	4.74	ug/L	95	(70-130)	20	5.3
MBLK	1,2,3-Trichloropropane			<0.5	ug/L				
MRL_CHK	1,2,3-Trichloropropane		0.5	0.480	ug/L	96	(50-150)		
LCS1	1,2,4-Trichlorobenzene		5	4.97	ug/L	99	(70-130)		
LCS2	1,2,4-Trichlorobenzene		5	5.07	ug/L	101	(70-130)	20	2.0
MBLK	1,2,4-Trichlorobenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trichlorobenzene		0.5	0.550	ug/L	110	(50-150)		
LCS1	1,2,4-Trimethylbenzene		5	5.30	ug/L	106	(70-130)		
LCS2	1,2,4-Trimethylbenzene		5	5.21	ug/L	104	(70-130)	20	1.7
MBLK	1,2,4-Trimethylbenzene			<0.5	ug/L				
MRL_CHK	1,2,4-Trimethylbenzene		0.5	0.490	ug/L	98	(50-150)		
LCS1	1,2-Dichloroethane		5	5.06	ug/L	101	(70-130)		
LCS2	1,2-Dichloroethane		5	5.01	ug/L	100	(70-130)	20	0.99
MBLK	1,2-Dichloroethane			<0.5	ug/L				
MRL_CHK	1,2-Dichloroethane		0.5	0.490	ug/L	98	(50-150)		
LCS1	1,2-Dichloroethane-d4 (S)		5	98.2	%	98	(70-130)		
LCS2	1,2-Dichloroethane-d4 (S)		5	98.2	%	98	(70-130)		
MBLK	1,2-Dichloroethane-d4 (S)			99.6	%	100	(70-130)		
MRL_CHK	1,2-Dichloroethane-d4 (S)		5	99.8	%	100	(70-130)		
MRLLW	1,2-Dichloroethane-d4 (S)		5	98.8	%	99	(70-130)		
LCS1	1,2-Dichloropropane		5	4.94	ug/L	99	(70-130)		
LCS2	1,2-Dichloropropane		5	4.91	ug/L	98	(70-130)	20	0.61

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: 973343  
 Project: INTERA  
 Group: RUSH Incident Follow-up TPH (2021)

Honolulu Board of Water Supply

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

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: 973343  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Benzene		0.5	0.520	ug/L	104	(50-150)		
LCS1	Bromobenzene		5	5.15	ug/L	103	(70-130)		
LCS2	Bromobenzene		5	5.04	ug/L	101	(70-130)	20	2.2
MBLK	Bromobenzene			<0.5	ug/L				
MRL_CHK	Bromobenzene		0.5	0.490	ug/L	98	(50-150)		
LCS1	Bromochloromethane		5	4.91	ug/L	98	(70-130)		
LCS2	Bromochloromethane		5	4.91	ug/L	98	(70-130)	20	0.0
MBLK	Bromochloromethane			<0.5	ug/L				
MRL_CHK	Bromochloromethane		0.5	0.470	ug/L	94	(50-150)		
LCS1	Bromodichloromethane		5	4.96	ug/L	99	(70-130)		
LCS2	Bromodichloromethane		5	4.86	ug/L	97	(70-130)	20	2.0
MBLK	Bromodichloromethane			<0.5	ug/L				
MRL_CHK	Bromodichloromethane		0.5	0.420	ug/L	84	(50-150)		
LCS1	Bromoethane		5	4.92	ug/L	98	(70-130)		
LCS2	Bromoethane		5	5.03	ug/L	101	(70-130)	20	2.2
MBLK	Bromoethane			<0.5	ug/L				
MRL_CHK	Bromoethane		0.5	0.570	ug/L	114	(50-150)		
LCS1	Bromoform		5	5.18	ug/L	104	(70-130)		
LCS2	Bromoform		5	4.76	ug/L	95	(70-130)	20	8.4
MBLK	Bromoform			<0.5	ug/L				
MRL_CHK	Bromoform		0.5	0.570	ug/L	114	(50-150)		
LCS1	Bromomethane (Methyl Bromide)		5	5.10	ug/L	102	(70-130)		
LCS2	Bromomethane (Methyl Bromide)		5	5.14	ug/L	103	(70-130)	20	0.78
MBLK	Bromomethane (Methyl Bromide)			<0.5	ug/L				
MRL_CHK	Bromomethane (Methyl Bromide)		0.5	0.600	ug/L	120	(50-150)		
LCS1	Carbon disulfide		5	4.52	ug/L	90	(70-130)		
LCS2	Carbon disulfide		5	4.52	ug/L	90	(70-130)	20	0.0
MBLK	Carbon disulfide			<0.5	ug/L				
MRL_CHK	Carbon disulfide		0.5	0.430	ug/L	86	(50-150)		
LCS1	Carbon Tetrachloride		5	5.27	ug/L	105	(70-130)		
LCS2	Carbon Tetrachloride		5	5.34	ug/L	107	(70-130)	20	1.3
MBLK	Carbon Tetrachloride			<0.5	ug/L				
MRL_CHK	Carbon Tetrachloride		0.5	0.430	ug/L	86	(50-150)		
LCS1	Chlorobenzene		5	5.00	ug/L	100	(70-130)		
LCS2	Chlorobenzene		5	5.01	ug/L	100	(70-130)	20	0.20
MBLK	Chlorobenzene			<0.5	ug/L				
MRL_CHK	Chlorobenzene		0.5	0.460	ug/L	92	(50-150)		
LCS1	Chlorodibromomethane		5	4.83	ug/L	97	(70-130)		

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: 973343  
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Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS2	Chlorodibromomethane		5	4.82	ug/L	96	(70-130)	20	0.21
MBLK	Chlorodibromomethane			<0.5	ug/L				
MRL_CHK	Chlorodibromomethane		0.5	0.520	ug/L	104	(50-150)		
LCS1	Chloroethane		5	5.18	ug/L	104	(70-130)		
LCS2	Chloroethane		5	4.86	ug/L	97	(70-130)	20	6.4
MBLK	Chloroethane			<0.5	ug/L				
MRL_CHK	Chloroethane		0.5	0.640	ug/L	128	(50-150)		
LCS1	Chloroform (Trichloromethane)		5	4.85	ug/L	97	(70-130)		
LCS2	Chloroform (Trichloromethane)		5	4.84	ug/L	97	(70-130)	20	0.21
MBLK	Chloroform (Trichloromethane)			<0.5	ug/L				
MRL_CHK	Chloroform (Trichloromethane)		0.5	0.510	ug/L	102	(50-150)		
LCS1	Chloromethane(Methyl Chloride)		5	4.84	ug/L	97	(70-130)		
LCS2	Chloromethane(Methyl Chloride)		5	4.81	ug/L	96	(70-130)	20	0.62
MBLK	Chloromethane(Methyl Chloride)			<0.5	ug/L				
MRL_CHK	Chloromethane(Methyl Chloride)		0.5	0.640	ug/L	128	(50-150)		
LCS1	cis-1,2-Dichloroethylene		5	5.18	ug/L	104	(70-130)		
LCS2	cis-1,2-Dichloroethylene		5	5.04	ug/L	101	(70-130)	20	2.7
MBLK	cis-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	cis-1,2-Dichloroethylene		0.5	0.530	ug/L	106	(50-150)		
LCS1	cis-1,3-Dichloropropene		5	4.93	ug/L	99	(70-130)		
LCS2	cis-1,3-Dichloropropene		5	4.95	ug/L	99	(70-130)	20	0.41
MBLK	cis-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	cis-1,3-Dichloropropene		0.5	0.400	ug/L	80	(50-150)		
LCS1	Dibromomethane		5	4.98	ug/L	100	(70-130)		
LCS2	Dibromomethane		5	4.84	ug/L	97	(70-130)	20	2.9
MBLK	Dibromomethane			<0.5	ug/L				
MRL_CHK	Dibromomethane		0.5	0.480	ug/L	96	(50-150)		
LCS1	Dichlorodifluoromethane		5	5.02	ug/L	100	(70-130)		
LCS2	Dichlorodifluoromethane		5	4.96	ug/L	99	(70-130)	20	1.2
MBLK	Dichlorodifluoromethane			<0.5	ug/L				
MRL_CHK	Dichlorodifluoromethane		0.5	0.510	ug/L	102	(50-150)		
LCS1	Dichloromethane		5	5.23	ug/L	105	(70-130)		
LCS2	Dichloromethane		5	5.07	ug/L	101	(70-130)	20	3.1
MBLK	Dichloromethane			<0.5	ug/L				
MRL_CHK	Dichloromethane		0.5	0.560	ug/L	112	(50-150)		
LCS1	Di-isopropyl ether		5	5.02	ug/L	100	(70-130)		
LCS2	Di-isopropyl ether		5	5.00	ug/L	100	(70-130)	20	0.40
MBLK	Di-isopropyl ether			<3.0	ug/L				

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.

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Di-isopropyl ether		0.5	0.540	ug/L	108	(50-150)		
LCS1	Ethyl benzene		5	5.06	ug/L	101	(70-130)		
LCS2	Ethyl benzene		5	4.98	ug/L	100	(70-130)	20	1.6
MBLK	Ethyl benzene			<0.5	ug/L				
MRL_CHK	Ethyl benzene		0.5	0.490	ug/L	98	(50-150)		
LCS1	Hexachlorobutadiene		5	4.96	ug/L	99	(70-130)		
LCS2	Hexachlorobutadiene		5	5.11	ug/L	102	(70-130)	20	3.0
MBLK	Hexachlorobutadiene			<0.5	ug/L				
MRL_CHK	Hexachlorobutadiene		0.5	0.550	ug/L	110	(50-150)		
LCS1	Isopropylbenzene		5	5.39	ug/L	108	(70-130)		
LCS2	Isopropylbenzene		5	5.16	ug/L	103	(70-130)	20	4.4
MBLK	Isopropylbenzene			<0.5	ug/L				
MRL_CHK	Isopropylbenzene		0.5	0.480	ug/L	96	(50-150)		
LCS1	m,p-Xylenes		10	10.1	ug/L	101	(70-130)		
LCS2	m,p-Xylenes		10	9.95	ug/L	100	(70-130)	20	1.5
MBLK	m,p-Xylenes			<0.5	ug/L				
MRL_CHK	m,p-Xylenes		1	0.890	ug/L	89	(50-150)		
MRLLW	m,p-Xylenes		0.5	0.480	ug/L	96	(50-150)		
LCS1	m-Dichlorobenzene (1,3-DCB)		5	5.24	ug/L	105	(70-130)		
LCS2	m-Dichlorobenzene (1,3-DCB)		5	5.11	ug/L	102	(70-130)	20	2.5
MBLK	m-Dichlorobenzene (1,3-DCB)			<0.5	ug/L				
MRL_CHK	m-Dichlorobenzene (1,3-DCB)		0.5	0.550	ug/L	110	(50-150)		
LCS1	Methyl Tert-butyl ether (MTBE)		5	5.00	ug/L	100	(70-130)		
LCS2	Methyl Tert-butyl ether (MTBE)		5	4.88	ug/L	98	(70-130)	20	2.4
MBLK	Methyl Tert-butyl ether (MTBE)			<0.5	ug/L				
MRL_CHK	Methyl Tert-butyl ether (MTBE)		0.5	0.490	ug/L	98	(50-150)		
LCS1	Naphthalene		5	4.85	ug/L	97	(70-130)		
LCS2	Naphthalene		5	4.90	ug/L	98	(70-130)	20	1.0
MBLK	Naphthalene			<0.5	ug/L				
MRL_CHK	Naphthalene		0.5	0.530	ug/L	106	(50-150)		
LCS1	n-Butylbenzene		5	4.98	ug/L	100	(70-130)		
LCS2	n-Butylbenzene		5	5.11	ug/L	102	(70-130)	20	2.6
MBLK	n-Butylbenzene			<0.5	ug/L				
MRL_CHK	n-Butylbenzene		0.5	0.500	ug/L	100	(50-150)		
LCS1	n-Propylbenzene		5	5.53	ug/L	111	(70-130)		
LCS2	n-Propylbenzene		5	5.37	ug/L	107	(70-130)	20	2.9
MBLK	n-Propylbenzene			<0.5	ug/L				
MRL_CHK	n-Propylbenzene		0.5	0.530	ug/L	106	(50-150)		

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.

