UICI - 5

WASTE ANALYSES INFO

2020

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised August 1, 2011

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Heavy Oil Solutions, Inc., 5101 College Blvd, Farmington NM 87402

2. Originating Site:
Heavy Oil Solutions Engineering Development Laboratory

3. Location of Material (Street Address, City, State or ULSTR):
5101 College Blvd, Farmington NM 87402

4. Source and Description of Waste:
Oily water from oil upgrading pilot plant

Estimated Volume 20 bbl yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) 20 bbl yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Stephen Yarbro, representative or authorized agent for Heavy Oil Solutions, Inc. do hereby certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. *Operator Use Only: Waste Acceptance Frequency* ☐ *Monthly* ☐ *Weekly* ☐ *Per Load*

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Stephen Yarbro, representative for Heavy Oil Solutions, Inc. do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter:
M&R Trucking

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: Sunco Disposal #1 UICI-5-0

Address of Facility: SW/4 NW/4 Section 2, T29N, R12W San Juan County, Crouch Mesa Facility

Method of Treatment and/or Disposal:

☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: Philana Thompson TITLE: Regulatory Compliance Specialist DATE: 9/6/18

SIGNATURE: _____ TELEPHONE NO.: 505-486-1171
Surface Waste Management Facility Authorized Agent

envirotech
Analytical Laboratory

Analytical Report

Report Summary

Client: Heavy Oil Solutions

Samples Received: 10/11/2019
Job Number: 17014-0001
Work Order: P910060
Project Name/Location: No Recycle

Report Reviewed By: Walter Hinchman Date: 10/17/19

Walter Hinchman, Laboratory Director

NELAP ACCREDITED TNI LABORATORY

Envirotech Inc. certifies the test results meet all requirements of TNI unless footnoted otherwise.
Statement of Data Authenticity: Envirotech, Inc, attests the data reported has not been altered in any way.
Partial or incomplete reproduction of this report is prohibited, unless approved by Envirotech, Inc.
Envirotech, Inc, holds the Utah TNI certification NM009792018-1 for the data reported.
Envirotech, Inc, holds the Texas TNI certification T104704557-19-2 for the data reported.

5796 Highway 64, Farmington, NM 87401
Ph (505) 632-0615 Fx (505) 632-1865
envirotech-inc.com
Labadmin@envirotech-inc.com
24 Hour Emergency Response Phone (800) 362-1879

envirotech
Analytical Laboratory

Heavy Oil Solutions	Project Name:	No Recycle	
531 Rover BLVD	Project Number:	17014-0001	**Reported:**
Los Alamos NM, 87547	Project Manager:	Alyssa House	10/17/19 13:19

Analytical Report for Samples

Client Sample ID	Lab Sample ID	Matrix	Sampled	Received	Container
PW-100919	P910060-01A	Aqueous	10/10/19	10/11/19	Poly 500mL; HNO3

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Analytical Laboratory

Heavy Oil Solutions	Project Name:	No Recycle	
531 Rover BLVD	Project Number:	17014-0001	**Reported:**
Los Alamos NM, 87547	Project Manager:	Alyssa House	10/17/19 13:19

PW-100919
P910060-01 (Water)

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Total Metals by 6010									
Arsenic	ND	0.0600	mg/L	3	1942022	10/16/19	10/16/19	EPA 6010C	
Barium	ND	0.750	mg/L	3	1942022	10/16/19	10/16/19	EPA 6010C	
Cadmium	ND	0.0300	mg/L	3	1942022	10/16/19	10/16/19	EPA 6010C	
Chromium	ND	0.0600	mg/L	3	1942022	10/16/19	10/16/19	EPA 6010C	
Lead	ND	0.0300	mg/L	3	1942022	10/16/19	10/16/19	EPA 6010C	
Selenium	ND	0.150	mg/L	3	1942022	10/16/19	10/16/19	EPA 6010C	
Silver	ND	0.0300	mg/L	3	1942022	10/16/19	10/16/19	EPA 6010C	
Total Mercury by EPA 7470A									
Mercury	ND	0.200	ug/L	1	1942005	10/14/19	10/15/19	EPA 7470A	

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Analytical Laboratory

Heavy Oil Solutions	Project Name:	No Recycle	
531 Rover BLVD	Project Number:	17014-0001	**Reported:**
Los Alamos NM, 87547	Project Manager:	Alyssa House	10/17/19 13:19

Total Metals by 6010 - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1942022 - Metals Water Hotblock Digestion EPA 3010A/200.2										
Blank (1942022-BLK1)				Prepared: 10/16/19 0 Analyzed: 10/16/19 1						
Arsenic	ND	0.0200	mg/L							
Barium	ND	0.250	"							
Cadmium	ND	0.0100	"							
Chromium	ND	0.0200	"							
Lead	ND	0.0100	"							
Selenium	ND	0.0500	"							
Silver	ND	0.0100	"							
LCS (1942022-BS1)				Prepared: 10/16/19 0 Analyzed: 10/16/19 1						
Arsenic	0.465	0.0200	mg/L	0.500		92.9	80-120			
Barium	12.9	0.250	"	12.5		103	80-120			
Cadmium	0.236	0.0100	"	0.250		94.5	80-120			
Chromium	0.984	0.0200	"	1.00		98.4	80-120			
Lead	0.255	0.0100	"	0.250		102	80-120			
Selenium	1.22	0.0500	"	1.25		97.7	80-120			
Silver	0.0910	0.0100	"	0.100		91.0	80-120			
Matrix Spike (1942022-MS1)		**Source: P910060-01**		Prepared: 10/16/19 0 Analyzed: 10/16/19 1						
Arsenic	1.38	0.0600	mg/L	1.50	ND	92.1	75-125			
Barium	36.8	0.750	"	37.5	ND	98.2	75-125			
Cadmium	0.695	0.0300	"	0.750	ND	92.6	75-125			
Chromium	2.91	0.0600	"	3.00	ND	96.9	75-125			
Lead	0.740	0.0300	"	0.750	ND	98.6	75-125			
Selenium	3.66	0.150	"	3.75	ND	97.7	75-125			
Silver	0.272	0.0300	"	0.300	ND	90.5	75-125			
Matrix Spike Dup (1942022-MSD1)		**Source: P910060-01**		Prepared: 10/16/19 0 Analyzed: 10/16/19 1						
Arsenic	1.46	0.0600	mg/L	1.50	ND	97.4	75-125	5.62	20	
Barium	39.9	0.750	"	37.5	ND	106	75-125	8.13	20	
Cadmium	0.735	0.0300	"	0.750	ND	98.0	75-125	5.71	20	
Chromium	3.07	0.0600	"	3.00	ND	102	75-125	5.41	20	
Lead	0.784	0.0300	"	0.750	ND	105	75-125	5.87	20	
Selenium	3.87	0.150	"	3.75	ND	103	75-125	5.57	20	
Silver	0.287	0.0300	"	0.300	ND	95.5	75-125	5.38	20	

envirotech
Analytical Laboratory

Heavy Oil Solutions	Project Name:	No Recycle	
531 Rover BLVD	Project Number:	17014-0001	**Reported:**
Los Alamos NM, 87547	Project Manager:	Alyssa House	10/17/19 13:19

Total Mercury by EPA 7470A - Quality Control

Envirotech Analytical Laboratory

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1942005 - Mercury Water Digestion KMNO4										
Blank (1942005-BLK1)				Prepared: 10/14/19 1 Analyzed: 10/15/19 0						
Mercury	ND	0.200	ug/L							
LCS (1942005-BS1)				Prepared: 10/14/19 1 Analyzed: 10/15/19 0						
Mercury	2.02	0.200	ug/L	2.00		101	80-120			
Matrix Spike (1942005-MS1)	**Source: P910033-01**			Prepared: 10/14/19 1 Analyzed: 10/15/19 0						
Mercury	1.48	0.200	ug/L	2.00	ND	74.0	75-125			M2
Matrix Spike Dup (1942005-MSD1)	**Source: P910033-01**			Prepared: 10/14/19 1 Analyzed: 10/15/19 0						
Mercury	1.50	0.200	ug/L	2.00	ND	74.8	75-125	1.06	20	M2

QC Summary Report
Comment:
Calculations are based off of the raw (non-rounded) data. However, for reporting purposes all QC data is rounded to three significant figures. Therefore, hand calculated values my differ slightly.

Project Information | Chain of Custody | Page 1 of 1

Client: Heavy Oil Solutions	
No Recycle	
Project Manager: Alyssa House	
Address: 5101 College Blve - QCB 5059	
City, State, Zip Farmington, NM 87402	
Phone: 505.566.3713	
Email: steve.alyssa.house@heavyoilsolutions.c	

Report Attention

Report due by:	
Attention:	
Address:	
City, State, Zip	
Phone:	
Email:	

Lab Use Only

Lab WO#	Job Number
P910060	17014-0001

TAT: 1D | 3D

EPA Program: RCRA | CWA | SDWA

State: NM | CO | UT | AZ — NM: X

Analysis and Method

Time Sampled	Date Sampled	Matrix	No Containers	Sample ID	Lab Number	C7 Insolubles	Density	Sufur	BS&W	Karl Fisher for water in oil	PONA	TSS	TDS	Oil & Grease	Silica	Hardness	RICRA	Remarks
0800	10/10/19	A	1	PW-100919	1												X	

Additional Instructions:

I, (field sampler), attest to the validity and authenticity of this sample. I am aware that tampering with or intentionally mislabelling the sample location, date or time of collection is considered fraud and may be grounds for legal action. Sampled by: Ron Hallford

Samples requiring thermal preservation must be received on ice the day they are sampled or received packed in ice at an avg temp above 0 but less than 6 °C on subsequent days.

Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time
Ron Hallford	10/11/19	3:58	Rana Lopez	10/11/19	15:58
Relinquished by: (Signature)	Date	Time	Received by: (Signature)	Date	Time

Lab Use Only
Received on ice: (Y) / N
T1 T2 T3
AVG Temp °C 4

Sample Matrix: **S** - Soil, **Sd** - Solid, **Sg** - Sludge, **A** - Aqueous, **O** - Other

Container Type: **g** - glass, **p** - poly/plastic, **ag** - amber glass, v - VOA

Note: Samples are discarded 30 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at the client expense. The report for the analysis of the above ...oratory with this COC. The liability of the laboratory is limited to the amount paid for on the report.

envirotech Analytical Laboratory
5796 US Highway 64, Farmington, NM 87401 | Ph (505) 632-0615 | Fx (505) 632-1865
Three Springs - 65 Mercado Street, Suite 115, Durango, CO 81301 | Ph (970) 259-0615 | Fr (800) 362-1879
envirotech-inc.com

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL Dolores Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
SE ¼ Section 31 Township 37 North Range 15 West; 38.7416799, -108.433635

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non Hazardous Water from the compressor skids.
Estimated Volume 80 yd³ / bbls (circled) Known Volume (to be entered by the operator at the end of the haul) ________ yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long ________, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long ________, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, ________________, representative for ____Agua Moss, LLC____ do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: ________________ TITLE: ________________ DATE: ________
SIGNATURE: ________________ TELEPHONE NO.: ________________
Surface Waste Management Facility Authorized Agent

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

November 19, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX: (505) 327-1496

RE: Dolores Non Exempt OrderNo.: 1911060

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/2/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **1911060**
Date: **11/19/2019**

CLIENT: Souder, Miller and Associates
Project: Dolores Non Exempt

Analytical Notes For EPA Method 8270 PAHs:
The initial extraction for PAHs did not properly spike the LCS/LCSD. The sample was analzyed and was nondetect for PAHs. The sample was reextracted with a valid LCS/LCSD and the sample was reanalzyed. The sample result were nondetect for the second extraction as well.

Analytical Report
Lab Order **1911060**
Date Reported: **11/19/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Dolores Non Exempt
Lab ID: 1911060-001 **Matrix:** AQUEOUS

Client Sample ID: Dolores
Collection Date: 10/31/2019 9:28:00 AM
Received Date: 11/2/2019 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	ND	0.020		mg/L	1	11/8/2019 3:09:24 PM	48664
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **pmf**	
Arsenic	ND	5.0		mg/L	1	11/13/2019 8:08:26 PM	48560
Barium	ND	100		mg/L	1	11/13/2019 8:08:26 PM	48560
Cadmium	ND	1.0		mg/L	1	11/13/2019 8:08:26 PM	48560
Chromium	ND	5.0		mg/L	1	11/13/2019 8:08:26 PM	48560
Lead	ND	5.0		mg/L	1	11/13/2019 8:08:26 PM	48560
Selenium	ND	1.0		mg/L	1	11/13/2019 8:08:26 PM	48560
Silver	ND	5.0		mg/L	1	11/13/2019 8:08:26 PM	48560
EPA METHOD 8270C: PAHS						Analyst: **JDC**	
Naphthalene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
1-Methylnaphthalene	ND	1000	D	µg/L	20	11/15/2019 1:40:38 AM	48643
2-Methylnaphthalene	ND	1000	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Acenaphthylene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Acenaphthene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Fluorene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Phenanthrene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Anthracene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Fluoranthene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Pyrene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Benz(a)anthracene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Chrysene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Benzo(b)fluoranthene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Benzo(k)fluoranthene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Benzo(a)pyrene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Dibenz(a,h)anthracene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Benzo(g,h,i)perylene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Indeno(1,2,3-cd)pyrene	ND	500	D	µg/L	20	11/15/2019 1:40:38 AM	48643
Surr: N-hexadecane	0	20.4-126	SD	%Rec	20	11/15/2019 1:40:38 AM	48643
Surr: Benzo(e)pyrene	0	21.4-126	SD	%Rec	20	11/15/2019 1:40:38 AM	48643
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	0.50		mg/L	200	11/6/2019 9:51:50 PM	R64290
Toluene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Ethylbenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1911060**
Date Reported: **11/19/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Dolores Non Exempt
Lab ID: 1911060-001 **Matrix:** AQUEOUS

Client Sample ID: Dolores
Collection Date: 10/31/2019 9:28:00 AM
Received Date: 11/2/2019 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Naphthalene	ND	0.40		mg/L	200	11/6/2019 9:51:50 PM	R64290
1-Methylnaphthalene	ND	0.80		mg/L	200	11/6/2019 9:51:50 PM	R64290
2-Methylnaphthalene	ND	0.80		mg/L	200	11/6/2019 9:51:50 PM	R64290
Acetone	ND	2.0		mg/L	200	11/6/2019 9:51:50 PM	R64290
Bromobenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Bromodichloromethane	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Bromoform	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Bromomethane	ND	0.60		mg/L	200	11/6/2019 9:51:50 PM	R64290
2-Butanone	ND	2.0		mg/L	200	11/6/2019 9:51:50 PM	R64290
Carbon disulfide	ND	2.0		mg/L	200	11/6/2019 9:51:50 PM	R64290
Carbon Tetrachloride	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Chlorobenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Chloroethane	ND	0.40		mg/L	200	11/6/2019 9:51:50 PM	R64290
Chloroform	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Chloromethane	ND	0.60		mg/L	200	11/6/2019 9:51:50 PM	R64290
2-Chlorotoluene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
4-Chlorotoluene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
cis-1,2-DCE	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	11/6/2019 9:51:50 PM	R64290
Dibromochloromethane	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Dibromomethane	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,2-Dichlorobenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,3-Dichlorobenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,4-Dichlorobenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Dichlorodifluoromethane	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,1-Dichloroethane	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,1-Dichloroethene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,2-Dichloropropane	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,3-Dichloropropane	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
2,2-Dichloropropane	ND	0.40		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,1-Dichloropropene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Hexachlorobutadiene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
2-Hexanone	ND	2.0		mg/L	200	11/6/2019 9:51:50 PM	R64290
Isopropylbenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
4-Isopropyltoluene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
4-Methyl-2-pentanone	ND	2.0		mg/L	200	11/6/2019 9:51:50 PM	R64290
Methylene Chloride	ND	0.60		mg/L	200	11/6/2019 9:51:50 PM	R64290

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1911060**
Date Reported: **11/19/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: Dolores
Project: Dolores Non Exempt
Collection Date: 10/31/2019 9:28:00 AM
Lab ID: 1911060-001 **Matrix:** AQUEOUS **Received Date:** 11/2/2019 9:50:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
n-Butylbenzene	ND	0.60		mg/L	200	11/6/2019 9:51:50 PM	R64290
n-Propylbenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
sec-Butylbenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Styrene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
tert-Butylbenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	11/6/2019 9:51:50 PM	R64290
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
trans-1,2-DCE	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,1,1-Trichloroethane	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,1,2-Trichloroethane	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Trichloroethene (TCE)	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Trichlorofluoromethane	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
1,2,3-Trichloropropane	ND	0.40		mg/L	200	11/6/2019 9:51:50 PM	R64290
Vinyl chloride	ND	0.20		mg/L	200	11/6/2019 9:51:50 PM	R64290
Xylenes, Total	ND	0.30		mg/L	200	11/6/2019 9:51:50 PM	R64290
Surr: 1,2-Dichloroethane-d4	92.3	70-130		%Rec	200	11/6/2019 9:51:50 PM	R64290
Surr: 4-Bromofluorobenzene	87.7	70-130		%Rec	200	11/6/2019 9:51:50 PM	R64290
Surr: Dibromofluoromethane	102	70-130		%Rec	200	11/6/2019 9:51:50 PM	R64290
Surr: Toluene-d8	97.3	70-130		%Rec	200	11/6/2019 9:51:50 PM	R64290

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 13, 2019

Hall Environmental Analysis Laboratory

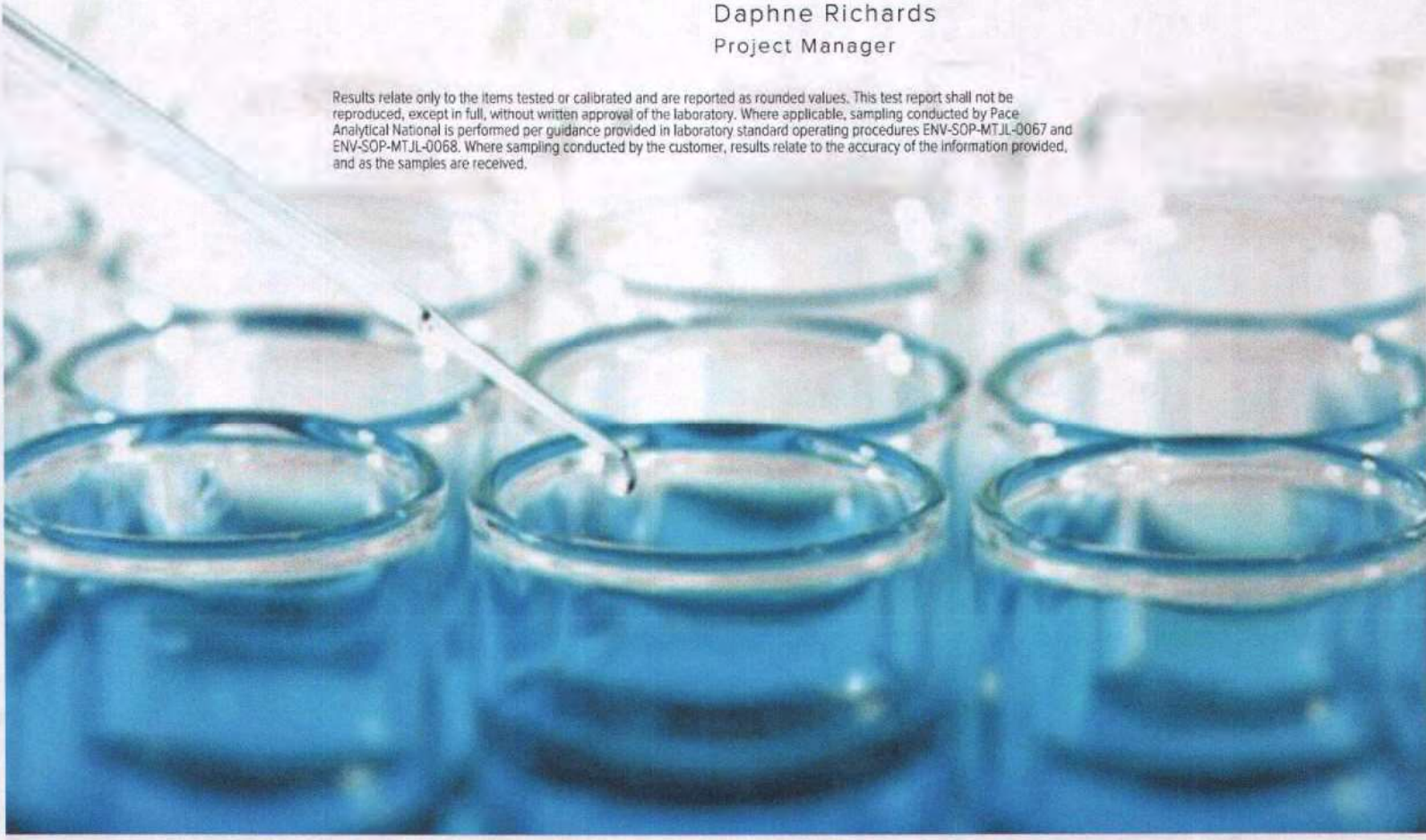
Sample Delivery Group: L1157021
Samples Received: 11/05/2019
Project Number:
Description:

Report To:

4901 Hawkins NE
Albuquerque, NM 87109

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager



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ONE LAB. NATIONWIDE.

