

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: 989671  
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
Enterococci	Enterolert	x	x
Escherichia coli (Enumeration)	SM 9221 B.1 SM 9221 F	x	
Fecal Coliform (P/A and Enumeration)	SM 9221 C (MTF/EC), SM 9221 E (MTF/EC)	x	x
Fecal Streptococci and Enterococci	SM 9230 B	x	x
Heterotrophic Bacteria	SM 9215 B	x	
Legionella	Legiolert®	x	
Pseudomonas aeruginosa	Idexx Pseudalart	x	
Total Coliform (P/A and Enumeration)	SM 9221A, SM 9221B, SM 9221 C	x	x
Total Coliform, Total Coliform with Chlorine Present	SM 9221 B	x	x
Total Coliform/E. coli (P/A and Enumeration, Idexx Colilert, Idexx Colilert 18, Colisure)	SM 9223	x	
Total Microcystins and Nodularins	EPA 546	X	
Yeast and Mold	SM 9610	x	
1,2,3-Trichloropropane (TCP) at 5 PPT	CA SRL 524M-TCP	x	
1,4-Dioxane	EPA 522	x	
2,3,7,8-TCDD	Modified EPA 1613 B	x	
Acrylamide	+ LCMS 2440)	x	
Algal Toxins/Microcystin	+ LCMS 3570	x	
Alkalinity	SM 2320B	x	x
Ammonia	EPA 350.1, SM 4500-NH3 H		x
Asbestos	EPA 100.2	x	x
Bicarbonate Alkalinity as HCO3	SM 2330 B	x	x
BOD/CBOD	SM 5210 B		x
Bromate	+ LCMS- 2447	x	
Carbonate as CO3	SM 2330 B	x	x
Carbonyls	EPA 556	x	x
Chemical Oxygen Demand	EPA 410.4, SM 5220D		x
Chlorinated Acids	EPA 515.4	x	
Chlorine Dioxide	Palin Test Chlordio X Plus, SM 4500-CLO2 D	x	
Chlorine, Free, Combined, Total Residual, Chloramines	SM 4500-Cl G	x	
Color	SM2120B	x	
Conductivity	EPA 120.1, SM 2510B	x	x
Corrosivity (Langelier Index), Carbonate as CO3, Hydroxide as OH Calculated	SM 2330 B	x	
Cyanide (Amenable)	SM 4500-CN G	x	x
Cyanide (Free)	SM 4500CN F	x	x
Cyanide (Total)	EPA 335.4	x	x
Cyanogen Chloride (Screen)	+ 335 Mod (WC-24467)	x	
Diquat and Paraquat	EPA 549.2	x	
DBP and HAA	SM 6251 B	x	
Dissolved Organic Carbon	SM 5310 C	x	
Dissolved Oxygen	SM 4500-O G		x
EDB/DCBP/TCP	EPA 504.1	x	
EDB/DBCP and Disinfection Byproducts	EPA 551.1	x	
EDTA and NTA	+ WC-2454	x	
Endothall	EPA 548.1, +(LCMS-2445)	x	
Fluoride	SM 4500F C	x	x
Glyphosate	EPA 547	x	
Glyphosate and AMPA	+ LCMS-3618	x	
Gross Alpha and Gross Beta	EPA 900.0	x	x