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
LCS1	<u>o-Chlorotoluene</u>		5	5.40	ug/L	108	(70-130)		
LCS2	<u>o-Chlorotoluene</u>		5	5.19	ug/L	104	(70-130)	20	4.0
MBLK	<u>o-Chlorotoluene</u>			<0.5	ug/L				
MRL_CHK	<u>o-Chlorotoluene</u>		0.5	0.520	ug/L	104	(50-150)		
LCS1	<u>o-Dichlorobenzene (1,2-DCB)</u>		5	4.93	ug/L	99	(70-130)		
LCS2	<u>o-Dichlorobenzene (1,2-DCB)</u>		5	4.94	ug/L	99	(70-130)	20	0.20
MBLK	<u>o-Dichlorobenzene (1,2-DCB)</u>			<0.5	ug/L				
MRL_CHK	<u>o-Dichlorobenzene (1,2-DCB)</u>		0.5	0.500	ug/L	100	(50-150)		
LCS1	<u>o-Xylene</u>		5	5.08	ug/L	102	(70-130)		
LCS2	<u>o-Xylene</u>		5	4.88	ug/L	98	(70-130)	20	4.0
MBLK	<u>o-Xylene</u>			<0.5	ug/L				
MRL_CHK	<u>o-Xylene</u>		0.5	0.470	ug/L	94	(50-150)		
LCS1	<u>p-Chlorotoluene</u>		5	5.37	ug/L	107	(70-130)		
LCS2	<u>p-Chlorotoluene</u>		5	5.15	ug/L	103	(70-130)	20	4.2
MBLK	<u>p-Chlorotoluene</u>			<0.5	ug/L				
MRL_CHK	<u>p-Chlorotoluene</u>		0.5	0.510	ug/L	102	(50-150)		
LCS1	<u>p-Dichlorobenzene (1,4-DCB)</u>		5	5.28	ug/L	106	(70-130)		
LCS2	<u>p-Dichlorobenzene (1,4-DCB)</u>		5	5.12	ug/L	102	(70-130)	20	3.1
MBLK	<u>p-Dichlorobenzene (1,4-DCB)</u>			<0.5	ug/L				
MRL_CHK	<u>p-Dichlorobenzene (1,4-DCB)</u>		0.5	0.490	ug/L	98	(50-150)		
LCS1	<u>p-Isopropyltoluene</u>		5	5.37	ug/L	107	(70-130)		
LCS2	<u>p-Isopropyltoluene</u>		5	5.22	ug/L	104	(70-130)	20	2.8
MBLK	<u>p-Isopropyltoluene</u>			<0.5	ug/L				
MRL_CHK	<u>p-Isopropyltoluene</u>		0.5	0.460	ug/L	92	(50-150)		
LCS1	<u>sec-Butylbenzene</u>		5	5.39	ug/L	108	(70-130)		
LCS2	<u>sec-Butylbenzene</u>		5	5.29	ug/L	106	(70-130)	20	1.9
MBLK	<u>sec-Butylbenzene</u>			<0.5	ug/L				
MRL_CHK	<u>sec-Butylbenzene</u>		0.5	0.480	ug/L	96	(50-150)		
LCS1	<u>Styrene</u>		5	5.03	ug/L	101	(70-130)		
LCS2	<u>Styrene</u>		5	4.95	ug/L	99	(70-130)	20	1.6
MBLK	<u>Styrene</u>			<0.5	ug/L				
MRL_CHK	<u>Styrene</u>		0.5	0.430	ug/L	86	(50-150)		
LCS1	<u>tert-amyl Methyl Ether</u>		5	4.82	ug/L	96	(70-130)		
LCS2	<u>tert-amyl Methyl Ether</u>		5	4.79	ug/L	96	(70-130)	20	0.62
MBLK	<u>tert-amyl Methyl Ether</u>			<3.0	ug/L				
MRL_CHK	<u>tert-amyl Methyl Ether</u>		0.5	0.490	ug/L	98	(50-150)		
LCS1	<u>tert-Butyl Ethyl Ether</u>		5	5.18	ug/L	104	(70-130)		
LCS2	<u>tert-Butyl Ethyl Ether</u>		5	5.09	ug/L	102	(70-130)	20	1.8

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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 1 800 566 LABS (1 800 566 5227)

Report: 973343  
 Project: INTERA  
 Group: RUSH Incident Follow-up TPH (2021)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MBLK	tert-Butyl Ethyl Ether			<3.0	ug/L				
MRL_CHK	tert-Butyl Ethyl Ether		0.5	0.510	ug/L	102	(50-150)		
LCS1	tert-Butylbenzene		5	5.33	ug/L	107	(70-130)		
LCS2	tert-Butylbenzene		5	5.23	ug/L	105	(70-130)	20	1.9
MBLK	tert-Butylbenzene			<0.5	ug/L				
MRL_CHK	tert-Butylbenzene		0.5	0.500	ug/L	100	(50-150)		
LCS1	Tetrachloroethylene (PCE)		5	5.15	ug/L	103	(70-130)		
LCS2	Tetrachloroethylene (PCE)		5	4.93	ug/L	99	(70-130)	20	4.4
MBLK	Tetrachloroethylene (PCE)			<0.5	ug/L				
MRL_CHK	Tetrachloroethylene (PCE)		0.5	0.490	ug/L	98	(50-150)		
LCS1	Toluene		5	4.67	ug/L	93	(70-130)		
LCS2	Toluene		5	4.66	ug/L	93	(70-130)	20	0.21
MBLK	Toluene			<0.5	ug/L				
MRL_CHK	Toluene		0.5	0.440	ug/L	88	(50-150)		
LCS1	Toluene-d8 (S)		5	98.8	%	99	(70-130)		
LCS2	Toluene-d8 (S)		5	101	%	101	(70-130)		
MBLK	Toluene-d8 (S)			97.8	%	98	(70-130)		
MRL_CHK	Toluene-d8 (S)		5	97.2	%	97	(70-130)		
MRLLLW	Toluene-d8 (S)		5	97.6	%	98	(70-130)		
LCS1	trans-1,2-Dichloroethylene		5	5.18	ug/L	104	(70-130)		
LCS2	trans-1,2-Dichloroethylene		5	5.08	ug/L	102	(70-130)	20	2.0
MBLK	trans-1,2-Dichloroethylene			<0.5	ug/L				
MRL_CHK	trans-1,2-Dichloroethylene		0.5	0.510	ug/L	102	(50-150)		
LCS1	trans-1,3-Dichloropropene		5	4.75	ug/L	95	(70-130)		
LCS2	trans-1,3-Dichloropropene		5	4.80	ug/L	96	(70-130)	20	1.1
MBLK	trans-1,3-Dichloropropene			<0.5	ug/L				
MRL_CHK	trans-1,3-Dichloropropene		0.5	0.640	ug/L	128	(50-150)		
LCS1	Trichloroethylene (TCE)		5	5.18	ug/L	104	(70-130)		
LCS2	Trichloroethylene (TCE)		5	5.05	ug/L	101	(70-130)	20	2.5
MBLK	Trichloroethylene (TCE)			<0.5	ug/L				
MRL_CHK	Trichloroethylene (TCE)		0.5	0.510	ug/L	102	(50-150)		
LCS1	Trichlorofluoromethane		5	5.21	ug/L	104	(70-130)		
LCS2	Trichlorofluoromethane		5	5.21	ug/L	104	(70-130)	20	0.0
MBLK	Trichlorofluoromethane			<0.5	ug/L				
MRL_CHK	Trichlorofluoromethane		0.5	0.550	ug/L	110	(50-150)		
LCS1	Trichlorotrifluoroethane(Freon)		5	5.41	ug/L	108	(70-130)		
LCS2	Trichlorotrifluoroethane(Freon)		5	5.32	ug/L	106	(70-130)	20	1.7
MBLK	Trichlorotrifluoroethane(Freon)			<0.5	ug/L				

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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(I) - Indicates internal standard compound.

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Report: 973343  
 Project: INTERA  
 Group: RUSH Incident Follow-up TPH (2021)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MRL_CHK	Trichlorotrifluoroethane(Freon		0.5	0.530	ug/L	106	(50-150)		
LCS1	Vinyl chloride (VC)		5	5.00	ug/L	100	(70-130)		
LCS2	Vinyl chloride (VC)		5	5.10	ug/L	102	(70-130)	20	2.0
MBLK	Vinyl chloride (VC)			<0.3	ug/L				
MRL_CHK	Vinyl chloride (VC)		0.5	0.560	ug/L	112	(50-150)		
MRL_LW	Vinyl chloride (VC)		0.25	0.320	ug/L	128	(50-150)		

Semivolatiles by GCMS by EPA 525.2

Prep Batch: 1372227 Analytical Batch: 1374135

Analysis Date: 12/12/2021

DUP_202111190056	1,3-Dimethyl-2-nitrobenzene (S)			95.6	%	96	(70-130)		
LCS1	1,3-Dimethyl-2-nitrobenzene (S)		5	94.0	%	94	(70-130)		
LCS2	1,3-Dimethyl-2-nitrobenzene (S)		5	92.4	%	92	(70-130)		
MBLK	1,3-Dimethyl-2-nitrobenzene (S)			96.0	%	96	(70-130)		
MRL_CHK	1,3-Dimethyl-2-nitrobenzene (S)		5	96.4	%	96	(70-130)		
MS_202111190139	1,3-Dimethyl-2-nitrobenzene (S)		5	95.8	%	96	(70-130)		
DUP_202111190056	Acenaphthene-d10 (I)			88.0	%	88	(50-150)		
LCS1	Acenaphthene-d10 (I)		5	91.9	%	92	(50-150)		
LCS2	Acenaphthene-d10 (I)		5	84.4	%	84	(50-150)		
MBLK	Acenaphthene-d10 (I)			93.3	%	93	(50-150)		
MRL_CHK	Acenaphthene-d10 (I)		5	96.3	%	96	(50-150)		
MS_202111190139	Acenaphthene-d10 (I)		5	86.8	%	87	(50-150)		
DUP_202111190056	Benz(a)Anthracene	ND		ND	ug/L		(0-20)		
LCS1	Benz(a)Anthracene		2	2.14	ug/L	107	(70-130)		
LCS2	Benz(a)Anthracene		2	2.08	ug/L	104	(70-130)	20	2.8
MBLK	Benz(a)Anthracene			<0.05	ug/L				
MRL_CHK	Benz(a)Anthracene		0.05	0.0520	ug/L	104	(50-150)		
MS_202111190139	Benz(a)Anthracene	ND	2	2.19	ug/L	110	(70-130)		
DUP_202111190056	Chrysene-d12 (I)			88.8	%	89	(50-150)		
LCS1	Chrysene-d12 (I)		5	94.6	%	95	(50-150)		
LCS2	Chrysene-d12 (I)		5	83.6	%	84	(50-150)		
MBLK	Chrysene-d12 (I)			90.4	%	90	(50-150)		
MRL_CHK	Chrysene-d12 (I)		5	94.6	%	95	(50-150)		
MS_202111190139	Chrysene-d12 (I)		5	90.9	%	91	(50-150)		
DUP_202111190056	Perylene-d12 (S)			86.2	%	86	(70-130)		
LCS1	Perylene-d12 (S)		5	95.6	%	96	(70-130)		
LCS2	Perylene-d12 (S)		5	93.2	%	93	(70-130)		
MBLK	Perylene-d12 (S)			84.0	%	84	(70-130)		
MRL_CHK	Perylene-d12 (S)		5	89.0	%	89	(70-130)		

Spike recovery is already corrected for native results.