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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

1911060-001D DOLORES L1157021-01 GW			Collected by	Collected date/time 10/31/19 09:28	Received date/time 11/05/19 08:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 CN E-2011	WG1378771	1	11/12/19 08:29	11/12/19 18:39	JER	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1375435	1	11/05/19 15:59	11/05/19 15:59	MJA	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1375220	1	11/05/19 17:00	11/05/19 17:00	MSP	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1378561	1	11/11/19 16:54	11/11/19 16:54	SL	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Project Narrative

All Reactive Cyanide results reported in the attached report were determined as totals using method 9012B.
All Reactive Sulfide results reported in the attached report were determined as totals using method 9034/9030B.

Sample Delivery Group (SDG) Narrative

Analysis was performed from an improper container for the following samples.

Lab Sample ID	Project Sample ID	Method
L1157021-01	1911060-001D DOLORES	D93/1010A

1911060-001D DOLORES
Collected date/time: 10/31/19 09:28

SAMPLE RESULTS - 01

L1157021

ONE LAB. NATIONWIDE.

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND		0.00500	1	11/12/2019 18:39	WG1378771

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		0.0500	1	11/05/2019 15:59	WG1375435

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	7.36	T8	1	11/05/2019 17:00	WG1375220

Sample Narrative:
L1157021-01 WG1375220: 7.36 at 17.9C

Wet Chemistry by Method D93/1010A

Analyte	Result deg F	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170		1	11/11/2019 16:54	WG1378561

Method Blank (MB)

(MB) R3471197-1 11/12/19 18:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Reactive Cyanide	U		0.00180	0.00500

L1156495-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1156495-01 11/12/19 18:22 • (DUP) R3471197-3 11/12/19 18:23

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive Cyanide	U	0.000	1	0.000		20

L1156826-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1156826-01 11/12/19 18:29 • (DUP) R3471197-6 11/12/19 18:30

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Reactive Cyanide	U	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3471197-2 11/12/19 18:11

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Cyanide	0.100	0.102	102	85.0-115	

L1156661-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1156661-03 11/12/19 18:26 • (MS) R3471197-4 11/12/19 18:27 • (MSD) R3471197-5 11/12/19 18:28

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Reactive Cyanide	0.100	ND	0.0925	0.0957	92.5	95.7	1	75.0-125			3.40	20

L1156998-06 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1156998-06 11/12/19 18:35 • (MS) R3471197-7 11/12/19 18:36 • (MSD) R3471197-8 11/12/19 18:37

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Reactive Cyanide	0.100	U	0.0951	0.0935	95.1	93.5	1	75.0-125			1.70	20

Method Blank (MB)

(MB) R3468650-1 11/05/19 15:52

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Reactive Sulfide	U		0.00650	0.0500

Laboratory Control Sample (LCS)

(LCS) R3468650-2 11/05/19 15:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Sulfide	0.500	0.552	110	85.0-115	

L1157021-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1157021-01 11/05/19 15:59 • (MS) R3468650-3 11/05/19 16:01 • (MSD) R3468650-4 11/05/19 16:02

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Reactive Sulfide	1.00	ND	1.18	1.14	115	111	1	80.0-120			3.70	20

L1157021-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1157021-01 11/05/19 17:00 • (DUP) R3468702-21 11/05/19 17:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
Corrosivity by pH	7.36	7.34	1	0.272		1

Sample Narrative:

OS: 7.36 at 17.9C

DUP: 7.34 at 17.9C

Laboratory Control Sample (LCS)

(LCS) R3468702-1 11/05/19 17:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
Corrosivity by pH	10.0	10.0	100	99.0-101	

Sample Narrative:

LCS: 10 at 18.1C

L1158325-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1158325-01 11/11/19 16:54 • (DUP) R3470739-8 11/11/19 16:54

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	deg F	deg F		%		%
Flashpoint	108	101	1	6.72		10

L1157728-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1157728-02 11/11/19 16:54 • (DUP) R3470765-2 11/11/19 16:54

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	deg F	deg F		%		%
Flashpoint	75.7	75.7	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3470739-1 11/11/19 16:54

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	deg F	deg F	%	%	
Flashpoint	82.0	82.7	101	96.0-104	

GLOSSARY OF TERMS

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

ONE LAB. NATIONWIDE.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.
* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [2]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

SUB CONTRATOR: ESC PACE	COMPANY: ESC PACE		PHONE: (800) 767-5859	FAX: (615) 758-5859	
ADDRESS: 12065 Lebanon Rd			ACCOUNT #:	EMAIL:	
CITY, STATE, ZIP: Mt. Juliet, TN 37122					

L1157021

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	1911060-001D	Dolores	500HDPE	Aqueous	10/31/2019 9:28:00 AM	3	Reactivity, Corrosivity and Ignitability (RCI) -01

A 11/04/19

A068

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 11/4/2019	Time: 9:12 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 11-05	Time: 0830

TAT: Standard X RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

Cool FOR LAB USE ONLY
Temp of samples 4.2-3.9 °C Attempt to Cool? ____
Comments: ____ oh

BAD SCREEN: <0.5 mR/hr

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client:	115702	
Cooler Received/Opened On: 11/04/19 Temperature:	3.9	
Received By: Issa Hussein		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

OK

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911060

19-Nov-19

Client: Souder, Miller and Associates

Project: Dolores Non Exempt

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R64290	RunNo: 64290
Prep Date:	Analysis Date: 11/6/2019	SeqNo: 2200042 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	101	70	130			
Toluene	18	1.0	20.00	0	92.4	70	130			
Chlorobenzene	19	1.0	20.00	0	97.2	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	84.6	70	130			
Trichloroethene (TCE)	18	1.0	20.00	0	87.9	70	130			
Surr: 1,2-Dichloroethane-d4	9.2		10.00		91.7	70	130			
Surr: 4-Bromofluorobenzene	8.9		10.00		89.2	70	130			
Surr: Dibromofluoromethane	10		10.00		103	70	130			
Surr: Toluene-d8	9.5		10.00		95.4	70	130			

Sample ID: rb1	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R64290	RunNo: 64290
Prep Date:	Analysis Date: 11/6/2019	SeqNo: 2200063 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- PQL Practical Quantitative Limit
- RL Reporting Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911060

19-Nov-19

Client: Souder, Miller and Associates

Project: Dolores Non Exempt

Sample ID: **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R64290**	RunNo: **64290**
Prep Date:	Analysis Date: **11/6/2019**	SeqNo: **2200063** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911060

19-Nov-19

Client: Souder, Miller and Associates

Project: Dolores Non Exempt

Sample ID: **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R64290**	RunNo: **64290**
Prep Date:	Analysis Date: **11/6/2019**	SeqNo: **2200063** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.1		10.00		91.4	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.7		10.00		97.4	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
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B	Analyte detected in the associated Method Blank
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RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911060

19-Nov-19

Client: Souder, Miller and Associates

Project: Dolores Non Exempt

Sample ID: mb-48643	SampType: MBLK	TestCode: EPA Method 8270C: PAHs
Client ID: PBW	Batch ID: 48643	RunNo: 64521
Prep Date: 11/7/2019	Analysis Date: 11/14/2019	SeqNo: 2209221 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	1.0								
2-Methylnaphthalene	ND	1.0								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	67		87.60		76.4	20.4	126			
Surr: Benzo(e)pyrene	15		20.00		73.8	21.4	126			

Sample ID: mb-48733	SampType: MBLK	TestCode: EPA Method 8270C: PAHs
Client ID: PBW	Batch ID: 48733	RunNo: 64521
Prep Date: 11/12/2019	Analysis Date: 11/14/2019	SeqNo: 2209222 Units: %Rec

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: N-hexadecane	74		87.60		84.4	20.4	126			
Surr: Benzo(e)pyrene	17		20.00		84.2	21.4	126			

Sample ID: lcs-48733	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 48733	RunNo: 64521
Prep Date: 11/12/2019	Analysis Date: 11/14/2019	SeqNo: 2209226 Units: %Rec

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: N-hexadecane	61		87.60		70.2	20.4	126			
Surr: Benzo(e)pyrene	13		20.00		66.3	21.4	126			

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911060

19-Nov-19

Client: Souder, Miller and Associates

Project: Dolores Non Exempt

Sample ID: **lcsd-48733**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS02**	Batch ID: **48733**	RunNo: **64521**
Prep Date: **11/12/2019**	Analysis Date: **11/14/2019**	SeqNo: **2209227** Units: **%Rec**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: N-hexadecane	57		87.60		64.6	20.4	126	0	0	
Surr: Benzo(e)pyrene	12		20.00		61.3	21.4	126	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911060

19-Nov-19

Client: Souder, Miller and Associates

Project: Dolores Non Exempt

Sample ID: MB-48664	SampType: MBLK	TestCode: EPA Method 7470: Mercury							
Client ID: PBW	Batch ID: 48664	RunNo: 64358							
Prep Date: 11/7/2019	Analysis Date: 11/8/2019	SeqNo: 2202576	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: LCS-48664	SampType: LCS	TestCode: EPA Method 7470: Mercury							
Client ID: LCSW	Batch ID: 48664	RunNo: 64358							
Prep Date: 11/7/2019	Analysis Date: 11/8/2019	SeqNo: 2202577	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0047	0.00020	0.005000	0	93.6	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911060

19-Nov-19

Client: Souder, Miller and Associates

Project: Dolores Non Exempt

Sample ID: MB-48560	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 48560	RunNo: 64273
Prep Date: 11/4/2019	Analysis Date: 11/6/2019	SeqNo: 2199639 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Silver	ND	0.0050								

Sample ID: LCS-48560	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 48560	RunNo: 64273
Prep Date: 11/4/2019	Analysis Date: 11/6/2019	SeqNo: 2199644 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.020	0.5000	0	98.3	80	120			
Barium	0.48	0.020	0.5000	0	95.7	80	120			
Cadmium	0.51	0.0020	0.5000	0	102	80	120			
Chromium	0.49	0.0060	0.5000	0	98.4	80	120			
Silver	0.093	0.0050	0.1000	0	92.7	80	120			

Sample ID: MB-48560	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 48560	RunNo: 64389
Prep Date: 11/4/2019	Analysis Date: 11/11/2019	SeqNo: 2203945 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0050								

Sample ID: LCS-48560	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 48560	RunNo: 64389
Prep Date: 11/4/2019	Analysis Date: 11/11/2019	SeqNo: 2203947 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.50	0.0050	0.5000	0	99.4	80	120			

Sample ID: MB-48560	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 48560	RunNo: 64501
Prep Date: 11/4/2019	Analysis Date: 11/13/2019	SeqNo: 2208278 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.0050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911060

19-Nov-19

Client: Souder, Miller and Associates

Project: Dolores Non Exempt

Sample ID: LCS-48560	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 48560	RunNo: 64501
Prep Date: 11/4/2019	Analysis Date: 11/13/2019	SeqNo: 2208283 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.51	0.0050	0.5000	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM Work Order Number: 1911060 RcptNo: 1

Received By: Erin Melendrez 11/2/2019 9:50:00 AM

Completed By: Yazmine Garduno 11/4/2019 8:58:29 AM

Reviewed By: JR 11/4/19

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Courier

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. VOA vials have zero headspace? Yes ☐ No ☐ No VOA Vials ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 1 1 (<2 or >12 unless noted)
Adjusted? NO
Checked by: JR 11/4/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.0	Good				
2	2.2	Good				

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway
Farmington, NM 87401

Phone #: 505 325 7535

email or Fax#: ashley.maxwell

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Dolores Non Exempt

Project #:

Project Manager: Ashley Maxwell

Sampler: RW

On Ice: ☒ Yes ☐ No

# of Coolers: 2

Cooler Temp (including CF): 2.2-0.2(CF)=2.0°C
2.4-0 2(CF)=2.2°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No.	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals TCLP	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	RCI
10/31/19	9:28	Aqueous	Dolores	Various	Various	1911060 -001						X		X	X		X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10/31/19	1735			Walk	10/31/19	1735
10/31/19	1826			Courier	11/2/19	0950

Remarks: 8260 Full List
TCLP compound at TCLP Limits

Invoice Enterprise CC Tom Long

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

12/3/21

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL Lyborrk Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL C Section 14 Township 23 North Range 7 West; 36.232901, -107.545978

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long Thomas Long , representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long Thomas Long , representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____
SIGNATURE: _____ TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

Good till 12/3/20
12DEC

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

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Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

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MAPL Lyborrk Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL C Section 14 Township 23 North Range 7 West; 36.232901, -107.545978

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd³ / bbls Known Volume (to be entered by the operator at the end of the haul) 79 yd³ / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long Thomas Long, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☒ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: William Clayton TITLE: Foreman DATE: 11/4/20
SIGNATURE: _____ TELEPHONE NO.: 505-716-2988
Surface Waste Management Facility Authorized Agent

William Clayton

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 12, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Lybrook OrderNo.: 1911677

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/15/2019 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 03, 2019.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1911677**
Date Reported: **12/12/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Lybrook
Lab ID: 1911677-001 **Matrix:** AQUEOUS

Client Sample ID: Lybrook
Collection Date: 11/14/2019 9:13:00 AM
Received Date: 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	ND	0.020		mg/L	1	11/22/2019 10:29:54 AM	48955
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **rde**	
Arsenic	ND	5.0		mg/L	1	11/25/2019 3:55:53 PM	48826
Barium	ND	100		mg/L	1	11/25/2019 12:47:25 PM	48826
Cadmium	ND	1.0		mg/L	1	11/25/2019 12:47:25 PM	48826
Chromium	ND	5.0		mg/L	1	11/25/2019 12:47:25 PM	48826
Lead	ND	5.0		mg/L	1	11/25/2019 12:47:25 PM	48826
Selenium	ND	1.0		mg/L	1	11/25/2019 12:47:25 PM	48826
Silver	ND	5.0		mg/L	1	11/25/2019 12:47:25 PM	48826
EPA METHOD 8270C: PAHS						Analyst: **JDC**	
Naphthalene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
1-Methylnaphthalene	ND	1.0		µg/L	1	11/25/2019 4:12:01 PM	48934
2-Methylnaphthalene	ND	1.0		µg/L	1	11/25/2019 4:12:01 PM	48934
Acenaphthylene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Acenaphthene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Fluorene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Phenanthrene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Anthracene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Fluoranthene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Pyrene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Benz(a)anthracene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Chrysene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Benzo(b)fluoranthene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Benzo(k)fluoranthene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Benzo(a)pyrene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Surr: N-hexadecane	65.8	20.4-126		%Rec	1	11/25/2019 4:12:01 PM	48934
Surr: Benzo(e)pyrene	62.0	21.4-126		%Rec	1	11/25/2019 4:12:01 PM	48934
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	0.50		mg/L	200	11/15/2019 3:32:37 PM	R64562
Toluene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Ethylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **1911677**
Date Reported: **12/12/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Lybrook
Lab ID: 1911677-001 **Matrix:** AQUEOUS

Client Sample ID: Lybrook
Collection Date: 11/14/2019 9:13:00 AM
Received Date: 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Naphthalene	ND	0.40		mg/L	200	11/15/2019 3:32:37 PM	R64562
1-Methylnaphthalene	ND	0.80		mg/L	200	11/15/2019 3:32:37 PM	R64562
2-Methylnaphthalene	ND	0.80		mg/L	200	11/15/2019 3:32:37 PM	R64562
Acetone	ND	2.0		mg/L	200	11/15/2019 3:32:37 PM	R64562
Bromobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Bromodichloromethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Bromoform	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Bromomethane	ND	0.60		mg/L	200	11/15/2019 3:32:37 PM	R64562
2-Butanone	ND	2.0		mg/L	200	11/15/2019 3:32:37 PM	R64562
Carbon disulfide	ND	2.0		mg/L	200	11/15/2019 3:32:37 PM	R64562
Carbon Tetrachloride	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Chlorobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Chloroethane	ND	0.40		mg/L	200	11/15/2019 3:32:37 PM	R64562
Chloroform	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Chloromethane	ND	0.60		mg/L	200	11/15/2019 3:32:37 PM	R64562
2-Chlorotoluene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
4-Chlorotoluene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
cis-1,2-DCE	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	11/15/2019 3:32:37 PM	R64562
Dibromochloromethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Dibromomethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2-Dichlorobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,3-Dichlorobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,4-Dichlorobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Dichlorodifluoromethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1-Dichloroethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1-Dichloroethene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2-Dichloropropane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,3-Dichloropropane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
2,2-Dichloropropane	ND	0.40		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1-Dichloropropene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Hexachlorobutadiene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
2-Hexanone	ND	2.0		mg/L	200	11/15/2019 3:32:37 PM	R64562
Isopropylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
4-Isopropyltoluene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
4-Methyl-2-pentanone	ND	2.0		mg/L	200	11/15/2019 3:32:37 PM	R64562
Methylene Chloride	ND	0.60		mg/L	200	11/15/2019 3:32:37 PM	R64562

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1911677**
Date Reported: **12/12/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: Lybrook
Project: Lybrook
Collection Date: 11/14/2019 9:13:00 AM
Lab ID: 1911677-001 **Matrix:** AQUEOUS **Received Date:** 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
n-Butylbenzene	ND	0.60		mg/L	200	11/15/2019 3:32:37 PM	R64562
n-Propylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
sec-Butylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Styrene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
tert-Butylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	11/15/2019 3:32:37 PM	R64562
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
trans-1,2-DCE	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1,1-Trichloroethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1,2-Trichloroethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Trichloroethene (TCE)	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Trichlorofluoromethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2,3-Trichloropropane	ND	0.40		mg/L	200	11/15/2019 3:32:37 PM	R64562
Vinyl chloride	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Xylenes, Total	ND	0.30		mg/L	200	11/15/2019 3:32:37 PM	R64562
Surr: 1,2-Dichloroethane-d4	98.1	70-130		%Rec	200	11/15/2019 3:32:37 PM	R64562
Surr: 4-Bromofluorobenzene	92.7	70-130		%Rec	200	11/15/2019 3:32:37 PM	R64562
Surr: Dibromofluoromethane	105	70-130		%Rec	200	11/15/2019 3:32:37 PM	R64562
Surr: Toluene-d8	107	70-130		%Rec	200	11/15/2019 3:32:37 PM	R64562