Test(s)	Method(s)	Potable Water *	Waste Water
Gross Alpha coprecipitation	SM 7110 C	x	x
Hardness	SM 2340 B	x	x
Hexavalent Chromium	EPA 218.6,	x	x
Hexavalent Chromium	EPA 218.7,	x	
Hexavalent Chromium	SM 3500-Cr B		x
Inorganic Anions and DBPs	EPA 300.0	x	x
Norganic Anions and DBPs	EPA 300.1	x	
Kjeldahl Nitrogen	EPA 351.2		x
Metals	EPA 200.7, EPA200.8	x	x
Nitrosamines	EEA-Agilent 521.1 (GCMS-24250)	x	
Nitrate/Nitrite Nitrogen	EPA 353.2	x	x
Odor	SM2150B	x	
Organohalide Pesticides and PCB	EPA 505	x	
Ortho Phosphate	SM 4500P E	x	
Oxyhalides Disinfection Byproducts	EPA 317.0	x	
Perchlorate	EPA 331.0	x	
Perchlorate (Low and High Levels)	EPA 314.0	x	
Perfluorinated Alkyl Acids	EPA 533, EPA 537, EPA 537.1	x	
PPCP and EDC	+ LCMS-2443	x	
pH	EPA 150.1 SM 4500-H+ B	x	x
Phenolics – Low Level	+WC 2493 (EPA 420.2 and EPA 420.4 MOD)	x	x
Phenylurea Pesticides/Herbicides	+ LCMS-2448	x	
Radium-226, Radium-228	GA Tech (Rad-2374)	x	
Radon-222	SM 7500RN	x	
Residue (Filterable)	SM 2540C	x	x
Residue (Non-Filterable)	SM 2540D		x
Residue (Total)	SM 2540B		x
Residue (Volatile)	EPA 160.4		x
Semi-Volatile Compounds	EPA 525.2	x	
Silica	SM 4500-SiO2 C	x	x
Sulfide	SM 4500-S D		x
Sulfite	SM 4500-SO3 B	x	x
Surfactants	SM 5540C	x	x
Taste and Odor	SM 6040 E	x	
Total Organic Carbon	SM 5310 C	x	x
Total Phenols	EPA 420.1		x
Total Phenols	EPA 420.4	x	x
Triazine Pesticides and their Degradates	+ LCMS-3617	x	
Turbidity	EPA 180.1	x	x
Uranium by ICP/MS	EPA 200.8	x	
UV 254 Organic Constituents	SM 5910B	x	
VOCs	EPA 524.2	x	
VOCs	+(GCMS 2412) by EPA 524.2 modified	x	

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

(+ ) In-House Method

**Acknowledgement of Samples Received**

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

Attn: Erwin Kawata  
Phone: 808-748-5091

Client ID: HONOLULU  
Folder #: 989671  
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 **February 25, 2022** at **1219**. 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
202202250259	DH43-AQ	02/23/2022 0900
Static ID: Moanalua DH-43, Well No. 3-2253-002		
(SUB)Gas Fraction Hydrocarbons RUSH TPH 8015 Diesel and Motor Oil		
202202250260	DH43-TB	02/23/2022 0900
(SUB)Gas Fraction Hydrocarbons		

**Test Description**





Eaton Analytical

# Kit Order for Honolulu Board of Water Supply

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

Created Date & Time: 1/7/2022 6:52:32PM

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

Kit #: 309922



Client ID: HONOLULU



Created By: Debbie L Frank - [DEB]

Deliver By: 01/14/2022

STG: Bottle Orders

Ice Type: W

Pre Registered

Project Code: INTERA Bottle Orders  
Group Name: RUSH Incident Follow-up TPH (2021)  
PO#/JOB#: C20525101 exp 05312023  
Description: ASSET DH-43, Well No. 3-2253-0C

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

**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	@8015_C8-C44_ASSETS	3	
1	8015 Gas Travel Blank	2	UN1789
1	8015 Gas	3	

**Sum Tests: 3**

**Sum Bottles: 8**

### Comments

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

Testing  
8015 C8-C44 extractable ~~ORO~~ DRO, ORO  
8015 C6-C10 purgeable (GRO)

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

Asset Labs  
Sample receiving  
ASSET Laboratories  
3151 W. Post Road,  
Las Vegas, NV 89118  
702.307.2659  
Marlon Cartin  
Sr. Project Manager  
www.assetlaboratories.com  
Email: marlon@assetlaboratories.com  
P: 702.307.2659 Ext. 410 | F: 702.307.2691 | M: 702.439.0421

Include KO with COC



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**Laboratory Comments**

**Report:** 989671  
**Project:** INTERA  
**Group:** RUSH Incident Follow-up TPH (2021)

Honolulu Board of Water Supply  
Erwin Kawata  
630 South Beretania Street  
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**Folder Comments**