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

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

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**Report:** 973343  
**Project:** INTERA  
**Group:** RUSH Incident Follow-up TPH (2021)

Honolulu Board of Water Supply

QC Type	Analyte	Native	Spiked	Recovered	Units	Yield(%)	Limits (%)	RPD Limit(%)	RPD%
MS_202111190139	Perylene-d12 (S)		5	94.6	%	95	(70-130)		
DUP_202111190056	Phenanthrene-d10 (I)			90.0	%	90	(50-150)		
LCS1	Phenanthrene-d10 (I)		5	92.4	%	92	(50-150)		
LCS2	Phenanthrene-d10 (I)		5	85.2	%	85	(50-150)		
MBLK	Phenanthrene-d10 (I)			94.2	%	94	(50-150)		
MRL_CHK	Phenanthrene-d10 (I)		5	98.3	%	98	(50-150)		
MS_202111190139	Phenanthrene-d10 (I)		5	89.0	%	89	(50-150)		
DUP_202111190056	Triphenylphosphate (S)			100	%	100	(70-130)		
LCS1	Triphenylphosphate (S)		5	104	%	104	(70-130)		
LCS2	Triphenylphosphate (S)		5	105	%	105	(70-130)		
MBLK	Triphenylphosphate (S)			100	%	100	(70-130)		
MRL_CHK	Triphenylphosphate (S)		5	99.6	%	100	(70-130)		
MS_202111190139	Triphenylphosphate (S)		5	107	%	107	(70-130)		

Spike recovery is already corrected for native results.

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**Report:** 973343  
**Project:** INTERA  
**Group:** RUSH Incident Follow-up TPH (2021)

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

Samples Received on:  
12/07/2021 1109

Analyzed	Analyte	Sample ID	Result	Federal MCL	Units	MRL
12/12/2021 00:00	Benzoic acid	<u>BWS2253-J1-AQ</u>	0.47		ug/L	0.2





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

Date: 12-10-2021  
 EMAX Batch No.: 21L052

Attn: Jackie Contreras

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

Subject: Laboratory Report  
 Project: 973343

Enclosed is the Laboratory report for samples received on 12/07/21.  
 The data reported relate only to samples listed below :

Sample ID	Control #	Col Date	Matrix	Analysis
202112070283	L052-01	12/06/21	WATER	ETHANOL TPH GASOLINE TPH
202112070284	L052-02	12/06/21	WATER	TPH GASOLINE
202112070283MS	L052-01M	12/06/21	WATER	ETHANOL TPH GASOLINE TPH
202112070283MSD	L052-01S	12/06/21	WATER	ETHANOL TPH GASOLINE TPH

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



21L052

EPA 201 -

Date: 12/7/2021

Submittal Form

\*REPORTING REQUIREMENTS: Do Not Combine Reports with any other samples submitted under different Folder Numbers!

Report & Invoice must have the Folder # 973343 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.

**eurofins** Eaton Analytical

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

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

Folder #: **973343** Report Due: **12/10/2021**

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

Provide in each Report the  
 Specified State Certification # and  
 Exp Date for requested tests + matrix  
 Samples from: HAWAII

rush order

Sample ID 202112070283	Client Sample ID for reference on!	Sample Date & Time	Matrix	Clip Code	PWSID
	BWS2253-J1-AQ	12/06/21 1030	DW		JLS
Sample type:	Sample Event:	Facility ID:	Static ID:	Raw+MS/MSD vol	

Method	Prep Method	Analysis Requested
SW8015C		8015CETW Ethanol
SW 8015B	EPA 5030C	(SUB)Gas Fraction Hydrocarbons
SW 8015B	EPA 3550B	TPH (C1W) TPH 8015 Diesel and Motor Oil
EPA 8015	EPA 8015	Jet Fuel 5 C8-C18
EPA 8015		Jet Fuel 8 C8-C18

Sample ID 202112070284	Client Sample ID for reference on!	Sample Date & Time	Matrix	Clip Code	PWSID
	TRAVEL BLANK Raw	12/06/21 1030	DW		JLS
Sample type:	Sample Event:	Facility ID:	Static ID:		

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

Relinquished by: \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_

Received by: \_\_\_\_\_ Date 12/7/21 Time 9:10

Page 8 of 122 pages

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS  
 An Acknowledgement of Receipt is requested to attn: Jackie Contreras

REPORT ID: 21L052

Page 20 of 140:54 PM

Type of Delivery <input type="checkbox"/> Fedex <input type="checkbox"/> UPS <input type="checkbox"/> GSO <input type="checkbox"/> Others <input type="checkbox"/> EMAX Courier <input type="checkbox"/> Client Delivery	Airbill / Tracking Number 2871 5603 3600	ECN 21 L052 Recipient JOCELYNE Solis-Ramos Date 12/07/21 Time 9:00
--	---	--

**COC INSPECTION**

<input checked="" type="checkbox"/> Client Name	<input type="checkbox"/> Client PM/FC	<input checked="" 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 checked="" type="checkbox"/> TAT
Safety Issues (if any)		<input type="checkbox"/> High concentrations expected	<input type="checkbox"/> From Superfund Site	<input type="checkbox"/> Rad screening required	

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 1.3/0-0 °C	<input type="checkbox"/> Cooler 2 _____ °C	<input type="checkbox"/> Cooler 3 _____ °C
	<input type="checkbox"/> Cooler 6 _____ °C	<input type="checkbox"/> Cooler 7 _____ °C	<input type="checkbox"/> Cooler 8 _____ °C
Thermometer:	A - S/N 210191067	B - S/N 210271396	C - S/N 210271399

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

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

**DISCREPANCIES**

LabSampleID	LabSampleContainerID	Code	ClientSample Label ID / Information	Corrective Action
2	18,19	D3	3D on label: Travel Blank Raw	R1
2	18,19	D6/D7	date on label reads 11/10/21, no time listed	↓

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><b>D3</b> Sample ID mismatch COC vs label</p> <p>D4 Sample ID is not indicated in _____</p> <p>D5 Container -[improper] [leaking] [broken]</p> <p><b>D6</b> Date/Time is not indicated in label/COC</p> <p><b>D7</b> Date/Time mismatch COC vs label</p> <p>D8 Sample listed in COC is not received</p> <p>D9 Sample received is not listed in COC</p> <p>D10 No initial/date on corrections in COC/label</p> <p>D11 Container count mismatch COC vs received</p> <p>D12 Container size mismatch COC vs received</p>	<p><b>Code Description-Sample Management</b></p> <p>D13 Out of Holding Time</p> <p>D14 Bubble is &gt;6mm</p> <p>D15 No trip blank in cooler</p> <p>D16 Preservation not indicated in _____</p> <p>D17 Preservation mismatch COC vs label</p> <p>D18 Insufficient chemical preservative</p> <p>D19 Insufficient Sample</p> <p>D20 No filtration info for dissolved analysis</p> <p>D21 No sample for moisture determination</p> <p>D22 _____</p> <p>D23 _____</p> <p>D24 _____</p>	<p><input type="checkbox"/> Continue to next page.</p> <p><b>Code Description-Sample Management</b></p> <p>R1 Proceed as indicated in <input checked="" 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 _____</p> <p>R9 _____</p> <p>R10 _____</p> <p>R11 _____</p> <p>R12 _____</p>
---	---	--

**REVIEWS:**

Sample Labeling <u>JOCELYNE Solis-Ramos</u>	SRF <u>[Signature]</u>	PM <u>[Signature]</u>
Date <u>12/07/21</u>	Date <u>12/07/21</u>	Date <u>12/07/21</u>

ORIGIN ID: HNLA (806) 382-6853  
KEVIN GOODING  
INTERA INC  
74 KIHAPAI ST.  
KAILUA, HI 96734  
UNITED STATES US

SHIP DATE: 06DEC21  
ACTWGT: 68.15 LB  
CAD: 6994245/SSFE2220  
DIMS: 28x16x18 IN  
BILL THIRD PARTY

Part # 156297-435 HRRONZ EXP 09/22

TO **EMAX**  
**SAMPLE RECEIVING**  
**3051 FUJITA ST**

1.3/0.8  
L

**TORRANCE CA 90505**

(310) 618-8889  
INV:  
PO:

REF: BWSH1.C002  
DEPT:



**FedEx**  
Express



156297-435

TIME - 07 DEC 9:30A  
FIRST OVERNIGHT

TRK# 2871 5633 3680  
02(1)

**W1 HHR**

90505  
CA-US LAX



## 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

973343

METHOD SW8015C  
ALCOHOLS BY GC

SDG#: 21L052

CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 973343

SDG : 21L052

METHOD SW8015C  
ALCOHOLS BY GC

One(1) water sample was received on 12/07/21 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. MEL002WB - 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. MEL002WL/MEL002WC were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Ethanol was within MS QC limits in L052-01M/L052-01S. 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.





# **SAMPLE RESULTS**

METHOD SW8015C  
ALCOHOLS BY GC

```
=====
Client      : EUROFINS EATON ANALYTICAL      Date Collected: 12/06/21
Project     : 973343                        Date Received: 12/07/21
Batch No.   : 21L052                        Date Extracted: NA
Sample ID   : 202112070283                  Date Analyzed: 12/07/21 14:29
Lab Samp ID : L052-01                       Dilution Factor: 1
Lab File ID : TL07007A                      Matrix          : WATER
Ext Btch ID : MEL002W                       % Moisture      : NA
Calib. Ref. : TL07002A                      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     : 973343                        Date Received: NA
Batch No.   : 21L052                        Date Extracted: NA
Sample ID   : MBLK1W                        Date Analyzed: 12/07/21 13:00
Lab Samp ID: MEL002WB                       Dilution Factor: 1
Lab File ID: TL07004A                       Matrix          : WATER
Ext Btch ID: MEL002W                         % Moisture      : NA
Calib. Ref.: TL07002A                       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: 973343  
BATCH NO.: 21L052  
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: MBLK1W  
LAB SAMP ID: MEL002WB MEL002WL MEL002WC  
IAR FILE ID: TL07004A TL07005A TL07006A  
DATE EXTRACTED: NA NA NA DATE COLLECTED: NA  
DATE ANALYZED: 12/07/2113:00 12/07/2113:14 12/07/2113:27 DATE RECEIVED: NA  
PREP. BATCH: MEL002W MEL002W MEL002W  
CALIB. REF: TL07002A TL07002A TL07002A

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	9970	100	10000	10300	103	3	60-130	30

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT: EUROFINS EATON ANALYTICAL  
PROJECT: 973343  
BATCH NO.: 21L052  
METHOD: METHOD SW8015C

=====

MATRIX: WATER % MOISTURE: NA  
DILUTION FACTOR: 1 1 1  
SAMPLE ID: 202112070283  
LAB SAMP ID: L052-01 L052-01M L052-01S  
LAB FILE ID: TL07007A TL07008A TL07009A  
DATE EXTRACTED: NA NA NA DATE COLLECTED: 12/06/21  
DATE ANALYZED: 12/07/2114:29 12/07/2114:43 12/07/2114:56 DATE RECEIVED: 12/07/21  
PREP. BATCH: MEL002W MEL002W MEL002W  
CALIB. REF: TL07002A TL07002A TL07002A

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	10900	109	10000	10800	108	1	60-130	30

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

973343

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

SDG#: 21L052



CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 973343

SDG : 21L052

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

A total of two(2) water samples were received on 12/07/21 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. VG39L03B - 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. VG39L03L/VG39L03C were within LCS limits. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Gasoline was within MS QC limits in L052-01M/L052-01S. Refer to Matrix QC summary form for details.

Surrogate

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

Sample Analysis

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



# **SAMPLE RESULTS**

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

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 12/06/21 10:30
Project     : 973343                     Date Received: 12/07/21
Batch No.   : 21L052                     Date Extracted: 12/07/21 15:49
Sample ID   : 202112070283              Date Analyzed: 12/07/21 15:49
Lab Samp ID: L052-01                     Dilution Factor: 1
Lab File ID: EL07009A                    Matrix: WATER
Ext Btch ID: 21VG39L03                  % Moisture: NA
Calib. Ref.: EL07003A                   Instrument ID: 39
=====