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 12, 2019

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1162243

Samples Received: 11/19/2019

Project Number:

Description:

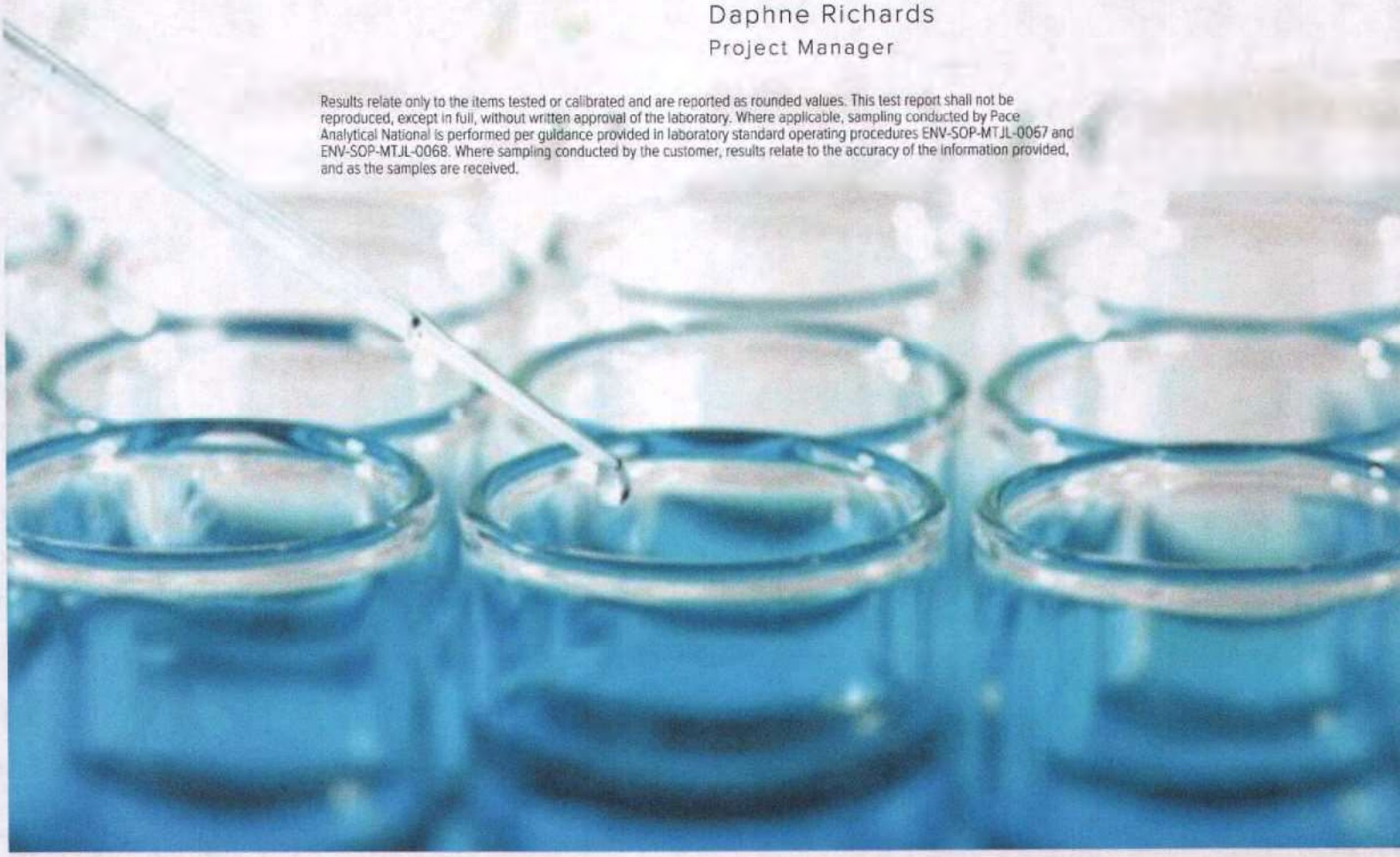
Report To:

4901 Hawkins NE

Albuquerque, NM 87109

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager



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SAMPLE SUMMARY

1911677-001D LYBROOK L1162243-01 WW			Collected by	Collected date/time 11/14/19 09:13	Received date/time 11/19/19 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 CN E-2011	WG1386291	1	11/24/19 11:16	11/24/19 21:47	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500H+ B-2011	WG1383247	1	11/19/19 19:45	11/19/19 19:45	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1384494	1	11/21/19 18:10	11/21/19 18:10	MJA	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1393561	1	12/10/19 17:31	12/10/19 17:31	MCG	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Report Revision History

Version 1: 11/29/19 09:07 AM

Project Narrative

All Reactive Cyanide results reported in the attached report were determined as totals using method 9012B.
All Reactive Sulfide results reported in the attached report were determined as totals using method 9034/9030B.

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND	J4	0.00500	1	11/24/2019 21:47	WG1386291

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	6.75	T8	1	11/19/2019 19:45	WG1383247

Sample Narrative:

L1162243-01 WG1383247: 6.75 at 18.5C

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		0.0500	1	11/21/2019 18:10	WG1384494

Wet Chemistry by Method D93/1010A

Analyte	Result deg F	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170	Q	1	12/10/2019 17:31	WG1393561

Method Blank (MB)

(MB) R3475672-1 11/24/19 20:21

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Reactive Cyanide	U		0.00180	0.00500

L1162058-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1162058-02 11/24/19 21:35 • (DUP) R3475672-3 11/24/19 21:36

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Reactive Cyanide	ND	0.00394	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3475672-2 11/24/19 20:23

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Reactive Cyanide	0.100	0.116	116	85.0-115	J4

L1162228-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1162228-01 11/24/19 21:41 • (MS) R3475672-4 11/24/19 21:44 • (MSD) R3475672-5 11/24/19 21:45

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Reactive Cyanide	0.100	ND	0.0897	0.0937	89.7	93.7	1	75.0-125			4.36	20

L1162243-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1162243-01 11/24/19 21:47 • (MS) R3475672-6 11/24/19 21:48 • (MSD) R3475672-7 11/24/19 21:50

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Reactive Cyanide	0.100	ND	0.0893	0.101	89.3	101	1	75.0-125			12.3	20

L1162185-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1162185-01 11/19/19 19:45 • (DUP) R3473880-10 11/19/19 19:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
Corrosivity by pH	8.75	8.75	1	0.000		1

Sample Narrative:
OS: 8.75 at 18.8C
DUP: 8.75 at 18.8C

L1162234-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1162234-01 11/19/19 19:45 • (DUP) R3473880-16 11/19/19 19:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
Corrosivity by pH	5.41	5.41	1	0.000		1

Sample Narrative:
OS: 5.41 at 18.3C
DUP: 5.41 at 18.4C

L1162243-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1162243-01 11/19/19 19:45 • (DUP) R3473880-17 11/19/19 19:45

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
Corrosivity by pH	6.75	6.79	1	0.591		1

Sample Narrative:
OS: 6.75 at 18.5C
DUP: 6.79 at 18.8C

Laboratory Control Sample (LCS)

(LCS) R3473880-1 11/19/19 19:45

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
Corrosivity by pH	10.0	9.92	99.2	99.0-101	

Sample Narrative:
LCS: 9.92 at 19.1C

Method Blank (MB)

(MB) R3474776-1 11/21/19 17:59

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Reactive Sulfide	U		0.00650	0.0500

Laboratory Control Sample (LCS)

(LCS) R3474776-2 11/21/19 17:59

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Sulfide	0.500	0.532	106	85.0-115	

L1167589-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1167589-01 12/10/19 17:31 • (DUP) R3480997-2 12/10/19 17:31

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	deg F	deg F		%		%
Flashpoint	74.4	74.4	1	0.000		10

Laboratory Control Sample (LCS)

(LCS) R3480997-1 12/10/19 17:31

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	deg F	deg F	%	%	
Flashpoint	82.0	84.4	103	97.0-103	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J4	The associated batch QC was outside the established quality control range for accuracy.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.

PROJECT: SDG: DATE/TIME: PAGE:

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

SUB CONTRATOR:	ESC PACE	COMPANY:	ESC PACE	PHONE:	(800) 767-5859	FAX:	(615) 758-5859
ADDRESS:	12065 Lebanon Rd			ACCOUNT #:		EMAIL:	
CITY, STATE, ZIP:	Mt. Juliet, TN 37122						

1201

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	1911677-001D	Lybrook	500HDPE	Aqueous	11/14/2019 9:13:00 AM	3	Reactivity, Corrosivity and Ignitability ** 7 Day TAT ** L1162247 -31

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By: [signature]	Date: 11/15/2019	Time: 8:32 AM	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Received By: [signature]	Date: 11/16/19	Time: 845	
TAT:	Standard ☐	(RUSH)	Next BD ☐	2nd BD ☐	3rd BD ☐	

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY Cocsl

Temp of samples 2.3-1=2.2 °C Attempt to Cool? RAD SCREEN: <0.5 mR/hr

Comments:

Tracking # 4510 1669 1984
Containers Received 3

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: Hallenvan M	1162243	
Cooler Received/Opened On: 11 / 19 /19 Temperature: 22		
Received By: Willie Taylor SLS		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

Matt Shacklock

Pace Analytical®
National Center for Testing & Innovation

L1162243	Client:HALLENVANM	Date:11/19/19	Evaluated by:Matt S

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
x	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	pH not in range.		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Couri
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Received FLASH in HDPE

Client informed by:		Call		Email		Voice Mail		Date: 11/19	Time:1201
TSR Initials: DR	Client Contact:								

Login Instructions:

Qualify and proceed with analysis

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

12-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: **100ng lcs**	SampType: **LCS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **LCSW**	Batch ID: **R64562**	RunNo: **64562**
Prep Date:	Analysis Date: **11/15/2019**	SeqNo: **2210714** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.4	70	130			
Toluene	19	1.0	20.00	0	97.2	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	82.7	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	81.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.9	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Sample ID: **1911677-001a ms**	SampType: **MS**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Lybrook**	Batch ID: **R64562**	RunNo: **64562**
Prep Date:	Analysis Date: **11/15/2019**	SeqNo: **2210720** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.9	0.20	4.000	0	97.0	70	130			
Toluene	3.9	0.20	4.000	0	96.7	70	130			
Chlorobenzene	4.0	0.20	4.000	0	101	70	130			
1,1-Dichloroethene	3.4	0.20	4.000	0	85.6	70	130			
Trichloroethene (TCE)	3.3	0.20	4.000	0	82.6	70	130			
Surr: 1,2-Dichloroethane-d4	1.9		2.000		96.8	70	130			
Surr: 4-Bromofluorobenzene	1.9		2.000		93.8	70	130			
Surr: Dibromofluoromethane	2.1		2.000		106	70	130			
Surr: Toluene-d8	2.0		2.000		102	70	130			

Sample ID: **1911677-001a msd**	SampType: **MSD**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **Lybrook**	Batch ID: **R64562**	RunNo: **64562**
Prep Date:	Analysis Date: **11/15/2019**	SeqNo: **2210721** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.7	0.20	4.000	0	93.3	70	130	3.91	20	
Toluene	3.7	0.20	4.000	0	93.6	70	130	3.17	20	
Chlorobenzene	3.9	0.20	4.000	0	97.8	70	130	3.24	20	
1,1-Dichloroethene	3.2	0.20	4.000	0	79.3	70	130	7.65	20	
Trichloroethene (TCE)	3.2	0.20	4.000	0	79.1	70	130	4.33	20	
Surr: 1,2-Dichloroethane-d4	2.0		2.000		98.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	1.8		2.000		91.3	70	130	0	0	
Surr: Dibromofluoromethane	2.1		2.000		106	70	130	0	0	
Surr: Toluene-d8	2.1		2.000		104	70	130	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

12-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R64562**	RunNo: **64562**
Prep Date:	Analysis Date: **11/15/2019**	SeqNo: **2210733** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

12-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R64562**	RunNo: **64562**
Prep Date:	Analysis Date: **11/15/2019**	SeqNo: **2210733** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.8	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.9	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

12-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: mb-48934	SampType: MBLK	TestCode: EPA Method 8270C: PAHs							
Client ID: PBW	Batch ID: 48934	RunNo: 64751							
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219189		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	1.0								
2-Methylnaphthalene	ND	1.0								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	61		87.60		69.2	20.4	126			
Surr: Benzo(e)pyrene	13		20.00		64.5	21.4	126			

Sample ID: lcs-48934	SampType: LCS	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSW	Batch ID: 48934	RunNo: 64751							
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219191		Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	73.8	41.8	97.8			
1-Methylnaphthalene	14	1.0	20.00	0	68.3	44.7	104			
2-Methylnaphthalene	14	1.0	20.00	0	72.4	45	101			
Acenaphthylene	15	0.50	20.00	0	72.8	51.2	102			
Acenaphthene	14	0.50	20.00	0	71.8	53.2	101			
Fluorene	15	0.50	20.00	0	75.1	57.6	106			
Phenanthrene	15	0.50	20.00	0	75.6	57.6	109			
Anthracene	15	0.50	20.00	0	73.2	56.1	98.9			
Fluoranthene	16	0.50	20.00	0	81.9	61.4	114			
Pyrene	16	0.50	20.00	0	78.7	58	110			
Benz(a)anthracene	15	0.50	20.00	0	76.6	60	102			
Chrysene	14	0.50	20.00	0	70.9	50.8	93.4			
Benzo(b)fluoranthene	15	0.50	20.00	0	74.0	56.2	118			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

12-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: lcs-48934	SampType: LCS	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSW	Batch ID: 48934	RunNo: 64751							
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219191	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	15	0.50	20.00	0	75.7	57.7	119			
Benzo(a)pyrene	15	0.50	20.00	0	75.0	55.5	114			
Dibenz(a,h)anthracene	15	0.50	20.00	0	75.5	53	110			
Benzo(g,h,i)perylene	15	0.50	20.00	0	74.8	55	113			
Indeno(1,2,3-cd)pyrene	15	0.50	20.00	0	75.5	51.2	115			
Surr: N-hexadecane	67		87.60		76.4	20.4	126			
Surr: Benzo(e)pyrene	14		20.00		68.3	21.4	126			

Sample ID: lcsd-48934	SampType: LCSD	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSS02	Batch ID: 48934	RunNo: 64751							
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219192	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	74.2	41.8	97.8	0.541	25.4	
1-Methylnaphthalene	15	1.0	20.00	0	73.8	44.7	104	7.74	21.5	
2-Methylnaphthalene	15	1.0	20.00	0	76.0	45	101	4.85	25.2	
Acenaphthylene	17	0.50	20.00	0	83.4	51.2	102	13.6	30.3	
Acenaphthene	16	0.50	20.00	0	81.6	53.2	101	12.8	28.1	
Fluorene	17	0.50	20.00	0	83.5	57.6	106	10.6	33	
Phenanthrene	15	0.50	20.00	0	74.8	57.6	109	1.06	24.5	
Anthracene	15	0.50	20.00	0	76.6	56.1	98.9	4.54	26.9	
Fluoranthene	17	0.50	20.00	0	83.2	61.4	114	1.57	21.8	
Pyrene	15	0.50	20.00	0	77.1	58	110	2.05	27	
Benz(a)anthracene	14	0.50	20.00	0	72.5	60	102	5.50	27.4	
Chrysene	14	0.50	20.00	0	68.6	50.8	93.4	3.30	20.4	
Benzo(b)fluoranthene	15	0.50	20.00	0	77.4	56.2	118	4.49	22.5	
Benzo(k)fluoranthene	17	0.50	20.00	0	83.3	57.7	119	9.56	24.1	
Benzo(a)pyrene	16	0.50	20.00	0	78.3	55.5	114	4.31	27.3	
Dibenz(a,h)anthracene	16	0.50	20.00	0	78.5	53	110	3.90	18.5	
Benzo(g,h,i)perylene	16	0.50	20.00	0	79.4	55	113	5.97	28.4	
Indeno(1,2,3-cd)pyrene	16	0.50	20.00	0	81.5	51.2	115	7.64	21.8	
Surr: N-hexadecane	70		87.60		79.8	20.4	126	0	0	
Surr: Benzo(e)pyrene	14		20.00		71.8	21.4	126	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

12-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: **MB-48955**	SampType: **MBLK**	TestCode: **EPA Method 7470: Mercury**
Client ID: **PBW**	Batch ID: **48955**	RunNo: **64701**
Prep Date: **11/21/2019**	Analysis Date: **11/22/2019**	SeqNo: **2217075** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LCS-48955**	SampType: **LCS**	TestCode: **EPA Method 7470: Mercury**
Client ID: **LCSW**	Batch ID: **48955**	RunNo: **64701**
Prep Date: **11/21/2019**	Analysis Date: **11/22/2019**	SeqNo: **2217080** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.7	80	120			

Sample ID: **1911677-001CMS**	SampType: **MS**	TestCode: **EPA Method 7470: Mercury**
Client ID: **Lybrook**	Batch ID: **48955**	RunNo: **64701**
Prep Date: **11/21/2019**	Analysis Date: **11/22/2019**	SeqNo: **2217083** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	.00004404	95.5	75	125			

Sample ID: **1911677-001CMSD**	SampType: **MSD**	TestCode: **EPA Method 7470: Mercury**
Client ID: **Lybrook**	Batch ID: **48955**	RunNo: **64701**
Prep Date: **11/21/2019**	Analysis Date: **11/22/2019**	SeqNo: **2217084** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	.00004404	98.3	75	125	0	20	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- PQL Practical Quantitative Limit
- RL Reporting Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

12-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: MB-48826	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219763 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID: LCS-48826	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219768 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.020	0.5000	0	94.6	80	120			
Cadmium	0.49	0.0020	0.5000	0	97.1	80	120			
Chromium	0.47	0.0060	0.5000	0	95.0	80	120			
Lead	0.50	0.0050	0.5000	0	100	80	120			
Selenium	0.54	0.050	0.5000	0	107	80	120			
Silver	0.095	0.0050	0.1000	0	95.0	80	120			

Sample ID: 1911677-001CMS	SampType: MS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Lybrook	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219789 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	100	0.5000	0.04852	98.2	75	125			
Cadmium	ND	1.0	0.5000	0	102	75	125			
Chromium	ND	5.0	0.5000	0	99.3	75	125			
Lead	ND	5.0	0.5000	0.004371	104	75	125			
Selenium	ND	1.0	0.5000	0	114	75	125			
Silver	ND	5.0	0.1000	0.0007323	96.1	75	125			

Sample ID: 1911677-001CMSD	SampType: MSD	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Lybrook	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219793 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	100	0.5000	0.04852	98.3	75	125	0	20	
Cadmium	ND	1.0	0.5000	0	101	75	125	0	20	
Chromium	ND	5.0	0.5000	0	99.5	75	125	0	20	
Lead	ND	5.0	0.5000	0.004371	102	75	125	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quantitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

12-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: **1911677-001CMSD** SampType: **MSD** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **Lybrook** Batch ID: **48826** RunNo: **64774**
Prep Date: **11/15/2019** Analysis Date: **11/25/2019** SeqNo: **2219793** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	1.0	0.5000	0	106	75	125	0	20	
Silver	ND	5.0	0.1000	0.0007323	94.7	75	125	0	20	