Results for Diesel Range Organics, Oil Range Organics and Gas Range Organics are submitted by Asset Laboratories



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**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:  
 02/25/2022 1219

Analyzed	Analyte	Sample ID	Result	HI Limit	Units	MRL
		<b>202202250259</b>				
		<b><u>DH43-AQ</u></b>				
03/01/2022 04:12	TPH Diesel		2300		ug/L	50
03/01/2022 04:12	TPH Motor Oil		230		ug/L	50

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**Report:** 989671  
**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:  
 02/25/2022 12:19

Prepped	Analyzed	Prep Batch	Analytical Batch	Method	Analyte	Result	Units	MRL	Dilution
<b><u>DH43-AQ (202202250259)</u></b>						<b>Sampled on 02/23/2022 0900</b>			
Static ID: Moanalua DH-43, Well No. 3-2253-002									
<b>SW 8015B - (SUB)Gas Fraction Hydrocarbons</b>									
03/01/22	03/01/22 12:11			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.05	1
<b>SW 8015B - TPH 8015 Diesel and Motor Oil</b>									
02/28/22	03/01/22 04:12			(SW 8015B)	TPH Diesel	2300	ug/L	50	1
02/28/22	03/01/22 04:12			(SW 8015B)	TPH Motor Oil	230	ug/L	50	1
<b><u>DH43-TB (202202250260)</u></b>						<b>Sampled on 02/23/2022 0900</b>			
<b>SW 8015B - (SUB)Gas Fraction Hydrocarbons</b>									
03/01/22	03/01/22 13:43			(SW 8015B)	(SUB)Gas Fraction Hydrocarbons	ND	mg/L	0.05	1

Rounding on totals after summation.  
 (c) - indicates calculated results. Analysis is a calculated result. Reported results are not rounded until the final step before reporting. Therefore methods that use a test result with further calculation may have slight differences in final result than the component analyses.

March 02, 2022

Debbie Frank  
Eurofins  
750 Royal Oaks Drive Suite 100  
Monrovia, CA 91016-3629  
TEL: (626) 386-1158  
FAX:

Workorder No.: N049568

RE: RED HILL

Attention: Debbie Frank

Enclosed are the results for sample(s) received on February 25, 2022 by ASSET Laboratories. The sample(s) are tested for the parameters as indicated in the enclosed chain of custody in accordance with the applicable laboratory certifications.

Thank you for the opportunity to service the needs of your company.

Please feel free to call me at (702) 307-2659 if I can be of further assistance to your company.

Sincerely,



Nancy Sibucan  
Laboratory Director

The cover letter is an integral part of this analytical report. This Laboratory Report cannot be reproduced in part or in its entirety without written permission from the client and ASSET Laboratories - Las Vegas.



**ASSET LABORATORIES**  
ANALYTICAL SUPPORT SERVICES FOR ENVIRONMENTAL TECHNOLOGIES

CALIFORNIA | P: 562.219.7435 F: 562.219.7436  
11110 Artesia Blvd., Ste B, Cerritos, CA 90703  
ELAP Cert 2921  
EPA ID CA01638

NEVADA | P: 702.307.2659 F: 702.307.2691  
3151 W. Post Rd., Las Vegas, NV 89118  
ELAP Cert 2676 | NV Cert NV00922  
ORELAP/NELAP Cert 4046

*"Serving Clients with Passion and Professionalism"*

**CLIENT:** Eurofins  
**Project:** RED HILL  
**Lab Order:** N049568

**CASE NARRATIVE**

**SAMPLE RECEIVING/GENERAL COMMENTS:**

All sample containers were received intact with proper chain of custody documentation.

Information on sample receipt conditions including discrepancies can be found in attached Sample Receipt Checklist Form.

Cooler temperature and sample preservation were verified upon receipt of samples if applicable.

Samples were analyzed within method holding time.

**Analytical Comments for EPA 8015B\_DRO:**

RPD and recovery of Matrix Spike (MS) and Matrix Spike Duplicate (MSD) are outside criteria for TPH-Diesel in QC samples N049568-001-MS/MSD possibly due to matrix interference. The associated Laboratory Control Sample (LCS) recovery was acceptable.