```

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

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromofluorobenzene	0.0355	0.0400	89	60-140

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

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



# QC SUMMARIES



EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 973343  
BATCH NO. : 21L052  
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: MBLK1W	LCS1W	LCD1W
LAB SAMPLE ID	: VG39L03B	VG39L03L	VG39L03C
LAB FILE ID	: EL07005A	EL07006A	EL07007A
DATE PREPARED	: 12/07/21 13:11	12/07/21 13:51	12/07/21 14:30
DATE ANALYZED	: 12/07/21 13:11	12/07/21 13:51	12/07/21 14:30
PREP BATCH	: 21VG39L03	21VG39L03	21VG39L03
CALIBRATION REF:	EL07003A	EL07003A	EL07003A

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	0.433	87	0.500	0.439	88	1	60-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	SpikeAmt (mg/L)	LCDResult (mg/L)	LCDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0436	109	0.0400	0.0429	107	70-130

MB: Method Blank sample LCS: Lab Control Sample LCD: Lab Control Sample Duplicate



EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 973343  
BATCH NO. : 21L052  
METHOD : 5030B/8015B

MATRIX	: WATER		% MOISTURE:NA
DILUTION FACTOR:	1	1	1
SAMPLE ID	: 202112070283	202112070283MS	202112070283MSD
LAB SAMPLE ID	: L052-01	L052-01M	L052-01S
LAB FILE ID	: EL07009A	EL07010A	EL07011A
DATE PREPARED	: 12/07/21 15:49	12/07/21 16:27	12/07/21 17:06
DATE ANALYZED	: 12/07/21 15:49	12/07/21 16:27	12/07/21 17:06
PREP BATCH	: 21VG39L03	21VG39L03	21VG39L03
CALIBRATION REF:	EL07003A	EL07003A	EL07003A

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	0.393	79	0.500	0.404	81	3	50-130	30

SURROGATE PARAMETER	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromofluorobenzene	0.0400	0.0440	110	0.0400	0.0447	112	60-140

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

LABORATORY REPORT FOR

EUROFINS EATON ANALYTICAL

973343

METHOD 3520C/8015B  
TOTAL PETROLEUM HYDROCARBONS BY EXTRACTION

SDG#: 21L052

## CASE NARRATIVE

Client : EUROFINS EATON ANALYTICAL

Project: 973343

SDG : 21L052

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

One(1) water sample was received on 12/07/21 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. DSL006WB - 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 DSL006WL. Refer to LCS summary form for details.

#### Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. Diesel was within MS QC limits in 21L052-01M/21L052-01S. 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: 973343

SDG : 21L052

METHOD 3520C/8015B  
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 12/07/21 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. DSL006WB - 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 J5L006WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. JP5 was within MS QC limits in 21L052-01M/21L052-01S. 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: 973343

SDG : 21L052

METHOD 3520C/8015B  
PETROLEUM HYDROCARBONS BY EXTRACTION

One(1) water sample was received on 12/07/21 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. DSL006WB - 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 J8L006WL. Refer to LCS summary form for details.

Matrix QC Sample

Matrix spike sample was prepared and analyzed at a frequency required by the project. For this SDG, one(1) set of MS/MSD was analyzed. JP8 was within MS QC limits in 21L052-01M/21L052-01S. 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  
 PETROLEUM HYDROCARBONS BY EXTRACTION

Client : EUROFINS EATON ANALYTICAL  
 Project : 973343  
 SDG NO. : 21L052  
 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
MBLK1W	DSL006WB	1	NA	12/08/2117:14	12/07/2116:00	LL08009A	LL08004A	21DSL006W	Method Blank
LCS1W	J5L006WL	1	NA	12/08/2117:49	12/07/2116:00	LL08011A	LL08004A	21DSL006W	Lab Control Sample (LCS)
202112070283	L052-01	1	NA	12/08/2118:25	12/07/2116:00	LL08013A	LL08004A	21DSL006W	Field Sample
202112070283MS	L052-01M	1	NA	12/08/2119:18	12/07/2116:00	LL08016A	LL08004A	21DSL006W	Matrix Spike Sample (MS)
202112070283MSD	L052-01S	1	NA	12/08/2119:36	12/07/2116:00	LL08017A	LL08004A	21DSL006W	MS Duplicate (MSD)

FN - Filename  
 % Moist - Percent Moisture





# **SAMPLE RESULTS**



METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 12/06/21 10:30
Project     : 973343                      Date Received: 12/07/21
Batch No.   : 21L052                      Date Extracted: 12/07/21 16:00
Sample ID   : 202112070283                Date Analyzed: 12/08/21 18:25
Lab Samp ID: 21L052-01                    Dilution Factor: 1
Lab File ID: LL08013A                     Matrix: WATER
Ext Btch ID: 21DSL006W                    % Moisture: NA
Calib. Ref.: 1108004A                     Instrument ID: D5
=====
  
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)	
JP5	ND	0.055	0.027	
SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.422	0.545	78	60-130
Hexacosane	0.118	0.136	87	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 : 920ml

Final Volume : 5ml

Prepared by : HWang

Analyzed by : SDeeso

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 12/06/21 10:30
Project     : 973343                     Date Received: 12/07/21
Batch No.   : 21L052                     Date Extracted: 12/07/21 16:00
Sample ID   : 202112070283              Date Analyzed: 12/08/21 18:25
Lab Samp ID: 21L052-01                   Dilution Factor: 1
Lab File ID: LL08013A                    Matrix: WATER
Ext Btch ID: 21DSL006W                   % Moisture: NA
Calib. Ref.: LL08005A                    Instrument ID: D5
=====
  
```

PARAMETERS	RESULTS (mg/L)	RL (mg/L)	MDL (mg/L)
JPB	ND	0.055	0.027

SURROGATE PARAMETERS	RESULT	SPK_AMT	%RECOVERY	QC LIMIT
Bromobenzene	0.422	0.545	78	60-130
Hexacosane	0.118	0.136	87	60-130

Notes:

RL : Reporting Limit  
 Parameter H-C Range  
 JPB C8-C18

Reported ND at RL quantitated per pattern recognition.

Detection limits are reported relative to sample result significant figures.

Sample Amount : 920ml                      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: 12/07/21 16:00
Project     : 973343                     Date Received: 12/07/21
Batch No.   : 21L052                     Date Extracted: 12/07/21 16:00
Sample ID   : MBLK1W                     Date Analyzed: 12/08/21 17:14
Lab Samp ID: DSL006WB                    Dilution Factor: 1
Lab File ID: LL08009A                    Matrix: WATER
Ext Btch ID: 21DSL006W                   % Moisture: NA
Calib. Ref.: LL08003A                    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	0.443	0.500	89	60-130
Hexacosane	0.116	0.125	93	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 : 973343  
BATCH NO. : 21L052  
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA  
DILUTION FACTOR: 1 1  
SAMPLE ID : MBLK1W LCS1W  
LAB SAMPLE ID : DSL006WB DSL006WL  
LAB FILE ID : LL08009A LL08010A  
DATE PREPARED : 12/07/21 16:00 12/07/21 16:00  
DATE ANALYZED : 12/08/21 17:14 12/08/21 17:31  
PREP BATCH : 21DSL006W 21DSL006W  
CALIBRATION REF: LL08003A LL08003A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Diesel	ND	2.50	2.14	86	50-130

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.451	90	60-130
Hexacosane	0.125	0.116	93	60-130

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 12/07/21 16:00
Project     : 973343                      Date Received: 12/07/21
Batch No.   : 21L052                      Date Extracted: 12/07/21 16:00
Sample ID   : MBLK1W                      Date Analyzed: 12/08/21 17:14
Lab Samp ID: DSL006WB                    Dilution Factor: 1
Lab File ID: LL08009A                    Matrix: WATER
Ext Btch ID: 21DSL006W                  % Moisture: NA
Calib. Ref.: LL08004A                  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	0.443	0.500	89	60-130
Hexacosane	0.116	0.125	93	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



EMAX QUALITY CONTROL DATA  
LAB CONTROL SAMPLE ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 973343  
BATCH NO. : 21L052  
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA  
DILUTION FACTOR: 1 1  
SAMPLE ID : MBLK1W LCS1W  
LAB SAMPLE ID : DSL006WB J5L006WL  
LAB FILE ID : LL08009A LL08011A  
DATE PREPARED : 12/07/21 16:00 12/07/21 16:00  
DATE ANALYZED : 12/08/21 17:14 12/08/21 17:49  
PREP BATCH : 21DSL006W 21DSL006W  
CALIBRATION REF: LL08004A LL08004A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP5	ND	2.50	1.91	76	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.453	91	60-130
Hexacosane	0.125	0.109	87	60-130

MB: Method Blank sample LCS: Lab Control Sample

METHOD 3520C/8015B  
 PETROLEUM HYDROCARBONS BY EXTRACTION

```

=====
Client      : EUROFINS EATON ANALYTICAL   Date Collected: 12/07/21 16:00
Project     : 973343                     Date Received: 12/07/21
Batch No.   : 21L052                     Date Extracted: 12/07/21 16:00
Sample ID   : MBLK1W                     Date Analyzed: 12/08/21 17:14
Lab Samp ID: DSL006WB                    Dilution Factor: 1
Lab File ID: LL08009A                    Matrix: WATER
Ext Btch ID: 21DSL006W                   % Moisture: NA
Calib. Ref.: LL08005A                    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	0.443	0.500	89	60-130
Hexacosane	0.116	0.125	93	60-130

Notes:

RL : Reporting Limit  
 Parameter H-C Range  
 JP8 CB-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 : 973343  
BATCH NO. : 21L052  
METHOD : 3520C/8015B

MATRIX : WATER % MOISTURE:NA  
DILUTION FACTOR: 1 1  
SAMPLE ID : MBLK1W LCS1W  
LAB SAMPLE ID : DSL006WB J8L006WL  
LAB FILE ID : LL08009A LL08012A  
DATE PREPARED : 12/07/21 16:00 12/07/21 16:00  
DATE ANALYZED : 12/08/21 17:14 12/08/21 18:07  
PREP BATCH : 21DSL006W 21DSL006W  
CALIBRATION REF: LL08005A LL08005A

ACCESSION:

PARAMETERS	MBResult (mg/L)	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
JP8	ND	2.50	1.92	77	30-160

SURROGATE PARAMETERS	SpikeAmt (mg/L)	LCSResult (mg/L)	LCSRec (%)	QCLimit (%)
Bromobenzene	0.500	0.468	94	60-130
Hexacosane	0.125	0.116	93	60-130