Sample ID: **MB-48826** SampType: **MBLK** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **PBW** Batch ID: **48826** RunNo: **64774**
Prep Date: **11/15/2019** Analysis Date: **11/25/2019** SeqNo: **2219851** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								

Sample ID: **LCS-48826** SampType: **LCS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **LCSW** Batch ID: **48826** RunNo: **64774**
Prep Date: **11/15/2019** Analysis Date: **11/25/2019** SeqNo: **2219853** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.7	80	120			

Sample ID: **1911677-001CMS** SampType: **MS** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **Lybrook** Batch ID: **48826** RunNo: **64774**
Prep Date: **11/15/2019** Analysis Date: **11/25/2019** SeqNo: **2219873** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	96.7	75	125			

Sample ID: **1911677-001CMSD** SampType: **MSD** TestCode: **EPA 6010B: Total Recoverable Metals**
Client ID: **Lybrook** Batch ID: **48826** RunNo: **64774**
Prep Date: **11/15/2019** Analysis Date: **11/25/2019** SeqNo: **2219874** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	95.6	75	125	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM | Work Order Number: 1911677 | RcptNo: 1

Received By: Juan Rojas 11/15/2019 8:00:00 AM

Completed By: Desiree Dominguez 11/15/2019 8:22:05 AM

Reviewed By: ENM 11/15/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 1 1 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? No
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: DM 11/15/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	Yes			

Chain-of-Custody Record

Client: SMA

Mailing Address: 401 W Broadway Farmington, NM 87401

Phone #: 505 325 7535

email or Fax#: Ashley Maxwell

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Lybrook

Project #:

Project Manager: Ashley Maxwell

Sampler: RW

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.8-0.2=0.6

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1911677	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals TCLP	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	RCI
11/14	9	Aqus	[redacted]	various	various						X	X		X			X
	9:13		Lybrook														

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/14/19	1630				11/14/19	1630
11/14/19	1753	Christa Waelea		carrier	11/15/19	8:00

Remarks: 8260 Full List
TCLP Compound at TCLP Limits
Invoice Enterprise CC Tom Long

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 03, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX: (505) 327-1496

RE: Lybrook OrderNo.: 1911677

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/15/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1911677**
Date Reported: **12/3/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: Lybrook
Project: Lybrook
Collection Date: 11/14/2019 9:13:00 AM
Lab ID: 1911677-001 **Matrix:** AQUEOUS **Received Date:** 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	ND	0.020		mg/L	1	11/22/2019 10:29:54 AM	48955
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **rde**	
Arsenic	ND	5.0		mg/L	1	11/25/2019 3:55:53 PM	48826
Barium	ND	100		mg/L	1	11/25/2019 12:47:25 PM	48826
Cadmium	ND	1.0		mg/L	1	11/25/2019 12:47:25 PM	48826
Chromium	ND	5.0		mg/L	1	11/25/2019 12:47:25 PM	48826
Lead	ND	5.0		mg/L	1	11/25/2019 12:47:25 PM	48826
Selenium	ND	1.0		mg/L	1	11/25/2019 12:47:25 PM	48826
Silver	ND	5.0		mg/L	1	11/25/2019 12:47:25 PM	48826
EPA METHOD 8270C: PAHS						Analyst: **JDC**	
Naphthalene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
1-Methylnaphthalene	ND	1.0		µg/L	1	11/25/2019 4:12:01 PM	48934
2-Methylnaphthalene	ND	1.0		µg/L	1	11/25/2019 4:12:01 PM	48934
Acenaphthylene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Acenaphthene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Fluorene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Phenanthrene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Anthracene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Fluoranthene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Pyrene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Benz(a)anthracene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Chrysene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Benzo(b)fluoranthene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Benzo(k)fluoranthene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Benzo(a)pyrene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Dibenz(a,h)anthracene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Benzo(g,h,i)perylene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Indeno(1,2,3-cd)pyrene	ND	0.50		µg/L	1	11/25/2019 4:12:01 PM	48934
Surr: N-hexadecane	65.8	20.4-126		%Rec	1	11/25/2019 4:12:01 PM	48934
Surr: Benzo(e)pyrene	62.0	21.4-126		%Rec	1	11/25/2019 4:12:01 PM	48934
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	0.50		mg/L	200	11/15/2019 3:32:37 PM	R64562
Toluene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Ethylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quantitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **1911677**
Date Reported: **12/3/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: Lybrook
Project: Lybrook
Collection Date: 11/14/2019 9:13:00 AM
Lab ID: 1911677-001 **Matrix:** AQUEOUS **Received Date:** 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Naphthalene	ND	0.40		mg/L	200	11/15/2019 3:32:37 PM	R64562
1-Methylnaphthalene	ND	0.80		mg/L	200	11/15/2019 3:32:37 PM	R64562
2-Methylnaphthalene	ND	0.80		mg/L	200	11/15/2019 3:32:37 PM	R64562
Acetone	ND	2.0		mg/L	200	11/15/2019 3:32:37 PM	R64562
Bromobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Bromodichloromethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Bromoform	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Bromomethane	ND	0.60		mg/L	200	11/15/2019 3:32:37 PM	R64562
2-Butanone	ND	2.0		mg/L	200	11/15/2019 3:32:37 PM	R64562
Carbon disulfide	ND	2.0		mg/L	200	11/15/2019 3:32:37 PM	R64562
Carbon Tetrachloride	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Chlorobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Chloroethane	ND	0.40		mg/L	200	11/15/2019 3:32:37 PM	R64562
Chloroform	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Chloromethane	ND	0.60		mg/L	200	11/15/2019 3:32:37 PM	R64562
2-Chlorotoluene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
4-Chlorotoluene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
cis-1,2-DCE	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	11/15/2019 3:32:37 PM	R64562
Dibromochloromethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Dibromomethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2-Dichlorobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,3-Dichlorobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,4-Dichlorobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Dichlorodifluoromethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1-Dichloroethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1-Dichloroethene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2-Dichloropropane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,3-Dichloropropane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
2,2-Dichloropropane	ND	0.40		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1-Dichloropropene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Hexachlorobutadiene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
2-Hexanone	ND	2.0		mg/L	200	11/15/2019 3:32:37 PM	R64562
Isopropylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
4-Isopropyltoluene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
4-Methyl-2-pentanone	ND	2.0		mg/L	200	11/15/2019 3:32:37 PM	R64562
Methylene Chloride	ND	0.60		mg/L	200	11/15/2019 3:32:37 PM	R64562

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1911677**
Date Reported: **12/3/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Lybrook
Lab ID: 1911677-001 **Matrix:** AQUEOUS

Client Sample ID: Lybrook
Collection Date: 11/14/2019 9:13:00 AM
Received Date: 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
n-Butylbenzene	ND	0.60		mg/L	200	11/15/2019 3:32:37 PM	R64562
n-Propylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
sec-Butylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Styrene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
tert-Butylbenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	11/15/2019 3:32:37 PM	R64562
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
trans-1,2-DCE	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1,1-Trichloroethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,1,2-Trichloroethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Trichloroethene (TCE)	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Trichlorofluoromethane	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
1,2,3-Trichloropropane	ND	0.40		mg/L	200	11/15/2019 3:32:37 PM	R64562
Vinyl chloride	ND	0.20		mg/L	200	11/15/2019 3:32:37 PM	R64562
Xylenes, Total	ND	0.30		mg/L	200	11/15/2019 3:32:37 PM	R64562
Surr: 1,2-Dichloroethane-d4	98.1	70-130		%Rec	200	11/15/2019 3:32:37 PM	R64562
Surr: 4-Bromofluorobenzene	92.7	70-130		%Rec	200	11/15/2019 3:32:37 PM	R64562
Surr: Dibromofluoromethane	105	70-130		%Rec	200	11/15/2019 3:32:37 PM	R64562
Surr: Toluene-d8	107	70-130		%Rec	200	11/15/2019 3:32:37 PM	R64562

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

November 29, 2019

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1162243

Samples Received: 11/19/2019

Project Number:

Description:

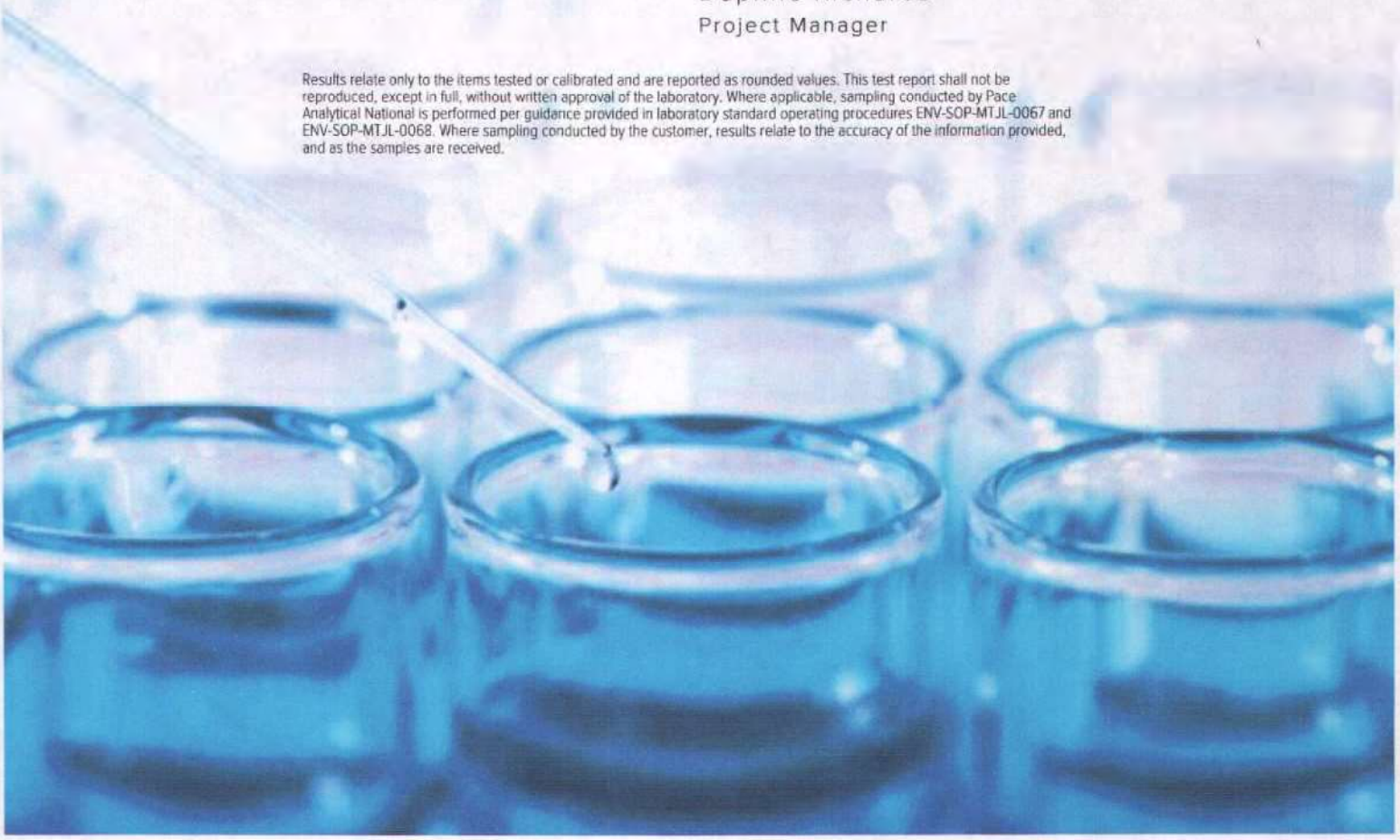
Report To:

4901 Hawkins NE

Albuquerque, NM 87109

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager



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SAMPLE SUMMARY

1911677-001D LYBROOK L1162243-01 WW			Collected by	Collected date/time 11/14/19 09:13	Received date/time 11/19/19 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 CN E-2011	WG1386291	1	11/24/19 11:16	11/24/19 21:47	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500H+ B-2011	WG1383247	1	11/19/19 19:45	11/19/19 19:45	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1384494	1	11/21/19 18:10	11/21/19 18:10	MJA	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1387079	1	11/26/19 17:15	11/26/19 17:15	MJA	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Project Narrative

All Reactive Cyanide results reported in the attached report were determined as totals using method 9012B.

All Reactive Sulfide results reported in the attached report were determined as totals using method 9034/9030B.

SAMPLE RESULTS - 01

Collected date/time: 11/14/19 09:13

L1162243

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND	J4	0.00500	1	11/24/2019 21:47	WG1386291

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	6.75	T8	1	11/19/2019 19:45	WG1383247

Sample Narrative:

L1162243-01 WG1383247: 6.75 at 18.5C

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		0.0500	1	11/21/2019 18:10	WG1384494

Wet Chemistry by Method D93/1010A

Analyte	Result deg F	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	131		1	11/26/2019 17:15	WG1387079

:hod Blank (MB)

R3475672-1 11/24/19 20:21

	MB Result	MB Qualifier	MB MDL	MB RDL
te	mg/l		mg/l	mg/l
ive Cyanide	U		0.00180	0.00500

;2058-02 Original Sample (OS) • Duplicate (DUP)

L1162058-02 11/24/19 21:35 • (DUP) R3475672-3 11/24/19 21:36

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	mg/l	mg/l		%		%
ive Cyanide	ND	0.00394	1	0.000		20

oratory Control Sample (LCS)

R3475672-2 11/24/19 20:23

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
te	mg/l	mg/l	%	%	
ive Cyanide	0.100	0.116	116	85.0-115	J4

;2228-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

L1162228-01 11/24/19 21:41 • (MS) R3475672-4 11/24/19 21:44 • (MSD) R3475672-5 11/24/19 21:45

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
te	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
ive Cyanide	0.100	ND	0.0897	0.0937	89.7	93.7	1	75.0-125			4.36	20

;2243-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

L1162243-01 11/24/19 21:47 • (MS) R3475672-6 11/24/19 21:48 • (MSD) R3475672-7 11/24/19 21:50

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
te	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
ive Cyanide	0.100	ND	0.0893	0.101	89.3	101	1	75.0-125			12.3	20

;2185-01 Original Sample (OS) • Duplicate (DUP)

L1162185-01 11/19/19 19:45 • (DUP) R3473880-10 11/19/19 19:45

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	su	su		%		%
sivity by pH	8.75	8.75	1	0.000		1

le Narrative:
: 8.75 at 18.8C
P: 8.75 at 18.8C

;2234-01 Original Sample (OS) • Duplicate (DUP)

L1162234-01 11/19/19 19:45 • (DUP) R3473880-16 11/19/19 19:45

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	su	su		%		%
sivity by pH	5.41	5.41	1	0.000		1

le Narrative:
: 5.41 at 18.3C
P: 5.41 at 18.4C

;2243-01 Original Sample (OS) • Duplicate (DUP)

L1162243-01 11/19/19 19:45 • (DUP) R3473880-17 11/19/19 19:45

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	su	su		%		%
sivity by pH	6.75	6.79	1	0.591		1

le Narrative:
: 6.75 at 18.5C
P: 6.79 at 18.8C

oratory Control Sample (LCS)

R3473880-1 11/19/19 19:45

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
te	su	su	%	%	
sivity by pH	10.0	9.92	99.2	99.0-101	

le Narrative:
S: 9.92 at 19.1C

:hod Blank (MB)

R3474776-1 11/21/19 17:59

	MB Result	MB Qualifier	MB MDL	MB RDL
te	mg/l		mg/l	mg/l
ive Sulfide	U		0.00650	0.0500

oratory Control Sample (LCS)

R3474776-2 11/21/19 17:59

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
te	mg/l	mg/l	%	%	
ive Sulfide	0.500	0.532	106	85.0-115	

;2185-01 Original Sample (OS) • Duplicate (DUP)

L1162185-01 11/26/19 17:15 • (DUP) R3476638-2 11/26/19 17:15

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	deg F	deg F		%		%
oint	131	125	1	4.69		10

;2234-01 Original Sample (OS) • Duplicate (DUP)

L1162234-01 11/26/19 17:15 • (DUP) R3476638-3 11/26/19 17:15

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	deg F	deg F		%		%
oint	131	136	1	3.75		10

;2243-01 Original Sample (OS) • Duplicate (DUP)

L1162243-01 11/26/19 17:15 • (DUP) R3476638-4 11/26/19 17:15

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	deg F	deg F		%		%
oint	131	135	1	3.01		10

;2558-01 Original Sample (OS) • Duplicate (DUP)

L1162558-01 11/26/19 17:15 • (DUP) R3476638-5 11/26/19 17:15

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	deg F	deg F		%		%
oint	116	127	1	9.06		10

;4862-01 Original Sample (OS) • Duplicate (DUP)

L1164862-01 11/26/19 17:15 • (DUP) R3476638-6 11/26/19 17:15

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	deg F	deg F		%		%
oint	123	124	1	0.810		10

Chemistry by Method D93/1010A

L1162243-01

oratory Control Sample (LCS)

R3476638-1 11/26/19 17:15

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
te	deg F	deg F	%	%	
oint	82.0	83.0	101	96.0-104	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

SUB CONTRATOR:	ESC PACE	COMPANY: ESC PACE	PHONE: (800) 767-5859	FAX:	(615) 758-5859
ADDRESS:	12065 Lebanon Rd		ACCOUNT #:	EMAIL:	
CITY, STATE, ZIP:	Mt. Juliet, TN 37122				

1201

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	1911677-001D	Lybrook	500HDPE	Aqueous	11/14/2019 9:13:00 AM	3	Reactivity, Corrosivity and Ignitability ** 7 Day TAT ** (1622Y) 3/

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 11/15/2019	Time: 8:32 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date: 11/16/19	Time: 845

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY Cool

Temp of samples 2.3-1.2=2.3 °C Attempt to Cool?