**CLIENT:** Eurofins  
**Project:** RED HILL  
**Lab Order:** N049568  
**Contract No:**

**Work Order Sample Summary**

Lab Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Date Reported
N049568-001A	989671_202202250259_DH4 3-AQ	Raw Groundwater	2/23/2022 9:00:00 AM	2/25/2022	3/2/2022
N049568-001B	989671_202202250259_DH4 3-AQ	Raw Groundwater	2/23/2022 9:00:00 AM	2/25/2022	3/2/2022
N049568-002A	989671_202202250260_DH4 3-TB	Bottled Water	2/23/2022 9:00:00 AM	2/25/2022	3/2/2022



**ASSET Laboratories**

**ANALYTICAL RESULTS**

Print Date: 02-Mar-22

**CLIENT:** Eurofins  
**Lab Order:** N049568  
**Project:** RED HILL  
**Lab ID:** N049568-001

**Client Sample ID:** 989671\_202202250259\_DH43-AQ  
**Collection Date:** 2/23/2022 9:00:00 AM  
**Matrix:** RAW GROUNDWATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**TPH CARBON CHAIN EPA 8015**

**EPA 3510C**

**EPA 8015B(M)**

RunID: NV00922-GC1_220228C	QC Batch: 91661				PrepDate: 2/28/2022	Analyst: MCC
Diesel Range Organics (C10-C28)	2300	50		ug/L	1	3/1/2022 04:12 AM
Oil Range Organics (C28-C40)	230	50		ug/L	1	3/1/2022 04:12 AM
Surr: p-Terphenyl	71.5	33-138		%REC	1	3/1/2022 04:12 AM

**GASOLINE RANGE ORGANICS BY GC/FID**

**EPA 8015B**

RunID: NV00922-GC4_220301A	QC Batch: E22VW022				PrepDate:	Analyst: DJ
GRO	ND	0.050		mg/L	1	3/1/2022 12:11 PM
Surr: Chlorobenzene - d5	85.0	69-130		%REC	1	3/1/2022 12:11 PM

**Qualifiers:** B Analyte detected in the associated Method Blank  
 H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference  
 DO Surrogate Diluted Out  
 E Value above quantitation range  
 ND Not Detected at the Reporting Limit  
 Results are wet unless otherwise specified



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**ASSET Laboratories**

**ANALYTICAL RESULTS**

Print Date: 02-Mar-22

**CLIENT:** Eurofins  
**Lab Order:** N049568  
**Project:** RED HILL  
**Lab ID:** N049568-002

**Client Sample ID:** 989671\_202202250260\_DH43-TB  
**Collection Date:** 2/23/2022 9:00:00 AM  
**Matrix:** BOTTLED WATER

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
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**GASOLINE RANGE ORGANICS BY GC/FID**

**EPA 8015B**

RunID: NV00922-GC4_220301A	QC Batch: E22VW022	PrepDate:	Analyst: DJ		
GRO	ND	0.050	mg/L	1	3/1/2022 01:43 PM
Surr: Chlorobenzene - d5	109	69-130	%REC	1	3/1/2022 01:43 PM

<b>Qualifiers:</b>	B Analyte detected in the associated Method Blank	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	ND Not Detected at the Reporting Limit
	S Spike/Surrogate outside of limits due to matrix interference	Results are wet unless otherwise specified
	DO Surrogate Diluted Out	



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**ASSET Laboratories**

Date: 02-Mar-22

**ANALYTICAL QC SUMMARY REPORT**

**CLIENT:** Eurofins  
**Work Order:** N049568  
**Project:** RED HILL

**TestCode:** 8015DM\_W\_CC

Sample ID: <b>MB-91661</b>	SampType: <b>MBLK</b>	TestCode: <b>8015DM_W_C</b>	Units: <b>ug/L</b>	Prep Date: <b>2/28/2022</b>	RunNo: <b>160509</b>						
Client ID: <b>PBW</b>	Batch ID: <b>91661</b>	TestNo: <b>EPA 8015B(M)</b>	EPA <b>3510C</b>	Analysis Date: <b>3/1/2022</b>	SeqNo: <b>4547252</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C28)	ND	50									
Oil Range Organics (C28-C40)	ND	50									
Surr: p-Terphenyl	70.720		80.00		88.4	33	138				