MB: Method Blank sample LCS: Lab Control Sample

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 973343  
BATCH NO. : 21L052  
METHOD : 3520C/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : 202112070283                       202112070283MSD
LAB SAMPLE ID : 21L052-01                         21L052-01S
LAB FILE ID  : LL08013A                           LL08015A
DATE PREPARED : 12/07/21 16:00                   12/07/21 16:00
DATE ANALYZED : 12/08/21 18:25                   12/08/21 19:00
PREP BATCH   : 21DSL006W                          21DSL006W
CALIBRATION REF: LL08003A                         LL08003A
  
```

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
Diesel	ND	2.58	2.18	85	2.50	2.06	82	6	50-130	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.515	0.441	86	0.500	0.389	78	60-130
Hexacosane	0.129	0.129	100	0.125	0.122	98	60-130

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

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 973343  
BATCH NO. : 21L052  
METHOD : 3520C/8015B

MATRIX : WATER		% MOISTURE:NA
DILUTION FACTOR: 1	1	1
SAMPLE ID : 202112070283	202112070283MS	202112070283MSD
LAB SAMPLE ID : 21L052-01	21L052-01M	21L052-01S
LAB FILE ID : LL08013A	LL08016A	LL08017A
DATE PREPARED : 12/07/21 16:00	12/07/21 16:00	12/07/21 16:00
DATE ANALYZED : 12/08/21 18:25	12/08/21 19:18	12/08/21 19:36
PREP BATCH : 21DSL006W	21DSL006W	21DSL006W
CALIBRATION REF: LL08004A	LL08004A	LL08004A

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP5	ND	2.62	2.23	85	2.62	2.35	90	5	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.525	0.485	92	0.525	0.494	94	60-130
Hexacosane	0.131	0.125	95	0.131	0.122	93	60-130

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

EMAX QUALITY CONTROL DATA  
MS/MSD ANALYSIS

CLIENT : EUROFINS EATON ANALYTICAL  
PROJECT : 973343  
BATCH NO. : 21L052  
METHOD : 3520C/8015B