RAD SCREEN: <0.5 mR/hr

Comments:

Tracking # 4970 1669 1984

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: Hallenvan	1162243	
Cooler Received/Opened On: 11 / 19 /19 Temperature: 22		
Received By: Willie Taylor 845		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	
Sufficient volume sent?		✓	
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

Matt Shacklock

L1162243	Client:HALLENVANM	Date:11/19/19	Evaluated by:Matt S

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
x	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	pH not in range.		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Cou
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Received FLASH in HDPE

Client informed by:		Call		Email		Voice Mail		Date: 11/19	Time:1201
TSR Initials: DR	Client Contact:								

Login Instructions:

Qualify and proceed with analysis

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677
03-Dec-19

Client: Souder, Miller and Associates
Project: Lybrook

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R64562	RunNo: 64562
Prep Date:	Analysis Date: 11/15/2019	SeqNo: 2210714 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.4	70	130			
Toluene	19	1.0	20.00	0	97.2	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	82.7	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	81.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.9	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Sample ID: 1911677-001a ms	SampType: MS	TestCode: EPA Method 8260B: VOLATILES
Client ID: Lybrook	Batch ID: R64562	RunNo: 64562
Prep Date:	Analysis Date: 11/15/2019	SeqNo: 2210720 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.9	0.20	4.000	0	97.0	70	130			
Toluene	3.9	0.20	4.000	0	96.7	70	130			
Chlorobenzene	4.0	0.20	4.000	0	101	70	130			
1,1-Dichloroethene	3.4	0.20	4.000	0	85.6	70	130			
Trichloroethene (TCE)	3.3	0.20	4.000	0	82.6	70	130			
Surr: 1,2-Dichloroethane-d4	1.9		2.000		96.8	70	130			
Surr: 4-Bromofluorobenzene	1.9		2.000		93.8	70	130			
Surr: Dibromofluoromethane	2.1		2.000		106	70	130			
Surr: Toluene-d8	2.0		2.000		102	70	130			

Sample ID: 1911677-001a msd	SampType: MSD	TestCode: EPA Method 8260B: VOLATILES
Client ID: Lybrook	Batch ID: R64562	RunNo: 64562
Prep Date:	Analysis Date: 11/15/2019	SeqNo: 2210721 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	3.7	0.20	4.000	0	93.3	70	130	3.91	20	
Toluene	3.7	0.20	4.000	0	93.6	70	130	3.17	20	
Chlorobenzene	3.9	0.20	4.000	0	97.8	70	130	3.24	20	
1,1-Dichloroethene	3.2	0.20	4.000	0	79.3	70	130	7.65	20	
Trichloroethene (TCE)	3.2	0.20	4.000	0	79.1	70	130	4.33	20	
Surr: 1,2-Dichloroethane-d4	2.0		2.000		98.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	1.8		2.000		91.3	70	130	0	0	
Surr: Dibromofluoromethane	2.1		2.000		106	70	130	0	0	
Surr: Toluene-d8	2.1		2.000		104	70	130	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quantitative Limit
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

03-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: rb1	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R64562	RunNo: 64562
Prep Date:	Analysis Date: 11/15/2019	SeqNo: 2210733 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

03-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R64562**	RunNo: **64562**
Prep Date:	Analysis Date: **11/15/2019**	SeqNo: **2210733** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.8	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.9	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677
03-Dec-19

Client: Souder, Miller and Associates
Project: Lybrook

Sample ID: mb-48934	SampType: MBLK	TestCode: EPA Method 8270C: PAHs
Client ID: PBW	Batch ID: 48934	RunNo: 64751
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219189 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	1.0								
2-Methylnaphthalene	ND	1.0								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	61		87.60		69.2	20.4	126			
Surr: Benzo(e)pyrene	13		20.00		64.5	21.4	126			

Sample ID: lcs-48934	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 48934	RunNo: 64751
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219191 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	73.8	41.8	97.8			
1-Methylnaphthalene	14	1.0	20.00	0	68.3	44.7	104			
2-Methylnaphthalene	14	1.0	20.00	0	72.4	45	101			
Acenaphthylene	15	0.50	20.00	0	72.8	51.2	102			
Acenaphthene	14	0.50	20.00	0	71.8	53.2	101			
Fluorene	15	0.50	20.00	0	75.1	57.6	106			
Phenanthrene	15	0.50	20.00	0	75.6	57.6	109			
Anthracene	15	0.50	20.00	0	73.2	56.1	98.9			
Fluoranthene	16	0.50	20.00	0	81.9	61.4	114			
Pyrene	16	0.50	20.00	0	78.7	58	110			
Benz(a)anthracene	15	0.50	20.00	0	76.6	60	102			
Chrysene	14	0.50	20.00	0	70.9	50.8	93.4			
Benzo(b)fluoranthene	15	0.50	20.00	0	74.0	56.2	118			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quantitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

03-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: lcs-48934	SampType: LCS	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSW	Batch ID: 48934	RunNo: 64751							
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219191	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	15	0.50	20.00	0	75.7	57.7	119			
Benzo(a)pyrene	15	0.50	20.00	0	75.0	55.5	114			
Dibenz(a,h)anthracene	15	0.50	20.00	0	75.5	53	110			
Benzo(g,h,i)perylene	15	0.50	20.00	0	74.8	55	113			
Indeno(1,2,3-cd)pyrene	15	0.50	20.00	0	75.5	51.2	115			
Surr: N-hexadecane	67		87.60		76.4	20.4	126			
Surr: Benzo(e)pyrene	14		20.00		68.3	21.4	126			

Sample ID: lcsd-48934	SampType: LCSD	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSS02	Batch ID: 48934	RunNo: 64751							
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219192	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	74.2	41.8	97.8	0.541	25.4	
1-Methylnaphthalene	15	1.0	20.00	0	73.8	44.7	104	7.74	21.5	
2-Methylnaphthalene	15	1.0	20.00	0	76.0	45	101	4.85	25.2	
Acenaphthylene	17	0.50	20.00	0	83.4	51.2	102	13.6	30.3	
Acenaphthene	16	0.50	20.00	0	81.6	53.2	101	12.8	28.1	
Fluorene	17	0.50	20.00	0	83.5	57.6	106	10.6	33	
Phenanthrene	15	0.50	20.00	0	74.8	57.6	109	1.06	24.5	
Anthracene	15	0.50	20.00	0	76.6	56.1	98.9	4.54	26.9	
Fluoranthene	17	0.50	20.00	0	83.2	61.4	114	1.57	21.8	
Pyrene	15	0.50	20.00	0	77.1	58	110	2.05	27	
Benz(a)anthracene	14	0.50	20.00	0	72.5	60	102	5.50	27.4	
Chrysene	14	0.50	20.00	0	68.6	50.8	93.4	3.30	20.4	
Benzo(b)fluoranthene	15	0.50	20.00	0	77.4	56.2	118	4.49	22.5	
Benzo(k)fluoranthene	17	0.50	20.00	0	83.3	57.7	119	9.56	24.1	
Benzo(a)pyrene	16	0.50	20.00	0	78.3	55.5	114	4.31	27.3	
Dibenz(a,h)anthracene	16	0.50	20.00	0	78.5	53	110	3.90	18.5	
Benzo(g,h,i)perylene	16	0.50	20.00	0	79.4	55	113	5.97	28.4	
Indeno(1,2,3-cd)pyrene	16	0.50	20.00	0	81.5	51.2	115	7.64	21.8	
Surr: N-hexadecane	70		87.60		79.8	20.4	126	0	0	
Surr: Benzo(e)pyrene	14		20.00		71.8	21.4	126	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

03-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: MB-48955	SampType: MBLK	TestCode: EPA Method 7470: Mercury							
Client ID: PBW	Batch ID: 48955	RunNo: 64701							
Prep Date: 11/21/2019	Analysis Date: 11/22/2019	SeqNo: 2217075	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: LCS-48955	SampType: LCS	TestCode: EPA Method 7470: Mercury							
Client ID: LCSW	Batch ID: 48955	RunNo: 64701							
Prep Date: 11/21/2019	Analysis Date: 11/22/2019	SeqNo: 2217080	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.7	80	120			

Sample ID: 1911677-001CMS	SampType: MS	TestCode: EPA Method 7470: Mercury							
Client ID: Lybrook	Batch ID: 48955	RunNo: 64701							
Prep Date: 11/21/2019	Analysis Date: 11/22/2019	SeqNo: 2217083	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	.00004404	95.5	75	125			

Sample ID: 1911677-001CMSD	SampType: MSD	TestCode: EPA Method 7470: Mercury							
Client ID: Lybrook	Batch ID: 48955	RunNo: 64701							
Prep Date: 11/21/2019	Analysis Date: 11/22/2019	SeqNo: 2217084	Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.020	0.005000	.00004404	98.3	75	125	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677
03-Dec-19

Client: Souder, Miller and Associates
Project: Lybrook

Sample ID: MB-48826	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219763 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID: LCS-48826	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219768 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.020	0.5000	0	94.6	80	120			
Cadmium	0.49	0.0020	0.5000	0	97.1	80	120			
Chromium	0.47	0.0060	0.5000	0	95.0	80	120			
Lead	0.50	0.0050	0.5000	0	100	80	120			
Selenium	0.54	0.050	0.5000	0	107	80	120			
Silver	0.095	0.0050	0.1000	0	95.0	80	120			

Sample ID: 1911677-001CMS	SampType: MS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Lybrook	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219789 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	100	0.5000	0.04852	98.2	75	125			
Cadmium	ND	1.0	0.5000	0	102	75	125			
Chromium	ND	5.0	0.5000	0	99.3	75	125			
Lead	ND	5.0	0.5000	0.004371	104	75	125			
Selenium	ND	1.0	0.5000	0	114	75	125			
Silver	ND	5.0	0.1000	0.0007323	96.1	75	125			

Sample ID: 1911677-001CMSD	SampType: MSD	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: Lybrook	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219793 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	100	0.5000	0.04852	98.3	75	125	0	20	
Cadmium	ND	1.0	0.5000	0	101	75	125	0	20	
Chromium	ND	5.0	0.5000	0	99.5	75	125	0	20	
Lead	ND	5.0	0.5000	0.004371	102	75	125	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911677

03-Dec-19

Client: Souder, Miller and Associates

Project: Lybrook

Sample ID: **1911677-001CMSD** SampType: **MSD** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **Lybrook** Batch ID: **48826** RunNo: **64774**

Prep Date: **11/15/2019** Analysis Date: **11/25/2019** SeqNo: **2219793** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Selenium	ND	1.0	0.5000	0	106	75	125	0	20	
Silver	ND	5.0	0.1000	0.0007323	94.7	75	125	0	20	

Sample ID: **MB-48826** SampType: **MBLK** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **PBW** Batch ID: **48826** RunNo: **64774**

Prep Date: **11/15/2019** Analysis Date: **11/25/2019** SeqNo: **2219851** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								

Sample ID: **LCS-48826** SampType: **LCS** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **LCSW** Batch ID: **48826** RunNo: **64774**

Prep Date: **11/15/2019** Analysis Date: **11/25/2019** SeqNo: **2219853** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.7	80	120			

Sample ID: **1911677-001CMS** SampType: **MS** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **Lybrook** Batch ID: **48826** RunNo: **64774**

Prep Date: **11/15/2019** Analysis Date: **11/25/2019** SeqNo: **2219873** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	96.7	75	125			

Sample ID: **1911677-001CMSD** SampType: **MSD** TestCode: **EPA 6010B: Total Recoverable Metals**

Client ID: **Lybrook** Batch ID: **48826** RunNo: **64774**

Prep Date: **11/15/2019** Analysis Date: **11/25/2019** SeqNo: **2219874** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	5.0	0.5000	0	95.6	75	125	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM | Work Order Number: 1911677 | RcptNo: 1

Received By: Juan Rojas 11/15/2019 8:00:00 AM

Completed By: Desiree Dominguez 11/15/2019 8:22:05 AM

Reviewed By: ENM 11/15/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 1 1 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? No
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: DM 11/15/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	Yes			

Chain-of-Custody Record

ent: SMA

ailing Address: 401 W Broadway
rmington, NM 87401
one #: 505 3257535
ail or Fax#: Ashley Maxwell
/QC Package:
Standard ☐ Level 4 (Full Validation)
creditation: ☐ Az Compliance
NELAC ☐ Other
EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Lybrook

Project #:

Project Manager: Ashley Maxwell

Sampler: RW
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 0.8-0.2=0.6

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

te	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1911677	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals TCLP	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	RCI
11/14	9	Aqueous	[redacted]	various	various						X	X		X			X
	9:13		Lybrook														

e:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/9	1630				11/14/19	1630
e:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/9	1753			carrier	11/15/19	8:00

Remarks: 8260 Full List
TCLP Compound at TCLP Limits
Invoice Enterprise CC Tom Long

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL Huerfano Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL L Section 21 Township 26 North Range 10 West; 36.471831, -107.908114

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 (bbls) Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long) , representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long) , representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____
SIGNATURE: _____ TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

OCT 11 2022

Form C-138
Revised 08/01/11

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MAPL Huerfano Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL L Section 21 Township 26 North Range 10 West; 36.471831, -107.908114

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 / bbls (circled: bbls) Known Volume (to be entered by the operator at the end of the haul) ________ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long [signature], representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long [signature], representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, ________________, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: ________ TITLE: ________ DATE: ________
SIGNATURE: ________ TELEPHONE NO.: ________
Surface Waste Management Facility Authorized Agent

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 12, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX (505) 327-1496

RE: Huerfano OrderNo.: 1911679

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/15/2019 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued December 03, 2019.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1911679**
Date Reported: **12/12/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Huerfano
Lab ID: 1911679-001 **Matrix:** AQUEOUS

Client Sample ID: Huerfano
Collection Date: 11/14/2019 10:22:00 AM
Received Date: 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	ND	0.020		mg/L	1	11/22/2019 10:36:46 AM	48955
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **rde**	
Arsenic	ND	5.0		mg/L	1	11/25/2019 4:00:30 PM	48826
Barium	ND	100		mg/L	1	11/25/2019 12:59:21 PM	48826
Cadmium	ND	1.0		mg/L	1	11/25/2019 12:59:21 PM	48826
Chromium	ND	5.0		mg/L	1	11/25/2019 12:59:21 PM	48826
Lead	ND	5.0		mg/L	1	11/25/2019 12:59:21 PM	48826
Selenium	ND	1.0		mg/L	1	11/25/2019 12:59:21 PM	48826
Silver	ND	5.0		mg/L	1	11/25/2019 12:59:21 PM	48826
EPA METHOD 8270C: PAHS						Analyst: **JDC**	
Naphthalene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
1-Methylnaphthalene	ND	10	D	µg/L	1	11/25/2019 4:36:18 PM	48934
2-Methylnaphthalene	ND	10	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Acenaphthylene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Acenaphthene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Fluorene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Phenanthrene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Anthracene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Fluoranthene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Pyrene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Benz(a)anthracene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Chrysene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Benzo(b)fluoranthene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Benzo(k)fluoranthene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Benzo(a)pyrene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Dibenz(a,h)anthracene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Benzo(g,h,i)perylene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Indeno(1,2,3-cd)pyrene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Surr: N-hexadecane	84.6	20.4-126	D	%Rec	1	11/25/2019 4:36:18 PM	48934
Surr: Benzo(e)pyrene	72.4	21.4-126	D	%Rec	1	11/25/2019 4:36:18 PM	48934
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	0.50		mg/L	200	11/15/2019 4:58:30 PM	R64562
Toluene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Ethylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1911679**
Date Reported: **12/12/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Huerfano
Lab ID: 1911679-001 **Matrix:** AQUEOUS

Client Sample ID: Huerfano
Collection Date: 11/14/2019 10:22:00 AM
Received Date: 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Naphthalene	ND	0.40		mg/L	200	11/15/2019 4:58:30 PM	R64562
1-Methylnaphthalene	ND	0.80		mg/L	200	11/15/2019 4:58:30 PM	R64562
2-Methylnaphthalene	ND	0.80		mg/L	200	11/15/2019 4:58:30 PM	R64562
Acetone	ND	2.0		mg/L	200	11/15/2019 4:58:30 PM	R64562
Bromobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Bromodichloromethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Bromoform	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Bromomethane	ND	0.60		mg/L	200	11/15/2019 4:58:30 PM	R64562
2-Butanone	ND	2.0		mg/L	200	11/15/2019 4:58:30 PM	R64562
Carbon disulfide	ND	2.0		mg/L	200	11/15/2019 4:58:30 PM	R64562
Carbon Tetrachloride	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Chlorobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Chloroethane	ND	0.40		mg/L	200	11/15/2019 4:58:30 PM	R64562
Chloroform	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Chloromethane	ND	0.60		mg/L	200	11/15/2019 4:58:30 PM	R64562
2-Chlorotoluene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
4-Chlorotoluene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
cis-1,2-DCE	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	11/15/2019 4:58:30 PM	R64562
Dibromochloromethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Dibromomethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2-Dichlorobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,3-Dichlorobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,4-Dichlorobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Dichlorodifluoromethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1-Dichloroethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1-Dichloroethene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2-Dichloropropane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,3-Dichloropropane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
2,2-Dichloropropane	ND	0.40		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1-Dichloropropene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Hexachlorobutadiene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
2-Hexanone	ND	2.0		mg/L	200	11/15/2019 4:58:30 PM	R64562
Isopropylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
4-Isopropyltoluene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
4-Methyl-2-pentanone	ND	2.0		mg/L	200	11/15/2019 4:58:30 PM	R64562
Methylene Chloride	ND	0.60		mg/L	200	11/15/2019 4:58:30 PM	R64562

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report

Hall Environmental Analysis Laboratory, Inc. Date Reported: 12/12/2019

[illegible] and Associates Client Sample ID: Huerfano

Project: Huerfano **Collection Date:** 11/14/2019 10:22:00 AM

Lab ID: 1911679-001 **Matrix:** AQUEOUS **Received Date:** 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
[illegible]-Butylbenzene	ND	0.60		mg/L	200	11/15/2019 4:58:30 PM	R64562
n-Propylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
sec-Butylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Styrene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
tert-Butylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	11/15/2019 4:58:30 PM	R64562
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
trans-1,2-DCE	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1,1-Trichloroethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1,2-Trichloroethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Trichloroethene (TCE)	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Trichlorofluoromethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2,3-Trichloropropane	ND	0.40		mg/L	200	11/15/2019 4:58:30 PM	R64562
Vinyl chloride	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Xylenes, Total	ND	0.30		mg/L	200	11/15/2019 4:58:30 PM	R64562
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	200	11/15/2019 4:58:30 PM	R64562
Surr: 4-Bromofluorobenzene	94.8	70-130		%Rec	200	11/15/2019 4:58:30 PM	R64562
Surr: Dibromofluoromethane	107	70-130		%Rec	200	11/15/2019 4:58:30 PM	R64562
Surr: Toluene-d8	107	70-130		%Rec	200	11/15/2019 4:58:30 PM	R64562

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1162234

Samples Received: 11/19/2019

Project Number:

Description:

4901 Hawkins NE

Daphne R Richards

Project Manager

Cp: Cover Page 1
Tc: Table of Contents 2
Ss: Sample Summary 3
Cn: Case Narrative 4
Sr: Sample Results 5
1911679-001D HUERFANO L1162234-01 5
Qc: Quality Control Summary 6
Wet Chemistry by Method 4500 CN E-2011 6
Wet Chemistry by Method 4500H+ B-2011 7
Wet Chemistry by Method 9034-9030B 8
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Gl: Glossary of Terms 10
Al: Accreditations & Locations 11
Sc: Sample Chain of Custody 12

1911679-001D HUERFANO L1162234-01 WW			Collected by	Collected date/time 11/14/19 10:22	Received date/time 11/19/19 08:45	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500H+ B-2011	WG1383247	1	11/19/19 19:45	11/19/19 19:45	MSF	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1384494	1	11/21/19 18:09	11/21/19 18:09	MJA	Mt. Juliet, TN

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution used in the analysis. All method and batch quality control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Report Revision History

Version 1: 11/29/19 09:06 AM

Project Narrative

All Reactive Sulfide results reported in the attached report were determined as totals using method 9034/9030B.