Sample ID: <b>LCS-91661</b>	SampType: <b>LCS</b>	TestCode: <b>8015DM_W_C</b>	Units: <b>ug/L</b>	Prep Date: <b>2/28/2022</b>	RunNo: <b>160509</b>						
Client ID: <b>LCSW</b>	Batch ID: <b>91661</b>	TestNo: <b>EPA 8015B(M)</b>	EPA <b>3510C</b>	Analysis Date: <b>3/1/2022</b>	SeqNo: <b>4547253</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C28)	858.001	50	1000	0	85.8	48	120				
Surr: p-Terphenyl	74.382		80.00		93.0	33	138				

Sample ID: <b>N049568-001B-MS</b>	SampType: <b>MS</b>	TestCode: <b>8015DM_W_C</b>	Units: <b>ug/L</b>	Prep Date: <b>2/28/2022</b>	RunNo: <b>160509</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>91661</b>	TestNo: <b>EPA 8015B(M)</b>	EPA <b>3510C</b>	Analysis Date: <b>3/1/2022</b>	SeqNo: <b>4547264</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C28)	1749.470	50	1000	2338	-58.9	48	120				S
Surr: p-Terphenyl	65.044		80.00		81.3	33	138				

Sample ID: <b>N049568-001B-MSD</b>	SampType: <b>MSD</b>	TestCode: <b>8015DM_W_C</b>	Units: <b>ug/L</b>	Prep Date: <b>2/28/2022</b>	RunNo: <b>160509</b>						
Client ID: <b>ZZZZZZ</b>	Batch ID: <b>91661</b>	TestNo: <b>EPA 8015B(M)</b>	EPA <b>3510C</b>	Analysis Date: <b>3/1/2022</b>	SeqNo: <b>4547265</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Diesel Range Organics (C10-C28)	3074.180	50	1000	2338	73.6	48	120	1749	54.9	20	R
Surr: p-Terphenyl	61.768		80.00		77.2	33	138		0	0	

**Qualifiers:**

B Analyte detected in the associated Method Blank  
 ND Not Detected at the Reporting Limit  
 DO Surrogate Diluted Out

E Value above quantitation range  
 R RPD outside accepted recovery limits  
 Calculations are based on raw values

H Holding times for preparation or analysis exceeded  
 S Spike/Surrogate outside of limits due to matrix interference



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 EPA ID:CA01638 ORELAP/NELAP Cert 4046



# ANALYTICAL QC SUMMARY REPORT

**CLIENT:** Eurofins  
**Work Order:** N049568  
**Project:** RED HILL

**TestCode: 8015GAS\_WP**

<b>Sample ID: E220301LCS</b>		<b>SampType: LCS</b>		<b>TestCode: 8015GAS_WP</b>		<b>Units: mg/L</b>		<b>RunNo: 160515</b>	
<b>Client ID: LCSW</b>		<b>Batch ID: E22VW022</b>		<b>TestNo: EPA 8015B</b>				<b>SeqNo: 4547373</b>	
<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>SPK value</b>	<b>SPK Ref Val</b>	<b>%REC</b>	<b>LowLimit</b>	<b>HighLimit</b>	<b>RPD Ref Val</b>	<b>%RPD RPDLimit Qual</b>
GRO	0.907	0.050	1.000	0	90.7	69	143		
Surr: Chlorobenzene - d5	46.251		50.00		92.5	69	130		