```

=====
MATRIX      : WATER                               % MOISTURE:NA
DILUTION FACTOR: 1                               1
SAMPLE ID   : 202112070283                       202112070283MSD
LAB SAMPLE ID : 21L052-01                         21L052-01S
LAB FILE ID  : LL08013A                           LL08018A
DATE PREPARED : 12/07/21 16:00                    12/07/21 16:00
DATE ANALYZED : 12/08/21 18:25                    12/08/21 20:11
PREP BATCH   : 21DSL006W                          21DSL006W
CALIBRATION REF: LL08005A                          LL08005A
  
```

ACCESSION:

PARAMETERS	PSResult (mg/L)	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	RPD (%)	QCLimit (%)	MaxRPD (%)
JP8	ND	2.50	2.25	90	2.55	2.23	87	1	30-160	30

SURROGATE PARAMETERS	SpikeAmt (mg/L)	MSResult (mg/L)	MSRec (%)	SpikeAmt (mg/L)	MSDResult (mg/L)	MSDRec (%)	QCLimit (%)
Bromobenzene	0.500	0.552	110	0.510	0.557	109	60-130
Hexacosane	0.125	0.116	93	0.127	0.123	96	60-130

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

December 13, 2021

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

Project Name: Folder # 973343 Job # 1000014  
 Physis Project ID: 1407003-195

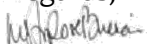
Dear Debbie,

Enclosed are the analytical results for the sample submitted to PHYSIS Environmental Laboratories, Inc. (PHYSIS) on 12/7/2021. 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: 1407003-195

Folder # 973343 Job # 1000014

Total Samples: 1

PHYSIS ID	Sample ID	Description	Date	Time	Matrix	Sample Type
93058	202112070283	BWS2253-J1-AQ	12/6/2021	10:30	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 ANALYTICAL AURA  
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: 93058-R1</b>	<b>202112070283 BWS2253-J1-AQ</b>	<b>Matrix: Samplewater</b>	<b>Sampled: 06-Dec-21 10:30</b>									<b>Received: 07-Dec-21</b>
(2,4,6-Tribromophenol)	EPA 625.1	% Recovery	61	1			Total	O-35016		07-Dec-21	12-Dec-21	
(d5-Phenol)	EPA 625.1	% Recovery	17	1			Total	O-35016		07-Dec-21	12-Dec-21	
2,4,5-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		07-Dec-21	12-Dec-21	
2,4,6-Trichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		07-Dec-21	12-Dec-21	
2,4-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		07-Dec-21	12-Dec-21	
2,4-Dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		07-Dec-21	12-Dec-21	
2,6-Dichlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		07-Dec-21	12-Dec-21	
2,6-Di-tert-butyl-4-methylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		07-Dec-21	12-Dec-21	
2,6-Di-tert-butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		07-Dec-21	12-Dec-21	
2-Chlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		07-Dec-21	12-Dec-21	
2-Methyl-4,6-dinitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		07-Dec-21	12-Dec-21	
2-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		07-Dec-21	12-Dec-21	
2-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		07-Dec-21	12-Dec-21	
3+4-Methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		07-Dec-21	12-Dec-21	
4-Chloro-3-methylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		07-Dec-21	12-Dec-21	
4-Nitrophenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		07-Dec-21	12-Dec-21	
6-tert-butyl-2,4-dimethylphenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		07-Dec-21	12-Dec-21	
Benzoic Acid	EPA 625.1	µg/L	0.47	1	0.1	0.2	Total	O-35016		07-Dec-21	12-Dec-21	
Benzyl Alcohol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		07-Dec-21	12-Dec-21	
Pentachlorophenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		07-Dec-21	12-Dec-21	
Phenol	EPA 625.1	µg/L	ND	1	0.1	0.2	Total	O-35016		07-Dec-21	12-Dec-21	
p-tert-Butylphenol	EPA 625.1	µg/L	ND	1	0.05	0.1	Total	O-35016		07-Dec-21	12-Dec-21	

## Base/Neutral Extractable Compounds

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed	
<b>Sample ID: 93058-R1</b>	<b>202112070283 BWS2253-J1-AQ</b>	<b>Matrix: Samplewater</b>	<b>Sampled: 06-Dec-21 10:30</b>									<b>Received: 07-Dec-21</b>
(d4-1,4-Dichlorobenzene)	EPA 625.1	% Recovery	49	1			Total		O-35016	07-Dec-21	12-Dec-21	
2-Chloronaphthalene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
2-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
3-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
4-Bromophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
4-Chloroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
4-Chlorophenylphenyl ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
4-Nitroaniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
Aniline	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
Benzidine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
Bis(2-Chloroethoxy) methane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
Bis(2-Chloroethyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
Bis(2-Chloroisopropyl) ether	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
Dibenzofuran	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
Disalicylidenepropanediamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
Hexachloroethane	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
Nitrobenzene	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
N-Nitrosodi-n-propylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	
N-Nitrosodiphenylamine	EPA 625.1	µg/L	ND	1	0.05	0.1	Total		O-35016	07-Dec-21	12-Dec-21	



## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
<b>Sample ID: 93058-R1 202112070283 BWS2253-Jr-AQ Matrix: Samplewater</b>											
(d10-Acenaphthene)	EPA 625.1	% Recovery	84	1			Total	O-35016	06-Dec-21 10:30	Received: 07-Dec-21	12-Dec-21
(d10-Phenanthrene)	EPA 625.1	% Recovery	99	1			Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
(d12-Chrysene)	EPA 625.1	% Recovery	91	1			Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
(d12-Perylene)	EPA 625.1	% Recovery	102	1			Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
(d8-Naphthalene)	EPA 625.1	% Recovery	67	1			Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
1-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
1-Methylphenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
2,3,5-Trimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
2,6-Dimethylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
2-Methylnaphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Acenaphthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Acenaphthylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Benz[a]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Benz[a]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Benz[b]fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Benz[e]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Benzof[g,h,i]perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Benzokjfluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Biphenyl	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Chrysene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Dibenz[a,h]anthracene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Dibenzo[a,l]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21
Dibenzothiophene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total	O-35016	07-Dec-21	07-Dec-21	12-Dec-21

## Polynuclear Aromatic Hydrocarbons

ANALYTE	Method	Units	RESULT	DF	MDL	RL	Fraction	QA CODE	Batch ID	Date Processed	Date Analyzed
Fluoranthene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	07-Dec-21	12-Dec-21
Fluorene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	07-Dec-21	12-Dec-21
Indeno[1,2,3-cd]pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	07-Dec-21	12-Dec-21
Naphthalene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	07-Dec-21	12-Dec-21
Perylene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	07-Dec-21	12-Dec-21
Phenanthrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	07-Dec-21	12-Dec-21
Pyrene	EPA 625.1	µg/L	ND	1	0.001	0.005	Total		O-35016	07-Dec-21	12-Dec-21

# QUALITY CONTROL REPORT

TERRA

AURA

ENVIRONMENTAL LABORATORIES, INC.

*Innovative Solutions for Nature*

## Acid Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE
Matrix: BlankMatrix											
Sample ID: 93057-B1											
QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-35016											
Prepared: 07-Dec-21											
Analyzed: 11-Dec-21											
(2,4,6-Tribromophenol)	Total	53	1			% Recovery	100		53	44 - 159%	PASS
(d5-Phenol)	Total	58	1			% Recovery	100		58	20 - 121%	PASS
2,4,5-Trichlorophenol	Total	ND	1	0.05	0.1	µg/L					
2,4,6-Trichlorophenol	Total	ND	1	0.05	0.1	µg/L					
2,4-Dichlorophenol	Total	ND	1	0.05	0.1	µg/L					
2,4-Dinitrophenol	Total	ND	1	0.1	0.2	µg/L					
2,6-Dichlorophenol	Total	ND	1	0.05	0.1	µg/L					
2,6-Di-tert-butyl-4-methylphenol	Total	ND	1	0.05	0.1	µg/L					
2,6-Di-tert-butylphenol	Total	ND	1	0.05	0.1	µg/L					
2-Chlorophenol	Total	ND	1	0.05	0.1	µg/L					
2-Methyl-4,6-dinitrophenol	Total	ND	1	0.1	0.2	µg/L					
2-Methylphenol	Total	ND	1	0.1	0.2	µg/L					
2-Nitrophenol	Total	ND	1	0.1	0.2	µg/L					
3+4-Methylphenol	Total	ND	1	0.1	0.2	µg/L					
4-Chloro-3-methylphenol	Total	ND	1	0.1	0.2	µg/L					
4-Nitrophenol	Total	ND	1	0.1	0.2	µg/L					
6-tert-butyl-2,4-dimethylphenol	Total	ND	1	0.05	0.1	µg/L					
Benzoic Acid	Total	ND	1	0.1	0.2	µg/L					
Benzyl Alcohol	Total	ND	1	0.1	0.2	µg/L					
Pentachlorophenol	Total	ND	1	0.05	0.1	µg/L					
Phenol	Total	ND	1	0.1	0.2	µg/L					
p-tert-Butylphenol	Total	ND	1	0.05	0.1	µg/L					

## Acid Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE
Matrix: BlankMatrix											
Sample ID: 93057-BS1											
QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-35016											
Prepared: 07-Dec-21											
Analyzed: 12-Dec-21											
(2,4,6-Tribromophenol)	Total	56	1			% Recovery	100	0	56	44 - 159%	PASS
(d5-Phenol)	Total	50	1			% Recovery	100	0	50	20 - 121%	PASS
2,4,5-Trichlorophenol	Total	0.869	1	0.05	0.1	µg/L	1	0	87	57 - 116%	PASS
2,4,6-Trichlorophenol	Total	0.938	1	0.05	0.1	µg/L	1	0	94	56 - 118%	PASS
2,4-Dichlorophenol	Total	0.89	1	0.05	0.1	µg/L	1	0	89	51 - 117%	PASS
2,4-Dinitrophenol	Total	0.215	1	0.1	0.2	µg/L	1	0	22	0 - 152%	PASS
2,6-Dichlorophenol	Total	0.45	1	0.05	0.1	µg/L	0.5	0	90	30 - 130%	PASS
2,6-Di-tert-butyl-4-methylphenol	Total	0.84	1	0.05	0.1	µg/L	1	0	84	50 - 150%	PASS
2,6-Di-tert-butylphenol	Total	0.906	1	0.05	0.1	µg/L	1	0	91	50 - 150%	PASS
2-Chlorophenol	Total	0.801	1	0.05	0.1	µg/L	1	0	80	41 - 110%	PASS
2-Methyl-4,6-dinitrophenol	Total	0.964	1	0.1	0.2	µg/L	1	0	96	0 - 141%	PASS
2-Methylphenol	Total	0.81	1	0.1	0.2	µg/L	1	0	81	40 - 117%	PASS
2-Nitrophenol	Total	1.04	1	0.1	0.2	µg/L	1	0	104	40 - 117%	PASS
3+4-Methylphenol	Total	0.862	1	0.1	0.2	µg/L	1	0	86	0 - 130%	PASS
4-Chloro-3-methylphenol	Total	1.01	1	0.1	0.2	µg/L	1	0	101	51 - 128%	PASS
4-Nitrophenol	Total	1	1	0.1	0.2	µg/L	1	0	100	10 - 164%	PASS
6-tert-butyl-2,4-dimethylphenol	Total	1.07	1	0.05	0.1	µg/L	1	0	107	50 - 150%	PASS
Benzoic Acid	Total	0.631	1	0.1	0.2	µg/L	1	0	63	2 - 145%	PASS
Benzyl Alcohol	Total	0.939	1	0.1	0.2	µg/L	1	0	94	43 - 148%	PASS
Pentachlorophenol	Total	0.417	1	0.05	0.1	µg/L	1	0	42	36 - 111%	PASS
Phenol	Total	0.685	1	0.1	0.2	µg/L	1	0	69	29 - 114%	PASS
p-tert-Butylphenol	Total	1.11	1	0.05	0.1	µg/L	1	0	111	50 - 150%	PASS

## Acid Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE	
Matrix: BlankMatrix												
Sample ID: 93057-BS2												
QAQC Procedural Blank												
Method: EPA 625.1												
Batch ID: O-35016												
Prepared: 07-Dec-21												
Analyzed: 12-Dec-21												
(2,4,6-Tribromophenol)	Total	55	1			% Recovery	100	0	55	44 - 159%	PASS	2 30 PASS
(d5-Phenol)	Total	49	1			% Recovery	100	0	49	20 - 121%	PASS	2 30 PASS
2,4,5-Trichlorophenol	Total	0.843	1	0.05	0.1	µg/L	1	0	84	57 - 116%	PASS	4 30 PASS
2,4,6-Trichlorophenol	Total	0.899	1	0.05	0.1	µg/L	1	0	90	56 - 118%	PASS	4 30 PASS
2,4-Dichlorophenol	Total	0.865	1	0.05	0.1	µg/L	1	0	87	51 - 117%	PASS	3 30 PASS
2,4-Dinitrophenol	Total	0.184	1	0.1	0.2	µg/L	1	0	18	0 - 152%	PASS	20 30 PASS
2,6-Dichlorophenol	Total	0.434	1	0.05	0.1	µg/L	0.5	0	87	30 - 130%	PASS	3 30 PASS