Wet Chemistry by Method 4500 CN E-2011

Analyte	mg/l		mg/l		date / time	
Reactive Cyanide	ND	J4	0.00500	1	11/24/2019 21:46	WG1386291

Wet Chemistry by Method 4500H+ B-2011

Corrosivity by pH	5.41	T8	1	11/19/2019 19:45	WG1383247	

L1162234-01 WG1383247: 5.41 at 18.3C

Wet Chemistry by Method 9034-9030B

	Result	Qualifier	RDL	Dilution	Analysis	Batch
						WG1384494

Wet Chemistry by Method D93/1010A

Analyte	deg F				date / time	
		Q				WG1393561

:hod Blank (MB)

1475€	1 11/2	20:2				
	ME	I	ualifie	IB MD	ME
	mg			ıg/l	mg
Cyani	U			.0018	0.(

;2058-02 Original Sample (OS) • Duplicate (DUP)

6205	2 11/	9 21:3	UP) F	672-:	1/19 2			
	Ori	esult	Result	ilutio	P RPD	DUP	er	'D
	mg							
Cyani	ND		194		00			

oratory Control Sample (LCS)

3475	2 11/	19 20				
	Spi	ount	esult	CS Re	Re	s	ualifi
	mg				%		
Cyani	0.1			16	85		J4

;2228-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

6222 1 11/2 21:4	;) R34	2-4 1	) 21:4	SD) F	672-5	1/19 2							
Spi	ount	ıal Re	1S Res	MS	ılt	ec.	1SD R	Dil	Rec.	alifier	D Qu	RPD	mits
mg			ıg/l	mg					%			%	
Cyani 0.1			.0897	0.(			13.7	1	75.0			4.36	

;2243-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

6224 1 11/2 21:4	;) R3	2-6	9 21:	ISD) I	672-	1/19 2							
Sp	ount	ıal Re	1S Res	MS	ılt	ec.	1SD R	Dil	Rec.	alifier	D Qu	RPD	mits
mg			ıg/l	mg					%			%	
Cyani 0.1			.0893	0.1			01	1	75.0			12.3	

;2185-01 Original Sample (OS) • Duplicate (DUP)

6218	11/19	19:45	P) R3	30-10	19 19				
		Ori	esult	Result	ilutior	P RPD	DUP	er	D
		su							
ity by		8.7				00		1	

Narrat
.75 at 1
8.75 a 3C

;2234-01 Original Sample (OS) • Duplicate (DUP)

6223	1 11/1	19:45	JP) R3	30-16	/19 19				
		Ori	esult	Result	ilutior	P RPD	DUP	er	D
		su							
ity by		5.4				00		1	

Narrat
.41 at 1
5.4 a IC

;2243-01 Original Sample (OS) • Duplicate (DUP)

6224	1 11/1	19:45	JP) R3	30-17	19 19				
		Ori	esult	Result	ilutior	P RPD	DUP	er	D
		su							
ity by		6.7				91		1	

Narrat
.75 at 1
6.79 a 3C

oratory Control Sample (LCS)

3473	-1 11/1	19:4						
	Spi	ount	esult	CS Re	Re	s	Qualifi	
	su			%	%			
ity by	10.			9.2	99			

Narrat
3.92 a C

hod Blank (MB)

34747. 1 11/21 17:59

	MB lt	Qualifier	MB MDL	MB
	mg/		mg/l	mg/
Sulfide	U		0.00650	0.0

oratory Control Sample (LCS)

34747 -2 11/ 9 17:59

	Spl ount	Result	LCS Rec	Rec ts	Qualifier
	mg/		%	%	
Sulfide	0.5	2	106	85.	

Qc GI Al Sc

ACCOU PROJ SDG TIME P

7589-01 Original Sample (OS) • Duplicate (DUP)

1167589-01 12/10/19 17:31 • (DUP) R34 997-2 1 0/19 17:3

	Orig	Result	P Result	Dilution	DUP RPD	DUP Qualifier	DL RPD Limits
	deg		F				%
oint	74.4		4	1	000		10

oratory Control Sample (LCS)

R34809 7-1 12/ 19 17:31

	Spik mount	S Result	LCS Rec.	Rec. nits	S Qualifier
	deg	F	%	%	
oint	82.0	4	103	97.0 3	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J4	The associated batch QC was outside the established quality control range for accuracy.
Q	Sample was prepared and/or analyzed past holding time as defined in the method. Concentrations should be considered minimum values.
T8	Sample(s) received past/too close to holding time expiration.

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Guam	232	North Dakota	R-235
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	404	Pennsylvania	68-01302
Kansas	E-10277	Rhode Island	LA000356
Kentucky [1,6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee	2008
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	Soil Permit
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

SUB CONTRATOR:	ESC PACE	COMPANY: ESC PACE	PHONE: (800) 767-5859	FAX:	(615) 758-5859
ADDRESS:	12065 Lebanon Rd		ACCOUNT #:	EMAIL:	
CITY, STATE, ZIP:	Mt. Juliet, TN 37122				

1202

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	1911679-001D	Huerfano	500HDPE	Aqueous	11/14/2019 10:22:00 AM	3	Reactivity, Corrosivity and Ignitability ** 7 Day TAT ** 116223.01

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date: 11/15/2019	Time: 8:38 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By: N Taylor	Date: 11/15/19	Time: 845

TAT: Standard ☐ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY Cool

Temp of samples 2.3-1.3=2.2 °C Attempt to Cool

RAD SCREEN: <0.5 mR/hr

Comments:

Tracking # 4510 1669 1984

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: Hallen Am — 1162234

Cooler Received/Opened On: 11/ 19 /19 Temperature: 2.2

Received By: Willie Taylor 845

Signature:

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		[illegible]	✓
Sufficient volume sent?			
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

Matt Shacklock

Pace Analytical®
National Center for Testing & Innovation

Login #: L1162234	Client:HALLENVANM	Date:11/19/19	Evaluated by:Matt S

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
x	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	pH not in range.		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Cou
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Received FLASH in HDPE

Client informed by:		Call		Email		Voice Mail		Date: 11/19	Time:1201
TSR Initials: DR	Client Contact:								

Login Instructions:

Qualify and proceed with analysis

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

12-Dec-19

Client: Souder, Miller and Associates

Project: Huerfano

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R64562	RunNo: 64562
Prep Date:	Analysis Date: 11/15/2019	SeqNo: 2210714 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.4	70	130			
Toluene	19	1.0	20.00	0	97.2	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	82.7	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	81.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.9	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Sample ID: rb1	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R64562	RunNo: 64562
Prep Date:	Analysis Date: 11/15/2019	SeqNo: 2210733 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quantitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

12-Dec-19

Client: Souder, Miller and Associates

Project: Huerfano

Sample ID: rb1	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R64562	RunNo: 64562
Prep Date:	Analysis Date: 11/15/2019	SeqNo: 2210733 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

12-Dec-19

Client: Souder, Miller and Associates

Project: Huerfano

Sample ID: **rb1**	SampType: **MBLK**	TestCode: **EPA Method 8260B: VOLATILES**
Client ID: **PBW**	Batch ID: **R64562**	RunNo: **64562**
Prep Date:	Analysis Date: **11/15/2019**	SeqNo: **2210733** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.8	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.9	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quantitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

12-Dec-19

Client: Souder, Miller and Associates

Project: Huerfano

Sample ID: mb-48934	SampType: MBLK	TestCode: EPA Method 8270C: PAHs				
Client ID: PBW	Batch ID: 48934	RunNo: 64751				
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219189	Units: µg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	1.0								
2-Methylnaphthalene	ND	1.0								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	61		87.60		69.2	20.4	126			
Surr: Benzo(e)pyrene	13		20.00		64.5	21.4	126			

Sample ID: lcs-48934	SampType: LCS	TestCode: EPA Method 8270C: PAHs				
Client ID: LCSW	Batch ID: 48934	RunNo: 64751				
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219191	Units: µg/L			

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	73.8	41.8	97.8			
1-Methylnaphthalene	14	1.0	20.00	0	68.3	44.7	104			
2-Methylnaphthalene	14	1.0	20.00	0	72.4	45	101			
Acenaphthylene	15	0.50	20.00	0	72.8	51.2	102			
Acenaphthene	14	0.50	20.00	0	71.8	53.2	101			
Fluorene	15	0.50	20.00	0	75.1	57.6	106			
Phenanthrene	15	0.50	20.00	0	75.6	57.6	109			
Anthracene	15	0.50	20.00	0	73.2	56.1	98.9			
Fluoranthene	16	0.50	20.00	0	81.9	61.4	114			
Pyrene	16	0.50	20.00	0	78.7	58	110			
Benz(a)anthracene	15	0.50	20.00	0	76.6	60	102			
Chrysene	14	0.50	20.00	0	70.9	50.8	93.4			
Benzo(b)fluoranthene	15	0.50	20.00	0	74.0	56.2	118			

Qualifiers:

*	Value exceeds Maximum Contaminant Level
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quantitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

12-Dec-19

Client: Souder, Miller and Associates

Project: Huerfano

Sample ID: lcs-48934	SampType: LCS	TestCode: EPA Method 8270C: PAHs
Client ID: LCSW	Batch ID: 48934	RunNo: 64751
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219191 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	15	0.50	20.00	0	75.7	57.7	119			
Benzo(a)pyrene	15	0.50	20.00	0	75.0	55.5	114			
Dibenz(a,h)anthracene	15	0.50	20.00	0	75.5	53	110			
Benzo(g,h,i)perylene	15	0.50	20.00	0	74.8	55	113			
Indeno(1,2,3-cd)pyrene	15	0.50	20.00	0	75.5	51.2	115			
Surr: N-hexadecane	67		87.60		76.4	20.4	126			
Surr: Benzo(e)pyrene	14		20.00		68.3	21.4	126			

Sample ID: lcsd-48934	SampType: LCSD	TestCode: EPA Method 8270C: PAHs
Client ID: LCSS02	Batch ID: 48934	RunNo: 64751
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219192 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	74.2	41.8	97.8	0.541	25.4	
1-Methylnaphthalene	15	1.0	20.00	0	73.8	44.7	104	7.74	21.5	
2-Methylnaphthalene	15	1.0	20.00	0	76.0	45	101	4.85	25.2	
Acenaphthylene	17	0.50	20.00	0	83.4	51.2	102	13.6	30.3	
Acenaphthene	16	0.50	20.00	0	81.6	53.2	101	12.8	28.1	
Fluorene	17	0.50	20.00	0	83.5	57.6	106	10.6	33	
Phenanthrene	15	0.50	20.00	0	74.8	57.6	109	1.06	24.5	
Anthracene	15	0.50	20.00	0	76.6	56.1	98.9	4.54	26.9	
Fluoranthene	17	0.50	20.00	0	83.2	61.4	114	1.57	21.8	
Pyrene	15	0.50	20.00	0	77.1	58	110	2.05	27	
Benz(a)anthracene	14	0.50	20.00	0	72.5	60	102	5.50	27.4	
Chrysene	14	0.50	20.00	0	68.6	50.8	93.4	3.30	20.4	
Benzo(b)fluoranthene	15	0.50	20.00	0	77.4	56.2	118	4.49	22.5	
Benzo(k)fluoranthene	17	0.50	20.00	0	83.3	57.7	119	9.56	24.1	
Benzo(a)pyrene	16	0.50	20.00	0	78.3	55.5	114	4.31	27.3	
Dibenz(a,h)anthracene	16	0.50	20.00	0	78.5	53	110	3.90	18.5	
Benzo(g,h,i)perylene	16	0.50	20.00	0	79.4	55	113	5.97	28.4	
Indeno(1,2,3-cd)pyrene	16	0.50	20.00	0	81.5	51.2	115	7.64	21.8	
Surr: N-hexadecane	70		87.60		79.8	20.4	126	0	0	
Surr: Benzo(e)pyrene	14		20.00		71.8	21.4	126	0	0	

Qualifiers:

- * Value exceeds Maximum Contaminant Level
- B Analyte detected in the associated Method Blank
- D Sample Diluted Due to Matrix
- E Value above quantitation range
- H Holding times for preparation or analysis exceeded
- J Analyte detected below quantitation limits
- ND Not Detected at the Reporting Limit
- P Sample pH Not In Range
- PQL Practical Quantitative Limit
- RL Reporting Limit
- S % Recovery outside of range due to dilution or matrix

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

12-Dec-19

Client: Souder, Miller and Associates

Project: Huerfano

Sample ID: MB-48955	SampType: MBLK	TestCode: EPA Method 7470: Mercury
Client ID: PBW	Batch ID: 48955	RunNo: 64701
Prep Date: 11/21/2019	Analysis Date: 11/22/2019	SeqNo: 2217075 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: LCS-48955	SampType: LCS	TestCode: EPA Method 7470: Mercury
Client ID: LCSW	Batch ID: 48955	RunNo: 64701
Prep Date: 11/21/2019	Analysis Date: 11/22/2019	SeqNo: 2217080 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.7	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679
12-Dec-19

Client: Souder, Miller and Associates
Project: Huerfano

Sample ID: MB-48826	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219763 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID: LCS-48826	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219768 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.020	0.5000	0	94.6	80	120			
Cadmium	0.49	0.0020	0.5000	0	97.1	80	120			
Chromium	0.47	0.0060	0.5000	0	95.0	80	120			
Lead	0.50	0.0050	0.5000	0	100	80	120			
Selenium	0.54	0.050	0.5000	0	107	80	120			
Silver	0.095	0.0050	0.1000	0	95.0	80	120			

Sample ID: MB-48826	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219851 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								

Sample ID: LCS-48826	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219853 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.7	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM | Work Order Number: 1911679 | RcptNo: 1

Received By: Juan Rojas 11/15/2019 8:00:00 AM

Completed By: Desiree Dominguez 11/15/2019 8:37:26 AM DD

Reviewed By: ENM 11/15/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 1 1 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? no
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: DM 11/15/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	Yes			

Chain-of-Custody Record

ent: SMA

iling Address: 401 W Broadway
irmington NM 87401
one #: 505 325 7535
ail or Fax#: ashley.maxwell
/QC Package:
Standard ☐ Level 4 (Full Validation)
creditation: ☐ Az Compliance
NELAC ☐ Other
EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush
Project Name: Huerfano
Project #:
Project Manager: Ashley Maxwell
Sampler: RW
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 0.8-0.2=0.6

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

e	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1911679	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11/19	10:22	Aques	Huerfano	VanCMS	VanCMS	-001					X	X		X		X

:	Time:	Relinquished by:	Received by:	Via:	Date	Time
19	1620		Christine Walters		11/14/19	1630
:	Time:	Relinquished by:	Received by:	Via:	Date	Time
19	1753	Christine Walters		carrier	11/15/19	8:00

Remarks: 8260 Full List
TCLP Compound at TCLP Limit
Invoice Enterprise

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Good till 12/3/2020

1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL Huerfano Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL L Section 21 Township 26 North Range 10 West; 36.471831, -107.908114

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long Thomas Long, representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long Thomas Long, representative for Enterprise Products Operating authorize to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

6. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____
SIGNATURE: _____ TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 03, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-5667
FAX: (505) 327-1496

RE: Huerfano OrderNo.: 1911679

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/15/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1911679**
Date Reported: **12/3/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: Huerfano
Project: Huerfano
Collection Date: 11/14/2019 10:22:00 AM
Lab ID: 1911679-001 **Matrix:** AQUEOUS **Received Date:** 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	ND	0.020		mg/L	1	11/22/2019 10:36:46 AM	48955
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **rde**	
Arsenic	ND	5.0		mg/L	1	11/25/2019 4:00:30 PM	48826
Barium	ND	100		mg/L	1	11/25/2019 12:59:21 PM	48826
Cadmium	ND	1.0		mg/L	1	11/25/2019 12:59:21 PM	48826
Chromium	ND	5.0		mg/L	1	11/25/2019 12:59:21 PM	48826
Lead	ND	5.0		mg/L	1	11/25/2019 12:59:21 PM	48826
Selenium	ND	1.0		mg/L	1	11/25/2019 12:59:21 PM	48826
Silver	ND	5.0		mg/L	1	11/25/2019 12:59:21 PM	48826
EPA METHOD 8270C: PAHS						Analyst: **JDC**	
Naphthalene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
1-Methylnaphthalene	ND	10	D	µg/L	1	11/25/2019 4:36:18 PM	48934
2-Methylnaphthalene	ND	10	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Acenaphthylene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Acenaphthene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Fluorene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Phenanthrene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Anthracene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Fluoranthene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Pyrene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Benz(a)anthracene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Chrysene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Benzo(b)fluoranthene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Benzo(k)fluoranthene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Benzo(a)pyrene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Dibenz(a,h)anthracene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Benzo(g,h,i)perylene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Indeno(1,2,3-cd)pyrene	ND	5.0	D	µg/L	1	11/25/2019 4:36:18 PM	48934
Surr: N-hexadecane	84.6	20.4-126	D	%Rec	1	11/25/2019 4:36:18 PM	48934
Surr: Benzo(e)pyrene	72.4	21.4-126	D	%Rec	1	11/25/2019 4:36:18 PM	48934
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
Benzene	ND	0.50		mg/L	200	11/15/2019 4:58:30 PM	R64562
Toluene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Ethylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quantitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **1911679**
Date Reported: **12/3/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Huerfano
Lab ID: 1911679-001 **Matrix:** AQUEOUS

Client Sample ID: Huerfano
Collection Date: 11/14/2019 10:22:00 AM
Received Date: 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Naphthalene	ND	0.40		mg/L	200	11/15/2019 4:58:30 PM	R64562
1-Methylnaphthalene	ND	0.80		mg/L	200	11/15/2019 4:58:30 PM	R64562
2-Methylnaphthalene	ND	0.80		mg/L	200	11/15/2019 4:58:30 PM	R64562
Acetone	ND	2.0		mg/L	200	11/15/2019 4:58:30 PM	R64562
Bromobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Bromodichloromethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Bromoform	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Bromomethane	ND	0.60		mg/L	200	11/15/2019 4:58:30 PM	R64562
2-Butanone	ND	2.0		mg/L	200	11/15/2019 4:58:30 PM	R64562
Carbon disulfide	ND	2.0		mg/L	200	11/15/2019 4:58:30 PM	R64562
Carbon Tetrachloride	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Chlorobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Chloroethane	ND	0.40		mg/L	200	11/15/2019 4:58:30 PM	R64562
Chloroform	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Chloromethane	ND	0.60		mg/L	200	11/15/2019 4:58:30 PM	R64562
2-Chlorotoluene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
4-Chlorotoluene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
cis-1,2-DCE	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	11/15/2019 4:58:30 PM	R64562
Dibromochloromethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Dibromomethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2-Dichlorobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,3-Dichlorobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,4-Dichlorobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Dichlorodifluoromethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1-Dichloroethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1-Dichloroethene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2-Dichloropropane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,3-Dichloropropane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
2,2-Dichloropropane	ND	0.40		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1-Dichloropropene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Hexachlorobutadiene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
2-Hexanone	ND	2.0		mg/L	200	11/15/2019 4:58:30 PM	R64562
Isopropylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
4-Isopropyltoluene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
4-Methyl-2-pentanone	ND	2.0		mg/L	200	11/15/2019 4:58:30 PM	R64562
Methylene Chloride	ND	0.60		mg/L	200	11/15/2019 4:58:30 PM	R64562

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1911679**
Date Reported: **12/3/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Client Sample ID: Huerfano
Project: Huerfano
Collection Date: 11/14/2019 10:22:00 AM
Lab ID: 1911679-001 **Matrix:** AQUEOUS **Received Date:** 11/15/2019 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **JMR**	
n-Butylbenzene	ND	0.60		mg/L	200	11/15/2019 4:58:30 PM	R64562
n-Propylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
sec-Butylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Styrene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
tert-Butylbenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	11/15/2019 4:58:30 PM	R64562
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
trans-1,2-DCE	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1,1-Trichloroethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,1,2-Trichloroethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Trichloroethene (TCE)	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Trichlorofluoromethane	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
1,2,3-Trichloropropane	ND	0.40		mg/L	200	11/15/2019 4:58:30 PM	R64562
Vinyl chloride	ND	0.20		mg/L	200	11/15/2019 4:58:30 PM	R64562
Xylenes, Total	ND	0.30		mg/L	200	11/15/2019 4:58:30 PM	R64562
Surr: 1,2-Dichloroethane-d4	100	70-130		%Rec	200	11/15/2019 4:58:30 PM	R64562
Surr: 4-Bromofluorobenzene	94.8	70-130		%Rec	200	11/15/2019 4:58:30 PM	R64562
Surr: Dibromofluoromethane	107	70-130		%Rec	200	11/15/2019 4:58:30 PM	R64562
Surr: Toluene-d8	107	70-130		%Rec	200	11/15/2019 4:58:30 PM	R64562

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

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National Center for Testing & Innovation

ANALYTICAL REPORT

November 29, 2019

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1162234

Samples Received: 11/19/2019

Project Number:

Description:

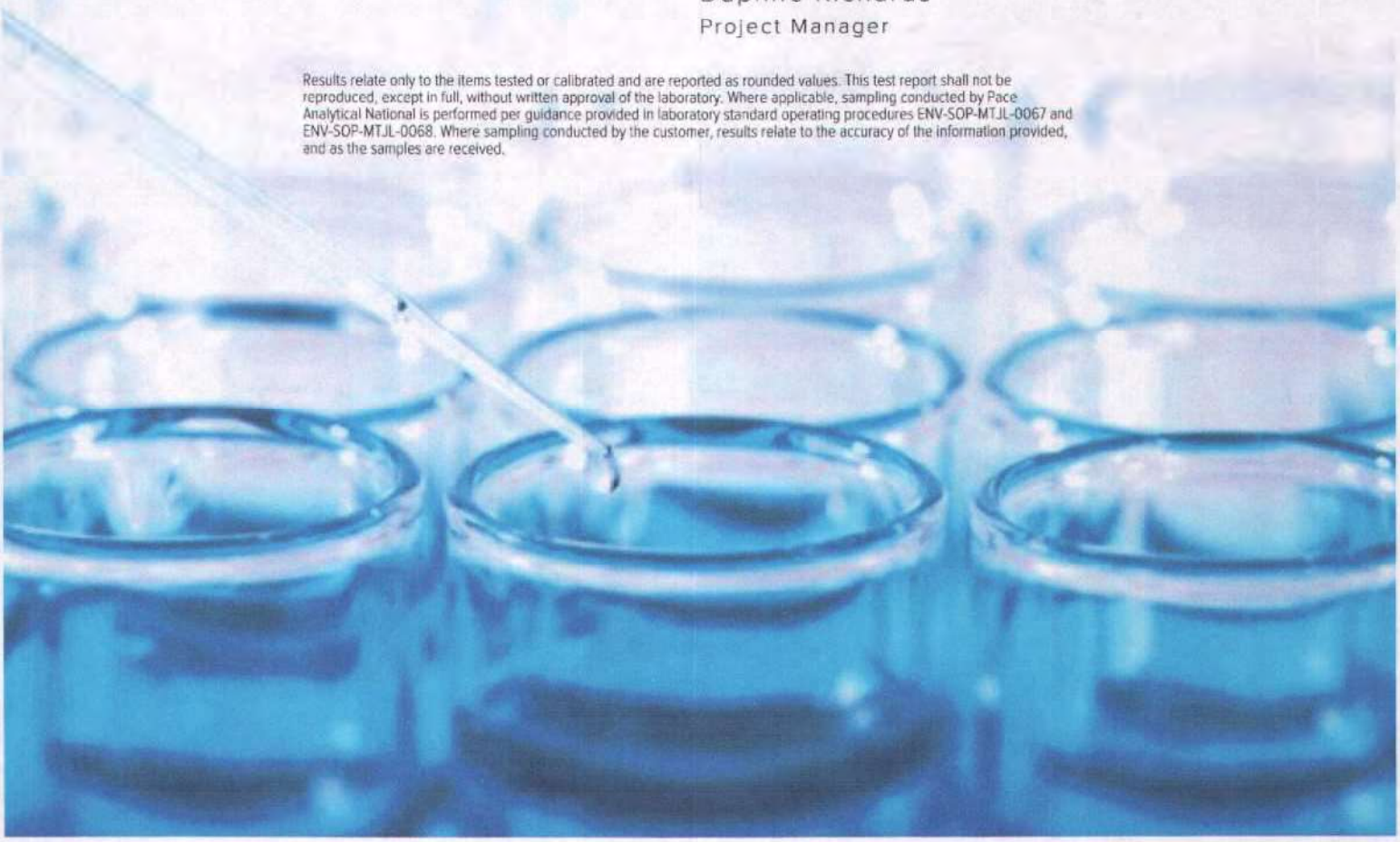
Report To:

4901 Hawkins NE

Albuquerque, NM 87109

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager



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SAMPLE SUMMARY

1911679-001D HUERFANO L1162234-01 WW

			Collected by	Collected date/time	Received date/time
				11/14/19 10:22	11/19/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 CN E-2011	WG1386291	1	11/24/19 11:16	11/24/19 21:46	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500H+ B-2011	WG1383247	1	11/19/19 19:45	11/19/19 19:45	MSP	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1384494	1	11/21/19 18:09	11/21/19 18:09	MJA	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1387079	1	11/26/19 17:15	11/26/19 17:15	MJA	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Project Narrative

All Reactive Cyanide results reported in the attached report were determined as totals using method 9012B.

All Reactive Sulfide results reported in the attached report were determined as totals using method 9034/9030B.

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND	J4	0.00500	1	11/24/2019 21:46	WG1386291

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	5.41	T8	1	11/19/2019 19:45	WG1383247

Sample Narrative:
L1162234-01 WG1383247: 5.41 at 18.3C

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	0.125		0.0500	1	11/21/2019 18:09	WG1384494

Wet Chemistry by Method D93/1010A

Analyte	Result deg F	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	131		1	11/26/2019 17:15	WG1387079

:hod Blank (MB)

R3475672-1 11/24/19 20:21

	MB Result	MB Qualifier	MB MDL	MB RDL
te	mg/l		mg/l	mg/l
ive Cyanide	U		0.00180	0.00500

;2058-02 Original Sample (OS) • Duplicate (DUP)

L1162058-02 11/24/19 21:35 • (DUP) R3475672-3 11/24/19 21:36

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	mg/l	mg/l		%		%
ive Cyanide	ND	0.00394	1	0.000		20

oratory Control Sample (LCS)

R3475672-2 11/24/19 20:23

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
te	mg/l	mg/l	%	%	
ive Cyanide	0.100	0.116	116	85.0-115	J4

;2228-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

L1162228-01 11/24/19 21:41 • (MS) R3475672-4 11/24/19 21:44 • (MSD) R3475672-5 11/24/19 21:45

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
te	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
ive Cyanide	0.100	ND	0.0897	0.0937	89.7	93.7	1	75.0-125			4.36	20

;2243-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

L1162243-01 11/24/19 21:47 • (MS) R3475672-6 11/24/19 21:48 • (MSD) R3475672-7 11/24/19 21:50

	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
te	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
ive Cyanide	0.100	ND	0.0893	0.101	89.3	101	1	75.0-125			12.3	20

;2185-01 Original Sample (OS) • Duplicate (DUP)

L1162185-01 11/19/19 19:45 • (DUP) R3473880-10 11/19/19 19:45

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	su	su		%		%
sivity by pH	8.75	8.75	1	0.000		1

le Narrative:
: 8.75 at 18.8C
P: 8.75 at 18.8C

;2234-01 Original Sample (OS) • Duplicate (DUP)

L1162234-01 11/19/19 19:45 • (DUP) R3473880-16 11/19/19 19:45

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	su	su		%		%
sivity by pH	5.41	5.41	1	0.000		1

le Narrative:
: 5.41 at 18.3C
P: 5.41 at 18.4C

;2243-01 Original Sample (OS) • Duplicate (DUP)

L1162243-01 11/19/19 19:45 • (DUP) R3473880-17 11/19/19 19:45

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	su	su		%		%
sivity by pH	6.75	6.79	1	0.591		1

le Narrative:
: 6.75 at 18.5C
P: 6.79 at 18.8C

oratory Control Sample (LCS)

R3473880-1 11/19/19 19:45

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
te	su	su	%	%	
sivity by pH	10.0	9.92	99.2	99.0-101	

le Narrative:
S: 9.92 at 19.1C

:hod Blank (MB)

R3474776-1 11/21/19 17:59

	MB Result	MB Qualifier	MB MDL	MB RDL
te	mg/l		mg/l	mg/l
ive Sulfide	U		0.00650	0.0500

oratory Control Sample (LCS)

R3474776-2 11/21/19 17:59

	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
te	mg/l	mg/l	%	%	
ive Sulfide	0.500	0.532	106	85.0-115	

2185-01 Original Sample (OS) • Duplicate (DUP)

L1162185-01 11/26/19 17:15 • (DUP) R3476638-2 11/26/19 17:15

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	deg F	deg F		%		%
oint	131	125	1	4.69		10

2234-01 Original Sample (OS) • Duplicate (DUP)

L1162234-01 11/26/19 17:15 • (DUP) R3476638-3 11/26/19 17:15

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	deg F	deg F		%		%
oint	131	136	1	3.75		10

2243-01 Original Sample (OS) • Duplicate (DUP)

L1162243-01 11/26/19 17:15 • (DUP) R3476638-4 11/26/19 17:15

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	deg F	deg F		%		%
oint	131	135	1	3.01		10

2558-01 Original Sample (OS) • Duplicate (DUP)

L1162558-01 11/26/19 17:15 • (DUP) R3476638-5 11/26/19 17:15

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	deg F	deg F		%		%
oint	116	127	1	9.06		10

4862-01 Original Sample (OS) • Duplicate (DUP)

L1164862-01 11/26/19 17:15 • (DUP) R3476638-6 11/26/19 17:15

	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
te	deg F	deg F		%		%
oint	123	124	1	0.810		10

Chemistry by Method D93/1010A

oratory Control Sample (LCS)

R3476638-1 11/26/19 17:15

te	Spike Amount deg F	LCS Result deg F	LCS Rec. %	Rec. Limits %	LCS Qualifier
oint	82.0	83.0	101	96.0-104	

Guide to Reading and Understanding Your Laboratory Report

The information below is designed to better explain the various terms used in your report of analytical results from the Laboratory. This is not intended as a comprehensive explanation, and if you have additional questions please contact your project representative.

Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. Results relate to the accuracy of this information provided, and as the samples are received.

Abbreviations and Definitions

MDL	Method Detection Limit.
ND	Not detected at the Reporting Limit (or MDL where applicable).
RDL	Reported Detection Limit.
Rec.	Recovery.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
U	Not detected at the Reporting Limit (or MDL where applicable).
Analyte	The name of the particular compound or analysis performed. Some Analyses and Methods will have multiple analytes reported.
Dilution	If the sample matrix contains an interfering material, the sample preparation volume or weight values differ from the standard, or if concentrations of analytes in the sample are higher than the highest limit of concentration that the laboratory can accurately report, the sample may be diluted for analysis. If a value different than 1 is used in this field, the result reported has already been corrected for this factor.
Limits	These are the target % recovery ranges or % difference value that the laboratory has historically determined as normal for the method and analyte being reported. Successful QC Sample analysis will target all analytes recovered or duplicated within these ranges.
Original Sample	The non-spiked sample in the prep batch used to determine the Relative Percent Difference (RPD) from a quality control sample. The Original Sample may not be included within the reported SDG.
Qualifier	This column provides a letter and/or number designation that corresponds to additional information concerning the result reported. If a Qualifier is present, a definition per Qualifier is provided within the Glossary and Definitions page and potentially a discussion of possible implications of the Qualifier in the Case Narrative if applicable.
Result	The actual analytical final result (corrected for any sample specific characteristics) reported for your sample. If there was no measurable result returned for a specific analyte, the result in this column may state "ND" (Not Detected) or "BDL" (Below Detectable Levels). The information in the results column should always be accompanied by either an MDL (Method Detection Limit) or RDL (Reporting Detection Limit) that defines the lowest value that the laboratory could detect or report for this analyte.
Uncertainty (Radiochemistry)	Confidence level of 2 sigma.
Case Narrative (Cn)	A brief discussion about the included sample results, including a discussion of any non-conformances to protocol observed either at sample receipt by the laboratory from the field or during the analytical process. If present, there will be a section in the Case Narrative to discuss the meaning of any data qualifiers used in the report.
Quality Control Summary (Qc)	This section of the report includes the results of the laboratory quality control analyses required by procedure or analytical methods to assist in evaluating the validity of the results reported for your samples. These analyses are not being performed on your samples typically, but on laboratory generated material.
Sample Chain of Custody (Sc)	This is the document created in the field when your samples were initially collected. This is used to verify the time and date of collection, the person collecting the samples, and the analyses that the laboratory is requested to perform. This chain of custody also documents all persons (excluding commercial shippers) that have had control or possession of the samples from the time of collection until delivery to the laboratory for analysis.
Sample Results (Sr)	This section of your report will provide the results of all testing performed on your samples. These results are provided by sample ID and are separated by the analyses performed on each sample. The header line of each analysis section for each sample will provide the name and method number for the analysis reported.
Sample Summary (Ss)	This section of the Analytical Report defines the specific analyses performed for each sample ID, including the dates and times of preparation and/or analysis.

Qualifier	Description
J4	The associated batch QC was outside the established quality control range for accuracy.
T8	Sample(s) received past/too close to holding time expiration.

ACCREDITATIONS & LOCATIONS

Pace National is the only environmental laboratory accredited/certified to support your work nationwide from one location. One phone call, one point of contact, one laboratory. No other lab is as accessible or prepared to handle your needs throughout the country. Our capacity and capability from our single location laboratory is comparable to the collective totals of the network laboratories in our industry. The most significant benefit to our one location design is the design of our laboratory campus. The model is conducive to accelerated productivity, decreasing turn-around time, and preventing cross contamination, thus protecting sample integrity. Our focus on premium quality and prompt service allows us to be YOUR LAB OF CHOICE.

* Not all certifications held by the laboratory are applicable to the results reported in the attached report.
* Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace National.

State Accreditations

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN-03-2002-34
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	n/a
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [2]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky [1 6]	90010	South Carolina	84004
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana [1]	LA180010	Texas	T104704245-18-15
Maine	TN0002	Texas [5]	LAB0152
Maryland	324	Utah	TN00003
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	460132
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	9980939910
Montana	CERT0086	Wyoming	A2LA

Third Party Federal Accreditations

A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

[1] Drinking Water [2] Underground Storage Tanks [3] Aquatic Toxicity [4] Chemical/Microbiological [5] Mold [6] Wastewater n/a Accreditation not applicable

Our Locations

Pace National has sixty-four client support centers that provide sample pickup and/or the delivery of sampling supplies. If you would like assistance from one of our support offices, please contact our main office. Pace National performs all testing at our central laboratory.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975
FAX: 505-345-4107
Website: www.hallenvironmental.com

CHAIN OF CUSTODY RECORD

SUB CONTRATOR:	ESC PACE	COMPANY:	ESC PACE	PHONE:	(800) 767-5859	FAX:	(615) 758-5859
ADDRESS:	12065 Lebanon Rd			ACCOUNT #:		EMAIL:	
CITY, STATE, ZIP:	Mt. Juliet, TN 37122						

1202

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	1911679-001D	Huerfano	500HDPE	Aqueous	11/14/2019 10:22:00 AM	3	Reactivity, Corrosivity and Ignitability ** 7 Day TAT ** 1162234-01

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By:	Date:	Time:	Received By:	Date:	Time:
[signature]	11/15/2019	8:38 AM			
			N Taylor	11/19/19	845

TAT: Standard ☐ RUSH (circled) Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:
☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY Cool
Temp of samples 2.3-1=2.2 °C Attempt to Cool?
RAD SCREEN: <0.5 mR/hr
Comments:

Tracking # 4510 1669 1984

Pace Analytical National Center for Testing & Innovation
Cooler Receipt Form

Client: Halliburton	1162234	
Cooler Received/Opened On: 11/19/19 Temperature: 2.2		
Received By: Willie Taylor 845		
Signature:		

Receipt Check List	NP	Yes	No
COC Seal Present / Intact?		✓	
COC Signed / Accurate?		✓	
Bottles arrive intact?		✓	
Correct bottles used?		✓	✓
Sufficient volume sent?			
If Applicable			
VOA Zero headspace?			
Preservation Correct / Checked?		✓	

Matt Shacklock

Pace Analytical®
National Center for Testing & Innovation

Login #: L1162234	Client:HALLENVANM	Date:11/19/19	Evaluated by:Matt S

Non-Conformance (check applicable items)

	Sample Integrity		Chain of Custody Clarification		
	Parameter(s) past holding time		Login Clarification Needed		**If Broken Container:**
	Temperature not in range		Chain of custody is incomplete		Insufficient packing material around container
x	Improper container type		Please specify Metals requested.		Insufficient packing material inside cooler
	pH not in range.		Please specify TCLP requested.		Improper handling by carrier (FedEx / UPS / Cou
	Insufficient sample volume.		Received additional samples not listed on coc.		Sample was frozen
	Sample is biphasic.		Sample ids on containers do not match ids on coc		Container lid not intact
	Vials received with headspace.		Trip Blank not received.		**If no Chain of Custody:**
	Broken container		Client did not "X" analysis.		Received by:
	Broken container:		Chain of Custody is missing		Date/Time:
	Sufficient sample remains				Temp./Cont. Rec./pH:
					Carrier:
					Tracking#

Login Comments: Received FLASH in HDPE

Client informed by:		Call		Email		Voice Mail		Date: 11/19	Time:1201
TSR Initials: DR	Client Contact:								

Login Instructions:

Qualify and proceed with analysis

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

03-Dec-19

Client: Souder, Miller and Associates

Project: Huerfano

Sample ID: 100ng lcs	SampType: LCS	TestCode: EPA Method 8260B: VOLATILES
Client ID: LCSW	Batch ID: R64562	RunNo: 64562
Prep Date:	Analysis Date: 11/15/2019	SeqNo: 2210714 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.4	70	130			
Toluene	19	1.0	20.00	0	97.2	70	130			
Chlorobenzene	20	1.0	20.00	0	102	70	130			
1,1-Dichloroethene	17	1.0	20.00	0	82.7	70	130			
Trichloroethene (TCE)	16	1.0	20.00	0	81.7	70	130			
Surr: 1,2-Dichloroethane-d4	9.8		10.00		97.9	70	130			
Surr: 4-Bromofluorobenzene	9.2		10.00		92.0	70	130			
Surr: Dibromofluoromethane	11		10.00		105	70	130			
Surr: Toluene-d8	11		10.00		105	70	130			

Sample ID: rb1	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R64562	RunNo: 64562
Prep Date:	Analysis Date: 11/15/2019	SeqNo: 2210733 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quantitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

03-Dec-19

Client: Souder, Miller and Associates

Project: Huerfano

Sample ID: rb1	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES
Client ID: PBW	Batch ID: R64562	RunNo: 64562
Prep Date:	Analysis Date: 11/15/2019	SeqNo: 2210733 Units: µg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quantative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

03-Dec-19

Client: Souder, Miller and Associates

Project: Huerfano

Sample ID: rb1	SampType: MBLK	TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW	Batch ID: R64562	RunNo: 64562						
Prep Date:	Analysis Date: 11/15/2019	SeqNo: 2210733	Units: µg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.9		10.00		98.8	70	130			
Surr: 4-Bromofluorobenzene	9.3		10.00		92.9	70	130			
Surr: Dibromofluoromethane	11		10.00		107	70	130			
Surr: Toluene-d8	11		10.00		109	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

03-Dec-19

Client: Souder, Miller and Associates

Project: Huerfano

Sample ID: mb-48934	SampType: MBLK	TestCode: EPA Method 8270C: PAHs							
Client ID: PBW	Batch ID: 48934	RunNo: 64751							
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219189	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.50								
1-Methylnaphthalene	ND	1.0								
2-Methylnaphthalene	ND	1.0								
Acenaphthylene	ND	0.50								
Acenaphthene	ND	0.50								
Fluorene	ND	0.50								
Phenanthrene	ND	0.50								
Anthracene	ND	0.50								
Fluoranthene	ND	0.50								
Pyrene	ND	0.50								
Benz(a)anthracene	ND	0.50								
Chrysene	ND	0.50								
Benzo(b)fluoranthene	ND	0.50								
Benzo(k)fluoranthene	ND	0.50								
Benzo(a)pyrene	ND	0.50								
Dibenz(a,h)anthracene	ND	0.50								
Benzo(g,h,i)perylene	ND	0.50								
Indeno(1,2,3-cd)pyrene	ND	0.50								
Surr: N-hexadecane	61		87.60		69.2	20.4	126			
Surr: Benzo(e)pyrene	13		20.00		64.5	21.4	126			