<b>Sample ID: E220301MB</b>		<b>SampType: MBLK</b>		<b>TestCode: 8015GAS_WP</b>		<b>Units: mg/L</b>		<b>RunNo: 160515</b>	
<b>Client ID: PBW</b>		<b>Batch ID: E22VW022</b>		<b>TestNo: EPA 8015B</b>				<b>SeqNo: 4547374</b>	
<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>SPK value</b>	<b>SPK Ref Val</b>	<b>%REC</b>	<b>LowLimit</b>	<b>HighLimit</b>	<b>RPD Ref Val</b>	<b>%RPD RPDLimit Qual</b>
GRO	ND	0.050	50.00		94.0	69	130		
Surr: Chlorobenzene - d5	47.017								

<b>Sample ID: N049568-001AMS</b>		<b>SampType: MS</b>		<b>TestCode: 8015GAS_WP</b>		<b>Units: mg/L</b>		<b>RunNo: 160515</b>	
<b>Client ID: ZZZZZZ</b>		<b>Batch ID: E22VW022</b>		<b>TestNo: EPA 8015B</b>				<b>SeqNo: 4547376</b>	
<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>SPK value</b>	<b>SPK Ref Val</b>	<b>%REC</b>	<b>LowLimit</b>	<b>HighLimit</b>	<b>RPD Ref Val</b>	<b>%RPD RPDLimit Qual</b>
GRO	0.892	0.050	1.000	0	89.2	49	156		
Surr: Chlorobenzene - d5	43.051		50.00		86.1	69	130		

<b>Sample ID: N049568-001MSD</b>		<b>SampType: MSD</b>		<b>TestCode: 8015GAS_WP</b>		<b>Units: mg/L</b>		<b>RunNo: 160515</b>	
<b>Client ID: ZZZZZZ</b>		<b>Batch ID: E22VW022</b>		<b>TestNo: EPA 8015B</b>				<b>SeqNo: 4547377</b>	
<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>SPK value</b>	<b>SPK Ref Val</b>	<b>%REC</b>	<b>LowLimit</b>	<b>HighLimit</b>	<b>RPD Ref Val</b>	<b>%RPD RPDLimit Qual</b>
GRO	0.899	0.050	1.000	0	89.9	49	156	0.8920	0.782 20
Surr: Chlorobenzene - d5	45.836		50.00		91.7	69	130		0 0

**Qualifiers:**

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	


  
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# ANALYTICAL QC SUMMARY REPORT

**CLIENT:** Eurofins  
**Work Order:** N049568  
**Project:** RED HILL

**TestCode: 8015GAS\_WU**

<b>Sample ID: E220301LCS</b>		<b>SampType: LCS</b>		<b>TestCode: 8015GAS_WU</b>		<b>Units: mg/L</b>		<b>Prep Date:</b>		<b>RunNo: 160515</b>	
<b>Client ID: LCSW</b>		<b>Batch ID: E22VW022</b>		<b>TestNo: EPA 8015B</b>				<b>Analysis Date: 3/1/2022</b>		<b>SeqNo: 4547366</b>	
<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>SPK value</b>	<b>SPK Ref Val</b>	<b>%REC</b>	<b>LowLimit</b>	<b>HighLimit</b>	<b>RPD Ref Val</b>	<b>%RPD</b>	<b>RPDLimit</b>	<b>Qual</b>
GRO	0.907	0.050	1.000	0	90.7	69	143				
Surr: Chlorobenzene - d5	46.251		50.00		92.5	69	130				


<b>Sample ID: E220301MB</b>		<b>SampType: MBLK</b>		<b>TestCode: 8015GAS_WU</b>		<b>Units: mg/L</b>		<b>Prep Date:</b>		<b>RunNo: 160515</b>	
<b>Client ID: PBW</b>		<b>Batch ID: E22VW022</b>		<b>TestNo: EPA 8015B</b>				<b>Analysis Date: 3/1/2022</b>		<b>SeqNo: 4547367</b>	
<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>SPK value</b>	<b>SPK Ref Val</b>	<b>%REC</b>	<b>LowLimit</b>	<b>HighLimit</b>	<b>RPD Ref Val</b>	<b>%RPD</b>	<b>RPDLimit</b>	<b>Qual</b>
GRO	ND	0.050	50.00		94.0	69	130				
Surr: Chlorobenzene - d5	47.017										