2,6-Di-tert-butyl-4-methylphenol	Total	0.827	1	0.05	0.1	µg/L	1	0	83	50 - 150%	PASS	1 30 PASS
2,6-Di-tert-butylphenol	Total	0.899	1	0.05	0.1	µg/L	1	0	90	50 - 150%	PASS	1 30 PASS
2-Chlorophenol	Total	0.735	1	0.05	0.1	µg/L	1	0	74	41 - 110%	PASS	8 30 PASS
2-Methyl-4,6-dinitrophenol	Total	0.897	1	0.1	0.2	µg/L	1	0	90	0 - 141%	PASS	6 30 PASS
2-Methylphenol	Total	0.766	1	0.1	0.2	µg/L	1	0	77	40 - 117%	PASS	5 30 PASS
2-Nitrophenol	Total	0.989	1	0.1	0.2	µg/L	1	0	99	40 - 117%	PASS	5 30 PASS
3+4-Methylphenol	Total	0.831	1	0.1	0.2	µg/L	1	0	83	0 - 130%	PASS	4 30 PASS
4-Chloro-3-methylphenol	Total	0.971	1	0.1	0.2	µg/L	1	0	97	51 - 128%	PASS	4 30 PASS
4-Nitrophenol	Total	1.05	1	0.1	0.2	µg/L	1	0	105	10 - 164%	PASS	5 30 PASS
6-tert-butyl-2,4-dimethylphenol	Total	1.03	1	0.05	0.1	µg/L	1	0	103	50 - 150%	PASS	4 30 PASS
Benzoic Acid	Total	0.616	1	0.1	0.2	µg/L	1	0	62	2 - 145%	PASS	2 30 PASS
Benzyl Alcohol	Total	0.904	1	0.1	0.2	µg/L	1	0	90	43 - 148%	PASS	4 30 PASS
Pentachlorophenol	Total	0.444	1	0.05	0.1	µg/L	1	0	44	36 - 111%	PASS	5 30 PASS
Phenol	Total	0.658	1	0.1	0.2	µg/L	1	0	66	29 - 114%	PASS	3 30 PASS
p-tert-Butylphenol	Total	1.04	1	0.05	0.1	µg/L	1	0	104	50 - 150%	PASS	7 30 PASS

## Base/Neutral Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE
Matrix: Blank											
Sample ID: 93057-B1											
QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-35016											
% Recovery 100											
Prepared: 07-Dec-21											
73 30 - 130% PASS											
Analyzed: 11-Dec-21											
Matrix: Blank											
Sampled: Received:											
(4-1,4-Dichlorobenzene)	Total	73	1				100				
2-Chloronaphthalene	Total	ND	1	0.05	0.1	µg/L					
2-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
3-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
4-Bromophenylphenyl ether	Total	ND	1	0.05	0.1	µg/L					
4-Chloroaniline	Total	ND	1	0.05	0.1	µg/L					
4-Chlorophenylphenyl ether	Total	ND	1	0.05	0.1	µg/L					
4-Nitroaniline	Total	ND	1	0.05	0.1	µg/L					
Aniline	Total	ND	1	0.05	0.1	µg/L					
Benzidine	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroethoxy) methane	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroethyl) ether	Total	ND	1	0.05	0.1	µg/L					
Bis(2-Chloroisopropyl) ether	Total	ND	1	0.05	0.1	µg/L					
Dibenzofuran	Total	ND	1	0.05	0.1	µg/L					
Disalicylidenepropanediamin	Total	ND	1	0.05	0.1	µg/L					
Hexachloroethane	Total	ND	1	0.05	0.1	µg/L					
Nitrobenzene	Total	ND	1	0.05	0.1	µg/L					
N-Nitrosodi-n-propylamine	Total	ND	1	0.05	0.1	µg/L					
N-Nitrosodiphenylamine	Total	ND	1	0.05	0.1	µg/L					

## Base/Neutral Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE
Matrix: Blank/Matrix											
Sample ID: 93057-BS1											
QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-35016											
Prepared: 07-Dec-21											
Analyzed: 12-Dec-21											
% Recovery											
(4-1,4-Dichlorobenzene)	Total	76	1				100	0	76	30 - 130%	PASS
2-Chloronaphthalene	Total	0.926	1	0.05	0.1	µg/L	1	0	93	53 - 130%	PASS
2-Nitroaniline	Total	1.45	1	0.05	0.1	µg/L	2	0	73	69 - 114%	PASS
3-Nitroaniline	Total	2.68	1	0.05	0.1	µg/L	2	0	134	23 - 137%	PASS
4-Bromophenylphenyl ether	Total	1.02	1	0.05	0.1	µg/L	1	0	102	61 - 132%	PASS
4-Chloroaniline	Total	0.942	1	0.05	0.1	µg/L	1	0	94	50 - 150%	PASS
4-Chlorophenylphenyl ether	Total	1	1	0.05	0.1	µg/L	1	0	100	63 - 130%	PASS
4-Nitroaniline	Total	1.47	1	0.05	0.1	µg/L	1	0	147	10 - 159%	PASS
Aniline	Total	0.794	1	0.05	0.1	µg/L	1	0	79	50 - 150%	PASS
Benzidine	Total	1.41	1	0.05	0.1	µg/L	2	0	70	0 - 125%	PASS
Bis(2-Chloroethoxy) methane	Total	0.965	1	0.05	0.1	µg/L	1	0	96	66 - 122%	PASS
Bis(2-Chloroethyl) ether	Total	0.509	1	0.05	0.1	µg/L	1	0	51	43 - 127%	PASS
Bis(2-Chloroisopropyl) ether	Total	1.2	1	0.05	0.1	µg/L	1	0	120	49 - 128%	PASS
Dibenzofuran	Total	0.995	1	0.05	0.1	µg/L	1	0	100	50 - 150%	PASS
Disalicylidenepropylamine	Total	27.7	1	0.05	0.1	µg/L	50	0	55	50 - 150%	PASS
Hexachloroethane	Total	0.776	1	0.05	0.1	µg/L	1	0	78	27 - 130%	PASS
Nitrobenzene	Total	0.843	1	0.05	0.1	µg/L	1	0	84	54 - 111%	PASS
N-Nitrosodi-n-propylamine	Total	1.01	1	0.05	0.1	µg/L	1	0	101	61 - 152%	PASS
N-Nitrosodiphenylamine	Total	1.03	1	0.05	0.1	µg/L	1	0	103	49 - 142%	PASS



## Base/Neutral Extractable Compounds

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY LIMITS	PRECISION %	QA CODE
<b>Sample ID: 93057-BS2</b> <b>QAQC Procedural Blank</b> <b>Matrix: BlankMatrix</b> <b>Sampled: Received:</b>											
Method: EPA 625.1      Batch ID: O-35016      Prepared: 07-Dec-21      Analyzed: 12-Dec-21											
(4-1,4-Dichlorobenzene)	Total	72	1			% Recovery	100	0	72 - 30 - 130%	PASS	5 30 PASS
2-Chloronaphthalene	Total	0.884	1	0.05	0.1	µg/L	1	0	88 - 53 - 130%	PASS	6 30 PASS
2-Nitroaniline	Total	1.44	1	0.05	0.1	µg/L	2	0	72 - 69 - 114%	PASS	0 30 PASS
3-Nitroaniline	Total	2.67	1	0.05	0.1	µg/L	2	0	134 - 23 - 137%	PASS	0 30 PASS
4-Bromophenylphenyl ether	Total	0.974	1	0.05	0.1	µg/L	1	0	97 - 61 - 132%	PASS	5 30 PASS
4-Chloroaniline	Total	0.877	1	0.05	0.1	µg/L	1	0	88 - 50 - 150%	PASS	7 30 PASS
4-Chlorophenylphenyl ether	Total	0.957	1	0.05	0.1	µg/L	1	0	96 - 63 - 130%	PASS	4 30 PASS
4-Nitroaniline	Total	1.49	1	0.05	0.1	µg/L	1	0	149 - 10 - 159%	PASS	1 30 PASS
Aniline	Total	0.725	1	0.05	0.1	µg/L	1	0	73 - 50 - 150%	PASS	9 30 PASS
Benzidine	Total	1.45	1	0.05	0.1	µg/L	2	0	73 - 0 - 125%	PASS	3 30 PASS
Bis(2-Chloroethoxy) methane	Total	0.922	1	0.05	0.1	µg/L	1	0	92 - 66 - 122%	PASS	4 30 PASS
Bis(2-Chloroethyl) ether	Total	0.504	1	0.05	0.1	µg/L	1	0	50 - 43 - 127%	PASS	2 30 PASS
Bis(2-Chloroisopropyl) ether	Total	1.28	1	0.05	0.1	µg/L	1	0	128 - 49 - 128%	PASS	6 30 PASS
Dibenzofuran	Total	0.95	1	0.05	0.1	µg/L	1	0	95 - 50 - 150%	PASS	5 30 PASS
Disalicylidenepropylamine	Total	26.1	1	0.05	0.1	µg/L	50	0	52 - 50 - 150%	PASS	6 30 PASS
Hexachloroethane	Total	0.739	1	0.05	0.1	µg/L	1	0	74 - 27 - 130%	PASS	5 30 PASS
Nitrobenzene	Total	0.802	1	0.05	0.1	µg/L	1	0	80 - 54 - 111%	PASS	5 30 PASS
N-Nitrosodi-n-propylamine	Total	0.893	1	0.05	0.1	µg/L	1	0	89 - 61 - 152%	PASS	13 30 PASS
N-Nitrosodiphenylamine	Total	0.988	1	0.05	0.1	µg/L	1	0	99 - 49 - 142%	PASS	4 30 PASS

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODEC
Matrix: BlankMatrix											
Sample ID: 93057-B1											
QAQC Procedural Blank											
		Method: EPA 625.1									
		Batch ID: O-35016									
		Prepared: 07-Dec-21									
		Analyzed: 11-Dec-21									
(d10-Acenaphthene)	Total	89	1			% Recovery	100		89	65 - 113%	PASS
(d10-Phenanthrene)	Total	93	1			% Recovery	100		93	80 - 111%	PASS
(d12-Chrysene)	Total	90	1			% Recovery	100		90	60 - 139%	PASS
(d12-Perylene)	Total	93	1			% Recovery	100		93	36 - 161%	PASS
(d8-Naphthalene)	Total	81	1			% Recovery	100		81	44 - 119%	PASS
1-Methylnaphthalene	Total	ND	1	0.001		µg/L					
1-Methylphenanthrene	Total	ND	1	0.001		µg/L					
2,3,5-Trimethylnaphthalene	Total	ND	1	0.001		µg/L					
2,6-Dimethylnaphthalene	Total	ND	1	0.001		µg/L					
2-Methylnaphthalene	Total	ND	1	0.001		µg/L					
Acenaphthene	Total	ND	1	0.001		µg/L					
Acenaphthylene	Total	ND	1	0.001		µg/L					
Anthracene	Total	ND	1	0.001		µg/L					
Benzo[a]anthracene	Total	ND	1	0.001		µg/L					
Benzo[a]pyrene	Total	ND	1	0.001		µg/L					
Benzo[b]fluoranthene	Total	ND	1	0.001		µg/L					
Benzo[e]pyrene	Total	ND	1	0.001		µg/L					
Benzo[g,h,i]perylene	Total	ND	1	0.001		µg/L					
Benzo[k]fluoranthene	Total	ND	1	0.001		µg/L					
Biphenyl	Total	ND	1	0.001		µg/L					
Chrysene	Total	ND	1	0.001		µg/L					
Dibenz[a,h]anthracene	Total	ND	1	0.001		µg/L					
Dibenzo[a,i]pyrene	Total	ND	1	0.001		µg/L					

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE
Dibenzothiophene	Total	ND	1	0.001	0.005	µg/L					
Fluoranthene	Total	ND	1	0.001	0.005	µg/L					
Fluorene	Total	ND	1	0.001	0.005	µg/L					
Indeno[1,2,3-cd]pyrene	Total	ND	1	0.001	0.005	µg/L					
Naphthalene	Total	ND	1	0.001	0.005	µg/L					
Perylene	Total	ND	1	0.001	0.005	µg/L					
Phenanthrene	Total	ND	1	0.001	0.005	µg/L					
Pyrene	Total	ND	1	0.001	0.005	µg/L					

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODE
Matrix: BlankMatrix											
Sample ID: 93057-BS1 QAQC Procedural Blank											
Method: EPA 625.1											
Batch ID: O-35016											
Prepared: 07-Dec-21											
Analyzed: 12-Dec-21											
(d10-Acenaphthene)	Total	87	1			% Recovery	100	0	87	65 - 113%	PASS
(d10-Phenanthrene)	Total	96	1			% Recovery	100	0	96	80 - 111%	PASS
(d12-Chrysene)	Total	104	1			% Recovery	100	0	104	60 - 139%	PASS
(d12-Perylene)	Total	81	1			% Recovery	100	0	81	36 - 161%	PASS
(d8-Naphthalene)	Total	76	1			% Recovery	100	0	76	44 - 119%	PASS
1-Methylnaphthalene	Total	0.439	1	0.001	0.005	µg/L	0.5	0	88	49 - 117%	PASS
1-Methylphenanthrene	Total	0.514	1	0.001	0.005	µg/L	0.5	0	103	66 - 127%	PASS
2,3,5-Trimethylnaphthalene	Total	0.476	1	0.001	0.005	µg/L	0.5	0	95	57 - 120%	PASS
2,6-Dimethylnaphthalene	Total	0.469	1	0.001	0.005	µg/L	0.5	0	94	54 - 117%	PASS
2-Methylnaphthalene	Total	1.33	1	0.001	0.005	µg/L	1.5	0	89	47 - 130%	PASS
Acenaphthene	Total	1.33	1	0.001	0.005	µg/L	1.5	0	89	53 - 131%	PASS
Acenaphthylene	Total	1.49	1	0.001	0.005	µg/L	1.5	0	99	43 - 140%	PASS
Anthracene	Total	1.54	1	0.001	0.005	µg/L	1.5	0	103	58 - 135%	PASS
Benz[a]anthracene	Total	1.87	1	0.001	0.005	µg/L	1.5	0	125	55 - 145%	PASS
Benzo[a]pyrene	Total	1.67	1	0.001	0.005	µg/L	1.5	0	111	51 - 143%	PASS
Benzo[b]fluoranthene	Total	1.97	1	0.001	0.005	µg/L	1.5	0	131	46 - 165%	PASS
Benzo[e]pyrene	Total	0.485	1	0.001	0.005	µg/L	0.5	0	97	42 - 152%	PASS
Benzo[g,h,i]perylene	Total	1.68	1	0.001	0.005	µg/L	1.5	0	112	63 - 133%	PASS
Benzo[k]fluoranthene	Total	1.76	1	0.001	0.005	µg/L	1.5	0	117	56 - 145%	PASS
Biphenyl	Total	0.459	1	0.001	0.005	µg/L	0.5	0	92	56 - 119%	PASS
Chrysene	Total	1.45	1	0.001	0.005	µg/L	1.5	0	97	56 - 141%	PASS
Dibenz[a,h]anthracene	Total	2.14	1	0.001	0.005	µg/L	1.5	0	143	55 - 150%	PASS
Dibenzo[a,l]pyrene	Total	0.548	1	0.001	0.005	µg/L	0.5	0	110	50 - 150%	PASS

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

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

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

ANALYTE	FRACTION	RESULT	DF	MDL	RL	UNITS	SPIKE LEVEL	SOURCE RESULT	ACCURACY %	PRECISION %	QA CODEC			
Matrix: BlankMatrix														
Sample ID: 93057-BS2														
QAQC Procedural Blank														
Method: EPA 625.1														
Batch ID: O-35016														
Prepared: 07-Dec-21														
Analyzed: 12-Dec-21														
(d10-Acenaphthene)	Total	83	1			% Recovery	100	0	83	65 - 113%	PASS	5	30	PASS
(d10-Phenanthrene)	Total	92	1			% Recovery	100	0	92	80 - 111%	PASS	4	30	PASS
(d12-Chrysene)	Total	93	1			% Recovery	100	0	93	60 - 139%	PASS	11	30	PASS
(d12-Perylene)	Total	77	1			% Recovery	100	0	77	36 - 161%	PASS	5	30	PASS
(d8-Naphthalene)	Total	73	1			% Recovery	100	0	73	44 - 119%	PASS	4	30	PASS
1-Methylnaphthalene	Total	0.419	1	0.001	0.005	µg/L	0.5	0	84	49 - 117%	PASS	5	30	PASS
1-Methylphenanthrene	Total	0.493	1	0.001	0.005	µg/L	0.5	0	99	66 - 127%	PASS	4	30	PASS
2,3,5-Trimethylnaphthalene	Total	0.453	1	0.001	0.005	µg/L	0.5	0	91	57 - 120%	PASS	4	30	PASS
2,6-Dimethylnaphthalene	Total	0.447	1	0.001	0.005	µg/L	0.5	0	89	54 - 117%	PASS	5	30	PASS
2-Methylnaphthalene	Total	1.27	1	0.001	0.005	µg/L	1.5	0	85	47 - 130%	PASS	5	30	PASS
Acenaphthene	Total	1.27	1	0.001	0.005	µg/L	1.5	0	85	53 - 131%	PASS	5	30	PASS
Acenaphthylene	Total	1.42	1	0.001	0.005	µg/L	1.5	0	95	43 - 140%	PASS	4	30	PASS
Anthracene	Total	1.47	1	0.001	0.005	µg/L	1.5	0	98	58 - 135%	PASS	5	30	PASS
Benz[a]anthracene	Total	1.68	1	0.001	0.005	µg/L	1.5	0	112	55 - 145%	PASS	11	30	PASS
Benzo[a]pyrene	Total	1.59	1	0.001	0.005	µg/L	1.5	0	106	51 - 143%	PASS	5	30	PASS
Benzo[b]fluoranthene	Total	1.81	1	0.001	0.005	µg/L	1.5	0	121	46 - 165%	PASS	8	30	PASS
Benzo[e]pyrene	Total	0.446	1	0.001	0.005	µg/L	0.5	0	89	42 - 152%	PASS	9	30	PASS
Benzo[g,h,i]perylene	Total	1.59	1	0.001	0.005	µg/L	1.5	0	106	63 - 133%	PASS	6	30	PASS
Benzo[k]fluoranthene	Total	1.67	1	0.001	0.005	µg/L	1.5	0	111	56 - 145%	PASS	5	30	PASS
Biphenyl	Total	0.438	1	0.001	0.005	µg/L	0.5	0	88	56 - 119%	PASS	4	30	PASS