<b>Sample ID: N049568-001AMS</b>		<b>SampType: MS</b>		<b>TestCode: 8015GAS_WU</b>		<b>Units: mg/L</b>		<b>Prep Date:</b>		<b>RunNo: 160515</b>	
<b>Client ID: ZZZZZZ</b>		<b>Batch ID: E22VW022</b>		<b>TestNo: EPA 8015B</b>				<b>Analysis Date: 3/1/2022</b>		<b>SeqNo: 4547369</b>	
<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>SPK value</b>	<b>SPK Ref Val</b>	<b>%REC</b>	<b>LowLimit</b>	<b>HighLimit</b>	<b>RPD Ref Val</b>	<b>%RPD</b>	<b>RPDLimit</b>	<b>Qual</b>
GRO	0.892	0.050	1.000	0	89.2	49	156				
Surr: Chlorobenzene - d5	43.051		50.00		86.1	69	130				

<b>Sample ID: N049568-001AMSD</b>		<b>SampType: MSD</b>		<b>TestCode: 8015GAS_WU</b>		<b>Units: mg/L</b>		<b>Prep Date:</b>		<b>RunNo: 160515</b>	
<b>Client ID: ZZZZZZ</b>		<b>Batch ID: E22VW022</b>		<b>TestNo: EPA 8015B</b>				<b>Analysis Date: 3/1/2022</b>		<b>SeqNo: 4547370</b>	
<b>Analyte</b>	<b>Result</b>	<b>PQL</b>	<b>SPK value</b>	<b>SPK Ref Val</b>	<b>%REC</b>	<b>LowLimit</b>	<b>HighLimit</b>	<b>RPD Ref Val</b>	<b>%RPD</b>	<b>RPDLimit</b>	<b>Qual</b>
GRO	0.899	0.050	1.000	0	89.9	49	156	0.8920	0.782	20	
Surr: Chlorobenzene - d5	45.836		50.00		91.7	69	130		0	0	

**Qualifiers:**

B Analyte detected in the associated Method Blank	E Value above quantitation range	H Holding times for preparation or analysis exceeded
ND Not Detected at the Reporting Limit	R RPD outside accepted recovery limits	S Spike/Surrogate outside of limits due to matrix interference
DO Surrogate Diluted Out	Calculations are based on raw values	


  
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# ASSET Laboratories

Please review the checklist below. Any NO signifies non-compliance. Any non-compliance will be noted and must be understood as having an impact on the quality of the data. All tests will be performed as requested regardless of any compliance issues.

If you have any questions or further instruction, please contact our Project Coordinator at (702) 307-2659.

Cooler Received/Opened On: 2/25/2022 Workorder: N049568  
 Rep sample Temp (Deg C): 5.4 IR Gun ID: 3  
 Temp Blank:  Yes  No  
 Carrier name: FedEx  
 Last 4 digits of Tracking No.: 2099 Packing Material Used: Bubble Wrap  
 Cooling process:  Ice  Ice Pack  Dry Ice  Other  None

## Sample Receipt Checklist

- |   |  |  |  |
|---|--|--|--|
| 1. Shipping container/cooler in good condition?   | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                | Not Present <input type="checkbox"/>   |
| 2. Custody seals intact, signed, dated on shipping container/cooler?                    | Yes <input type="checkbox"/>                                 | No <input type="checkbox"/>                                | Not Present <input checked="" type="checkbox"/>                                  |
| 3. Custody seals intact on sample bottles?  | Yes <input type="checkbox"/>                                 | No <input type="checkbox"/>                                | Not Present <input checked="" type="checkbox"/>                                  |
| 4. Chain of custody present?  | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 5. Sampler's name present in COC?   | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 6. Chain of custody signed when relinquished and received?                              | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 7. Chain of custody agrees with sample labels?  | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 8. Samples in proper container/bottle?  | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 9. Sample containers intact?  | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 10. Sufficient sample volume for indicated test?  | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 11. All samples received within holding time?   | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                |  |
| 12. Temperature of rep sample or Temp Blank within acceptable limit?                    | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                | NA <input type="checkbox"/>  |
| 13. Water - VOA vials have zero headspace?  | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                | NA <input type="checkbox"/>  |
| 14. Water - pH acceptable upon receipt?<br>Example: pH > 12 for (CN,S); pH<2 for Metals | Yes <input type="checkbox"/>                                 | No <input type="checkbox"/>                                | NA <input checked="" type="checkbox"/>   |
| 15. Did the bottle labels indicate correct preservatives used?                          | Yes <input checked="" type="checkbox"/>                      | No <input type="checkbox"/>                                | NA <input type="checkbox"/>  |
| 16. Were there Non-Conformance issues at login?<br>Was Client notified?                 | Yes <input type="checkbox"/><br>Yes <input type="checkbox"/> | No <input type="checkbox"/><br>No <input type="checkbox"/> | NA <input checked="" type="checkbox"/><br>NA <input checked="" type="checkbox"/> |

Comments: Sample 2: Same collection date and time of the associated field sample (sample 1).

Checklist Completed By: YR YRJ 2/25/2022

Reviewed By: ABC 3/1/2022

**ASSET Laboratories**

**WORK ORDER Summary**

01-Mar-22

**WorkOrder:** N049568

**Client ID:** EUROF01

**Project:** RED HILL

**Comments:** MRL only

**QC Level:** RTNE

**Date Received:** 2/25/2022

Sample ID	Client Sample ID	Date Collected	Date Due	Matrix	Test No	Test Name	Hld	MS	Sub	Storage
N049568-001A	989671_202202250259_DH4 2 AC	2/23/2022 9:00:00 AM	3/1/2022	Raw Groundwater	EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
N049568-001B			3/1/2022		EPA 3510C	SEPARATORY FUNNEL EXTRACTION: EXTRACTABLE FUELS	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
			3/1/2022		EPA 8015B(M)	TPH Carbon Chain EPA 8015	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	WW
N049568-002A	989671_202202250260_DH4 2 TP		3/1/2022	Bottled Water	EPA 8015B	GASOLINE RANGE ORGANICS BY GC/FID	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VW
N049568-003A	FOLDER	3/1/2022	3/1/2022		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB
			3/1/2022		Folder	Folder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LAB

ORIGIN ID:HNLA (808) 382-6853  
KEVIN GOODING  
INTERA INC  
74 KIHAPAI ST

KAILUA, HI 96734  
UNITED STATES US

SHIP DATE: 23FEB22  
ACTWGT: 32.55 LB  
CAD: 6984241/SSFE2300  
DIMS: 16x12x15 IN

BILL THIRD PARTY

TO **ASSET LABORATORIES SAMPLE RECE**  
**MARLON CARTIN**  
**3151 WEST POST ROAD**

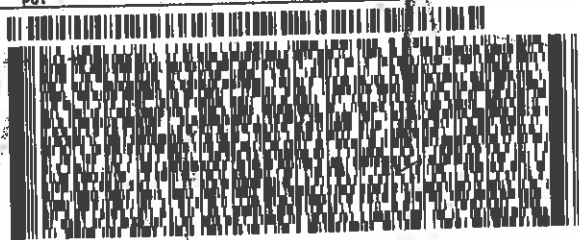
**LAS VEGAS NV 89118**

(702) 307-2868

REF:

INV:  
PO:

DE:



**FedEx**  
Express



AT 10581102201227

TRK# 2701 6276 2099  
0201

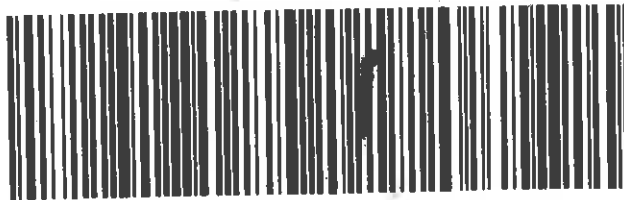
**WR LASA**

**THU - 24 FEB 10:30A**  
**PRIORITY OVERNIGHT**

**AHS**

**89118**

**NV-US LAS**



Part # 168297-333-PRD087009 06/22