Chrysene	Total	1.3	1	0.001	0.005	µg/L	1.5	0	87	56 - 141%	PASS	11	30	PASS
Dibenz[a,h]anthracene	Total	2.19	1	0.001	0.005	µg/L	1.5	0	146	55 - 150%	PASS	2	30	PASS
Dibenzo[a,i]pyrene	Total	0.626	1	0.001	0.005	µg/L	0.5	0	125	50 - 150%	PASS	13	30	PASS

## Polynuclear Aromatic Hydrocarbons

## QUALITY CONTROL REPORT

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

# PHYSICAL Total Ion Chromatogram RESULTS

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



Sample ID: 93058

RT	Area Pct	Concentration (ng/L)	Library/ID	Qual	Cas Number
34.1786	4.3787	1111	Anthracene-D10-	1719-06-8	97
12.2333	2.6305	668	Ethanol, 2-(hexyloxy)-	112-25-4	99
30.3470	2.4793	629	Methanone, (1-hydroxycyclohexyl)phenyl-	947-19-3	96
10.0060	2.3115	587	Cyclohexane, 1-methyl-3-propyl-	4291-80-9	92
16.1727	1.5603	396	Thymol	89-83-8	97
26.4408	1.3591	345	Diethyl Phthalate	84-66-2	99
21.9427	1.3213	335	2,6-Di-tert-butyl-4-hydroxy-4-methylcyclohexa-2,5-dien-1-one	10396-80-2	84
20.6413	1.0694	271	Ethanone, 1,1'-(1,4-phenylene)bis-	1009-61-6	98
18.7808	0.9196	233	Propanoic acid, 2-methyl-, 3-hydroxy-2,2,4-trimethylpentyl ester	77-68-9	99
27.9810	0.8247	209	Benzophenone	119-61-9	99
15.8760	0.6854	174	1-Dodecanesulfonyl chloride	10147-40-7	81
18.2126	0.6021	153	2,2,4-Trimethyl-1,3-pentanediol diisobutyrate	6846-50-0	87
11.0021	0.5179	131	1-Hexanol, 2-ethyl-	104-76-7	98
25.9581	0.4701	119	Diethyltoluamide	134-62-3	98
10.0096	0.4318	110	1H-Tetrazole	288-94-8	83

Concentration estimated using the response for Anthracene-d10

**Sample ID: Lab Blank B1\_35016**

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

Concentration estimated using the response for Anthracene-d10

# PERFORMANCE CHAIN OF CUSTODY

TERRA ENVIRONMENTAL LABORATORIES, INC. AURA

*Innovative Solutions for Nature*



Eaton Analytical

Ship To:
Physis Environmental Laboratories, Inc
1904 East Wright Circle
Anaheim, CA 92806-6028
Phone: 714-602-5320 Fax:

Folder #: 973343
Report Due: 12/10/2021

Submittal Form
Date: 12/7/2021

\*REPORTING REQUIREMENTS: Do Not Combine Reports with any other samples submitted under different Folder Numbers! Report & Invoice must have the Folder # 973343 Job # 1000014

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

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

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

rush order

Sample ID: 202112070283
Client Sample ID for reference on: BWS2253-J1-AQ

Sample Date & Time Matrix: 12/06/21 1030 DW
Clip Code: PWSID
JLS

Sample type: EPA 625
Sample Event: 625 Acid Extractable in ug/L
Facility ID:
Analysis Requested: 625 Base Neutral Extractable in ug/L
Static ID: Raw+MS/MSD vol

Method: EPA 625
Prep Method: EPA 625
EPA 625m
625PAH in ug/L

Relinquished by: [Signature] Date: 12-7-21 Time: 1413
Received by: [Signature] Date: 12-7-21 Time: 1512
Relinquished by: [Signature] Date: 12-7-21 Time: 1640
Received by: [Signature] Date: 12-7-21 Time: 1640

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

Project Iteration ID: 1407003-195  
 Client Name: Eurofins Eaton Analytical  
 Project Name: Folder # 973343 Job # 1000014  
 COC Page Number: 2 of 2  
 Bottle Label Color: NA

**Sample Receipt Summary**

**Receiving Info**

1. Initials Received By: BJS
2. Date Received: 12-7-21
3. Time Received: 1640
4. Client Name: Eurofins
5. Courier Information: (Please circle)
  - Client
  - UPS
  - Area Fast
  - DRS
  - FedEx
  - GSO/GLS
  - Ontrac
  - PAMS
  - PHYSIS Driver:
  - i. Start Time: \_\_\_\_\_
  - ii. End Time: \_\_\_\_\_
  - iii. Total Mileage: \_\_\_\_\_
  - iv. Number of Pickups: \_\_\_\_\_
6. Container Information: (Please put the # of containers or circle none)
  - 1 Cooler
  - \_\_\_ Styrofoam Cooler
  - \_\_\_ Boxes
  - None
  - \_\_\_ Carboy(s)
  - \_\_\_ Carboy Trash Can(s)
  - \_\_\_ Carboy Cap(s)
  - Other \_\_\_\_\_
7. What type of ice was used: (Please circle any that apply)
  - Wet Ice
  - Blue Ice
  - Dry Ice
  - Water
  - None
8. Randomly Selected Samples Temperature (°C): 13  
 Used I/R Thermometer # 1-2

**Inspection Info**

1. Initials Inspected By: \_\_\_\_\_

**Sample Integrity Upon Receipt:**

1. COC(s) included and completely filled out..... Yes / No
2. All sample containers arrived intact..... Yes / No
3. All samples listed on COC(s) are present..... Yes / No
4. Information on containers consistent with information on COC(s)..... Yes / No
5. Correct containers and volume for all analyses indicated..... Yes / No
6. All samples received within method holding time..... Yes / No
7. Correct preservation used for all analyses indicated..... Yes / No
8. Name of sampler included on COC(s)..... Yes / No

Notes:

## ANALYTICAL REPORT

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

Laboratory Job ID: 440-292505-1  
Laboratory Sample Delivery Group: 1000014  
Client Project/Site: Folder #: 973343

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

Attn: Subcontract Eurofins Eaton Analytical



Authorized for release by:  
12/10/2021 12:32:59 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 #: 973343

Job ID: 440-292505-1  
SDG: 1000014

---

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
440-292505-1	202112070283	Water	12/06/21 10:30	12/07/21 17:18

- 1
- 2
- 3
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- 5
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- 8
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- 10
- 11
- 12
- 13



# Case Narrative

Client: Eurofins Eaton Analytical  
Project/Site: Folder #: 973343

Job ID: 440-292505-1  
SDG: 1000014

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**Job ID: 440-292505-1**

---

**Laboratory: Eurofins Calscience Irvine**

---

**Narrative**

**Job Narrative  
440-292505-1**

**Comments**

No additional comments.

**Receipt**

The sample was received on 12/7/2021 5:18 PM. Unless otherwise noted below, the sample arrived in good condition, and where required, properly preserved and on ice. The temperature of the cooler at receipt was 1.7° C.

**GC/MS VOA**

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

**VOA Prep**

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

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# Client Sample Results

Client: Eurofins Eaton Analytical  
 Project/Site: Folder #: 973343

Job ID: 440-292505-1  
 SDG: 1000014

**Client Sample ID: 202112070283**

**Lab Sample ID: 440-292505-1**

Date Collected: 12/06/21 10:30

Matrix: Water

Date Received: 12/07/21 17:18

**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			12/09/21 16:58	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	104		60 - 140					12/09/21 16:58	1
4-Bromofluorobenzene (Surr)	105		60 - 140					12/09/21 16:58	1
Dibromofluoromethane (Surr)	100		60 - 140					12/09/21 16:58	1
Toluene-d8 (Surr)	104		60 - 140					12/09/21 16:58	1

# Method Summary

Client: Eurofins Eaton Analytical  
Project/Site: Folder #: 973343

Job ID: 440-292505-1  
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 #: 973343

Job ID: 440-292505-1  
SDG: 1000014

**Client Sample ID: 202112070283**

**Lab Sample ID: 440-292505-1**

**Date Collected: 12/06/21 10:30**

**Matrix: Water**

**Date Received: 12/07/21 17:18**

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	662610	12/09/21 16:58	K6MO	TAL IRV

**Laboratory References:**

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

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# QC Sample Results

Client: Eurofins Eaton Analytical  
Project/Site: Folder #: 973343

Job ID: 440-292505-1  
SDG: 1000014

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

**Lab Sample ID: MB 440-662610/4**  
**Matrix: Water**  
**Analysis Batch: 662610**

**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			12/09/21 16:28	1
Surrogate	%Recovery	Qualifier	Limits				Prepared	Analyzed	Dil Fac
1,2-Dichloroethane-d4 (Surr)	103		60 - 140					12/09/21 16:28	1
4-Bromofluorobenzene (Surr)	105		60 - 140					12/09/21 16:28	1
Dibromofluoromethane (Surr)	98		60 - 140					12/09/21 16:28	1
Toluene-d8 (Surr)	102		60 - 140					12/09/21 16:28	1

**Lab Sample ID: LCS 440-662610/1002**  
**Matrix: Water**  
**Analysis Batch: 662610**

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

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Acetone	125	163		ug/L		131	60 - 140
Surrogate	%Recovery	Qualifier	Limits				
1,2-Dichloroethane-d4 (Surr)	100		60 - 140				
4-Bromofluorobenzene (Surr)	104		60 - 140				
Dibromofluoromethane (Surr)	98		60 - 140				
Toluene-d8 (Surr)	99		60 - 140				

**Lab Sample ID: 440-292513-B-8 MSD**  
**Matrix: Water**  
**Analysis Batch: 662610**

**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		125	137		ug/L		109	60 - 140	11	35
Surrogate	%Recovery	Qualifier	Limits								
1,2-Dichloroethane-d4 (Surr)	98		60 - 140								
4-Bromofluorobenzene (Surr)	105		60 - 140								
Dibromofluoromethane (Surr)	99		60 - 140								
Toluene-d8 (Surr)	100		60 - 140								

**Lab Sample ID: 440-292513-C-8 MS**  
**Matrix: Water**  
**Analysis Batch: 662610**

**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		125	152		ug/L		122	60 - 140
Surrogate	%Recovery	Qualifier	Limits						
1,2-Dichloroethane-d4 (Surr)	99		60 - 140						
4-Bromofluorobenzene (Surr)	104		60 - 140						
Dibromofluoromethane (Surr)	99		60 - 140						
Toluene-d8 (Surr)	101		60 - 140						

# QC Association Summary

Client: Eurofins Eaton Analytical  
Project/Site: Folder #: 973343

Job ID: 440-292505-1  
SDG: 1000014

## GC/MS VOA

### Analysis Batch: 662610

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
440-292505-1	202112070283	Total/NA	Water	624.1	
MB 440-662610/4	Method Blank	Total/NA	Water	624.1	
LCS 440-662610/1002	Lab Control Sample	Total/NA	Water	624.1	
440-292513-B-8 MSD	Matrix Spike Duplicate	Total/NA	Water	624.1	
440-292513-C-8 MS	Matrix Spike	Total/NA	Water	624.1	

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# Definitions/Glossary

Client: Eurofins Eaton Analytical  
Project/Site: Folder #: 973343

Job ID: 440-292505-1  
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 #: 973343

Job ID: 440-292505-1  
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

1

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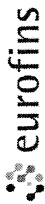
10

11

12

13





Eaton Analytical

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

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

Folder #: 973343 Report Due: 12/10/2021

### Submittal Form

Date: 12/7/2021

\*REPORTING REQUIREMENTS: Do Not Combine Reports with any other samples submitted under different Folder Numbers!  
Report & Invoice must have the Folder# 973343 Job # 1000014

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

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

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

2 day rush

Sample ID 202112070283	Client Sample ID for reference on! BWS2253-J1-AQ	Sample Date & Time 12/06/21 1030 DW	Matrix DW	Clip Code	PWSID	JLS
Sample type:	Sample Event:	Facility ID:	Sample Point ID:	Static ID: Raw+MS/MSD vol		

Method  
EPA 624.1

Prep Method  
Acetone by 624.1

Analysis Requested

JLS 12/7/21



440-292505 Chain of Custody

12-89 1.7/1.7

Relinquished by: Chen Bando Control

Received by: Chen Bando Control

Relinquished by: Chen Bando Sample Control

Received by: Chen Bando Control

Date 12-7-21 Time 14:14

Date 12-7-21 Time 15:12

Date 12-7-21 Time 17:18

Date 12-7-21 Time 17:18

NOTIFICATION REQUIRED IF RECEIVED OUTSIDE OF 0-6 CELSIUS

An Acknowledgement of Receipt is requested to attn: Jackie Contreras

## Login Sample Receipt Checklist

Client: Eurofins Eaton Analytical

Job Number: 440-292505-1

SDG Number: 1000014

**Login Number: 292505**

**List Number: 1**

**Creator: Lagunas, Jorge L**

**List Source: Eurofins Calscience Irvine**

Question	Answer	Comment
Radioactivity wasn't checked or is <math>\leq</math> 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 <math><6\text{mm}</math> (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	