Sample ID: lcs-48934	SampType: LCS	TestCode: EPA Method 8270C: PAHs							
Client ID: LCSW	Batch ID: 48934	RunNo: 64751							
Prep Date: 11/21/2019	Analysis Date: 11/25/2019	SeqNo: 2219191	Units: µg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	73.8	41.8	97.8			
1-Methylnaphthalene	14	1.0	20.00	0	68.3	44.7	104			
2-Methylnaphthalene	14	1.0	20.00	0	72.4	45	101			
Acenaphthylene	15	0.50	20.00	0	72.8	51.2	102			
Acenaphthene	14	0.50	20.00	0	71.8	53.2	101			
Fluorene	15	0.50	20.00	0	75.1	57.6	106			
Phenanthrene	15	0.50	20.00	0	75.6	57.6	109			
Anthracene	15	0.50	20.00	0	73.2	56.1	98.9			
Fluoranthene	16	0.50	20.00	0	81.9	61.4	114			
Pyrene	16	0.50	20.00	0	78.7	58	110			
Benz(a)anthracene	15	0.50	20.00	0	76.6	60	102			
Chrysene	14	0.50	20.00	0	70.9	50.8	93.4			
Benzo(b)fluoranthene	15	0.50	20.00	0	74.0	56.2	118			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

03-Dec-19

Client: Souder, Miller and Associates
Project: Huerfano

Sample ID: **lcs-48934**	SampType: **LCS**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSW**	Batch ID: **48934**	RunNo: **64751**
Prep Date: **11/21/2019**	Analysis Date: **11/25/2019**	SeqNo: **2219191** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzo(k)fluoranthene	15	0.50	20.00	0	75.7	57.7	119			
Benzo(a)pyrene	15	0.50	20.00	0	75.0	55.5	114			
Dibenz(a,h)anthracene	15	0.50	20.00	0	75.5	53	110			
Benzo(g,h,i)perylene	15	0.50	20.00	0	74.8	55	113			
Indeno(1,2,3-cd)pyrene	15	0.50	20.00	0	75.5	51.2	115			
Surr: N-hexadecane	67		87.60		76.4	20.4	126			
Surr: Benzo(e)pyrene	14		20.00		68.3	21.4	126			

Sample ID: **lcsd-48934**	SampType: **LCSD**	TestCode: **EPA Method 8270C: PAHs**
Client ID: **LCSS02**	Batch ID: **48934**	RunNo: **64751**
Prep Date: **11/21/2019**	Analysis Date: **11/25/2019**	SeqNo: **2219192** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	15	0.50	20.00	0	74.2	41.8	97.8	0.541	25.4	
1-Methylnaphthalene	15	1.0	20.00	0	73.8	44.7	104	7.74	21.5	
2-Methylnaphthalene	15	1.0	20.00	0	76.0	45	101	4.85	25.2	
Acenaphthylene	17	0.50	20.00	0	83.4	51.2	102	13.6	30.3	
Acenaphthene	16	0.50	20.00	0	81.6	53.2	101	12.8	28.1	
Fluorene	17	0.50	20.00	0	83.5	57.6	106	10.6	33	
Phenanthrene	15	0.50	20.00	0	74.8	57.6	109	1.06	24.5	
Anthracene	15	0.50	20.00	0	76.6	56.1	98.9	4.54	26.9	
Fluoranthene	17	0.50	20.00	0	83.2	61.4	114	1.57	21.8	
Pyrene	15	0.50	20.00	0	77.1	58	110	2.05	27	
Benz(a)anthracene	14	0.50	20.00	0	72.5	60	102	5.50	27.4	
Chrysene	14	0.50	20.00	0	68.6	50.8	93.4	3.30	20.4	
Benzo(b)fluoranthene	15	0.50	20.00	0	77.4	56.2	118	4.49	22.5	
Benzo(k)fluoranthene	17	0.50	20.00	0	83.3	57.7	119	9.56	24.1	
Benzo(a)pyrene	16	0.50	20.00	0	78.3	55.5	114	4.31	27.3	
Dibenz(a,h)anthracene	16	0.50	20.00	0	78.5	53	110	3.90	18.5	
Benzo(g,h,i)perylene	16	0.50	20.00	0	79.4	55	113	5.97	28.4	
Indeno(1,2,3-cd)pyrene	16	0.50	20.00	0	81.5	51.2	115	7.64	21.8	
Surr: N-hexadecane	70		87.60		79.8	20.4	126	0	0	
Surr: Benzo(e)pyrene	14		20.00		71.8	21.4	126	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

03-Dec-19

Client: Souder, Miller and Associates

Project: Huerfano

Sample ID: MB-48955	SampType: MBLK	TestCode: EPA Method 7470: Mercury
Client ID: PBW	Batch ID: 48955	RunNo: 64701
Prep Date: 11/21/2019	Analysis Date: 11/22/2019	SeqNo: 2217075 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: LCS-48955	SampType: LCS	TestCode: EPA Method 7470: Mercury
Client ID: LCSW	Batch ID: 48955	RunNo: 64701
Prep Date: 11/21/2019	Analysis Date: 11/22/2019	SeqNo: 2217080 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0048	0.00020	0.005000	0	96.7	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 1911679

03-Dec-19

Client: Souder, Miller and Associates
Project: Huerfano

Sample ID: MB-48826	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219763 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.0050								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID: LCS-48826	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219768 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.020	0.5000	0	94.6	80	120			
Cadmium	0.49	0.0020	0.5000	0	97.1	80	120			
Chromium	0.47	0.0060	0.5000	0	95.0	80	120			
Lead	0.50	0.0050	0.5000	0	100	80	120			
Selenium	0.54	0.050	0.5000	0	107	80	120			
Silver	0.095	0.0050	0.1000	0	95.0	80	120			

Sample ID: MB-48826	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: PBW	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219851 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.020								

Sample ID: LCS-48826	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals
Client ID: LCSW	Batch ID: 48826	RunNo: 64774
Prep Date: 11/15/2019	Analysis Date: 11/25/2019	SeqNo: 2219853 Units: mg/L

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.50	0.020	0.5000	0	99.7	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: SMA-FARM | Work Order Number: 1911679 | RcptNo: 1

Received By: Juan Rojas 11/15/2019 8:00:00 AM

Completed By: Desiree Dominguez 11/15/2019 8:37:26 AM

Reviewed By: ENM 11/15/19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Courier		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. VOA vials have zero headspace?	Yes ☑	No ☐	No VOA Vials ☐
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 1 1 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? no
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: DM 11/15/19

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good	Yes			

Chain-of-Custody Record

ent: SMA

iling Address: 401 W Broadway
imington NM 87401

one #: 505 325 7535

ail or Fax#: ashley.maxwell

/QC Package:
Standard ☐ Level 4 (Full Validation)

creditation: ☐ Az Compliance
NELAC ☐ Other

EDD (Type)

Turn-Around Time:
☑ Standard ☐ Rush

Project Name: Huerfano

Project #:

Project Manager: Ashley Maxwell

Sampler: RW

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.8-0.2=0.6

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

e	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 1911679	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)
11/19	10:22	Aques	Huerfano	VanCMS	VanCMS	-001					X	X	TCLP	X		X

:	Time:	Relinquished by:	Received by:	Via:	Date	Time
19	1630		Christine Walters		11/14/19	1630
:	Time:	Relinquished by:	Received by:	Via:	Date	Time
14	1753	Christine Walters		carrier	11/15/19	8:00

Remarks: 8260 Full List
TCLP Compound at TCLP Limit
Invoice Enterprise

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-138
Revised 08/01/11

*Surface Waste Management Facility Operator and Generator shall maintain and make this documentation available for Division inspection.

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

1. Generator Name and Address:
Enterprise Field Services, LLC, 614 Reilly Ave, Farmington NM 87401

2. Originating Site:
MAPL Duran Pumping Station

3. Location of Material (Street Address, City, State or ULSTR):
UL M Section 1 Township 2North Range 16 East; 34.422612, -105.224238

4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 / (bbls) Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

5. GENERATOR CERTIFICATION STATEMENT OF WASTE STATUS

I, Thomas Long (Thomas Long) , representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long (Thomas Long) , representative for Enterprise Products Operating authorizes Agua Moss, LLC to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

5. Transporter: To Be Determined

OCD Permitted Surface Waste Management Facility

Name and Facility Permit #: ***Agua Moss, LLC - Permit #: NM-01-009**
Address of Facility: **SW/4 NW/4 Section 2, Township 29N, Range Crouch Mesa, NM**

Method of Treatment and/or Disposal:
☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:
☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____
SIGNATURE: _____ TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
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Form C-138
Revised 08/01/11

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4. Source and Description of Waste:
Source: Water/Oil from the Non Exempt WasteWater Tanks and from the compressor skid drains.
Description: Non Exempt/Non-Hazardous Water from the compressor skids.
Estimated Volume 80 yd^3 / bbls Known Volume (to be entered by the operator at the end of the haul) _____ yd^3 / bbls

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I, Thomas Long Thomas Long , representative or authorized agent for Enterprise Products Operating do hereby
Generator Signature
certify that according to the Resource Conservation and Recovery Act (RCRA) and the US Environmental Protection Agency's July 1988 regulatory determination, the above described waste is: (Check the appropriate classification)

☐ RCRA Exempt: Oil field wastes generated from oil and gas exploration and production operations and are not mixed with non-exempt waste. ***Operator Use Only: Waste Acceptance Frequency*** ☐ ***Monthly*** ☐ ***Weekly*** ☐ ***Per Load***

☒ RCRA Non-Exempt: Oil field waste which is non-hazardous that does not exceed the minimum standards for waste hazardous by characteristics established in RCRA regulations, 40 CFR 261.21-261.24, or listed hazardous waste as defined in 40 CFR, part 261, subpart D, as amended. The following documentation is attached to demonstrate the above-described waste is non-hazardous. (Check the appropriate items)

☐ MSDS Information ☒ RCRA Hazardous Waste Analysis ☒ Process Knowledge ☐ Other (Provide description in Box 4)

GENERATOR 19.15.36.15 WASTE TESTING CERTIFICATION STATEMENT FOR LANDFARMS

I, Thomas Long Thomas Long , representative for Enterprise Products Operating authorizes Agua Moss, LLC to complete
Generator Signature
the required testing/sign the Generator Waste Testing Certification.

I, _____, representative for Agua Moss, LLC do hereby certify that representative samples of the oil field waste have been subjected to the paint filter test and tested for chloride content and that the samples have been found to conform to the specific requirements applicable to landfarms pursuant to Section 15 of 19.15.36 NMAC. The results of the representative samples are attached to demonstrate the above-described waste conform to the requirements of Section 15 of 19.15.36 NMAC.

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☐ Evaporation ☒ Injection ☐ Treating Plant ☐ Landfarm ☐ Landfill ☐ Other

Waste Acceptance Status:

☐ **APPROVED** ☐ **DENIED** (Must Be Maintained As Permanent Record)

PRINT NAME: _____ TITLE: _____ DATE: _____
SIGNATURE: _____ TELEPHONE NO.: _____
Surface Waste Management Facility Authorized Agent

EXP 4 DE

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

December 04, 2019

Ashley Maxwell
Souder, Miller and Associates
401 W. Broadway
Farmington, NM 87401
TEL: (505) 325-7535
FAX:

RE: Duran

OrderNo.: 1911845

Dear Ashley Maxwell:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/18/2019 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report
Lab Order **1911845**
Date Reported: **12/4/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Duran
Lab ID: 1911845-001 **Matrix:** AQUEOUS

Client Sample ID: Duran Non Exempt
Collection Date: 11/18/2019 9:00:00 AM
Received Date: 11/18/2019 3:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 7470: MERCURY						Analyst: **rde**	
Mercury	0.032	0.020		mg/L	10	11/22/2019 10:58:08 AM	48955
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: **rde**	
Arsenic	ND	5.0		mg/L	1	11/25/2019 3:35:14 PM	48929
Barium	ND	100		mg/L	1	11/25/2019 12:19:59 PM	48929
Cadmium	ND	1.0		mg/L	1	11/25/2019 12:19:59 PM	48929
Chromium	ND	5.0		mg/L	1	11/25/2019 12:19:59 PM	48929
Lead	ND	5.0		mg/L	1	11/25/2019 12:19:59 PM	48929
Selenium	ND	1.0		mg/L	1	11/25/2019 12:19:59 PM	48929
Silver	ND	5.0		mg/L	1	11/25/2019 12:19:59 PM	48929
EPA METHOD 8270C: PAHS						Analyst: **JDC**	
Naphthalene	9.2	5.0	D	µg/L	1	11/25/2019 5:24:34 PM	48934
1-Methylnaphthalene	18	10	D	µg/L	1	11/25/2019 5:24:34 PM	48934
2-Methylnaphthalene	22	10	D	µg/L	1	11/25/2019 5:24:34 PM	48934
Acenaphthylene	ND	5.0	D	µg/L	1	11/25/2019 5:24:34 PM	48934
Acenaphthene	ND	5.0	D	µg/L	1	11/25/2019 5:24:34 PM	48934
Fluorene	ND	5.0	D	µg/L	1	11/25/2019 5:24:34 PM	48934
Phenanthrene	ND	5.0	D	µg/L	1	11/25/2019 5:24:34 PM	48934
Anthracene	ND	5.0	D	µg/L	1	11/25/2019 5:24:34 PM	48934
Fluoranthene	ND	5.0	D	µg/L	1	11/25/2019 5:24:34 PM	48934
Pyrene	ND	5.0	D	µg/L	1	11/25/2019 5:24:34 PM	48934
Benz(a)anthracene	ND	5.0	D	µg/L	1	11/25/2019 5:24:34 PM	48934
Chrysene	ND	5.0	D	µg/L	1	11/25/2019 5:24:34 PM	48934
Benzo(b)fluoranthene	ND	50	D	µg/L	10	11/25/2019 5:00:34 PM	48934
Benzo(k)fluoranthene	ND	50	D	µg/L	10	11/25/2019 5:00:34 PM	48934
Benzo(a)pyrene	ND	50	D	µg/L	10	11/25/2019 5:00:34 PM	48934
Dibenz(a,h)anthracene	ND	50	D	µg/L	10	11/25/2019 5:00:34 PM	48934
Benzo(g,h,i)perylene	ND	50	D	µg/L	10	11/25/2019 5:00:34 PM	48934
Indeno(1,2,3-cd)pyrene	ND	50	D	µg/L	10	11/25/2019 5:00:34 PM	48934
Surr: N-hexadecane	92.7	20.4-126	D	%Rec	1	11/25/2019 5:24:34 PM	48934
Surr: Benzo(e)pyrene	0	21.4-126	SD	%Rec	10	11/25/2019 5:00:34 PM	48934
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
Benzene	ND	0.50		mg/L	200	11/20/2019 2:23:29 PM	W64653
Toluene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Ethylbenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Methyl tert-butyl ether (MTBE)	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,2,4-Trimethylbenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,3,5-Trimethylbenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,2-Dichloroethane (EDC)	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report
Lab Order **1911845**
Date Reported: **12/4/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Duran
Lab ID: 1911845-001 **Matrix:** AQUEOUS

Client Sample ID: Duran Non Exempt
Collection Date: 11/18/2019 9:00:00 AM
Received Date: 11/18/2019 3:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
1,2-Dibromoethane (EDB)	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Naphthalene	ND	0.40		mg/L	200	11/20/2019 2:23:29 PM	W64653
1-Methylnaphthalene	ND	0.80		mg/L	200	11/20/2019 2:23:29 PM	W64653
2-Methylnaphthalene	ND	0.80		mg/L	200	11/20/2019 2:23:29 PM	W64653
Acetone	ND	2.0		mg/L	200	11/20/2019 2:23:29 PM	W64653
Bromobenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Bromodichloromethane	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Bromoform	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Bromomethane	ND	0.60		mg/L	200	11/20/2019 2:23:29 PM	W64653
2-Butanone	ND	2.0		mg/L	200	11/20/2019 2:23:29 PM	W64653
Carbon disulfide	ND	2.0		mg/L	200	11/20/2019 2:23:29 PM	W64653
Carbon Tetrachloride	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Chlorobenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Chloroethane	ND	0.40		mg/L	200	11/20/2019 2:23:29 PM	W64653
Chloroform	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Chloromethane	ND	0.60		mg/L	200	11/20/2019 2:23:29 PM	W64653
2-Chlorotoluene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
4-Chlorotoluene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
cis-1,2-DCE	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
cis-1,3-Dichloropropene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,2-Dibromo-3-chloropropane	ND	0.40		mg/L	200	11/20/2019 2:23:29 PM	W64653
Dibromochloromethane	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Dibromomethane	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,2-Dichlorobenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,3-Dichlorobenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,4-Dichlorobenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Dichlorodifluoromethane	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,1-Dichloroethane	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,1-Dichloroethene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,2-Dichloropropane	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,3-Dichloropropane	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
2,2-Dichloropropane	ND	0.40		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,1-Dichloropropene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Hexachlorobutadiene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
2-Hexanone	ND	2.0		mg/L	200	11/20/2019 2:23:29 PM	W64653
Isopropylbenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
4-Isopropyltoluene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
4-Methyl-2-pentanone	ND	2.0		mg/L	200	11/20/2019 2:23:29 PM	W64653
Methylene Chloride	ND	0.60		mg/L	200	11/20/2019 2:23:29 PM	W64653

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Analytical Report
Lab Order **1911845**
Date Reported: **12/4/2019**

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates
Project: Duran
Lab ID: 1911845-001 **Matrix:** AQUEOUS

Client Sample ID: Duran Non Exempt
Collection Date: 11/18/2019 9:00:00 AM
Received Date: 11/18/2019 3:00:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES						Analyst: **DJF**	
n-Butylbenzene	ND	0.60		mg/L	200	11/20/2019 2:23:29 PM	W64653
n-Propylbenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
sec-Butylbenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Styrene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
tert-Butylbenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,1,1,2-Tetrachloroethane	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,1,2,2-Tetrachloroethane	ND	0.40		mg/L	200	11/20/2019 2:23:29 PM	W64653
Tetrachloroethene (PCE)	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
trans-1,2-DCE	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
trans-1,3-Dichloropropene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,2,3-Trichlorobenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,2,4-Trichlorobenzene	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,1,1-Trichloroethane	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,1,2-Trichloroethane	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Trichloroethene (TCE)	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Trichlorofluoromethane	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
1,2,3-Trichloropropane	ND	0.40		mg/L	200	11/20/2019 2:23:29 PM	W64653
Vinyl chloride	ND	0.20		mg/L	200	11/20/2019 2:23:29 PM	W64653
Xylenes, Total	ND	0.30		mg/L	200	11/20/2019 2:23:29 PM	W64653
Surr: 1,2-Dichloroethane-d4	107	70-130		%Rec	200	11/20/2019 2:23:29 PM	W64653
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	200	11/20/2019 2:23:29 PM	W64653
Surr: Dibromofluoromethane	106	70-130		%Rec	200	11/20/2019 2:23:29 PM	W64653
Surr: Toluene-d8	111	70-130		%Rec	200	11/20/2019 2:23:29 PM	W64653

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Qualifiers:

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H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Pace Analytical®
National Center for Testing & Innovation

ANALYTICAL REPORT

December 04, 2019

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1162674

Samples Received: 11/20/2019

Project Number:

Description:

Report To:

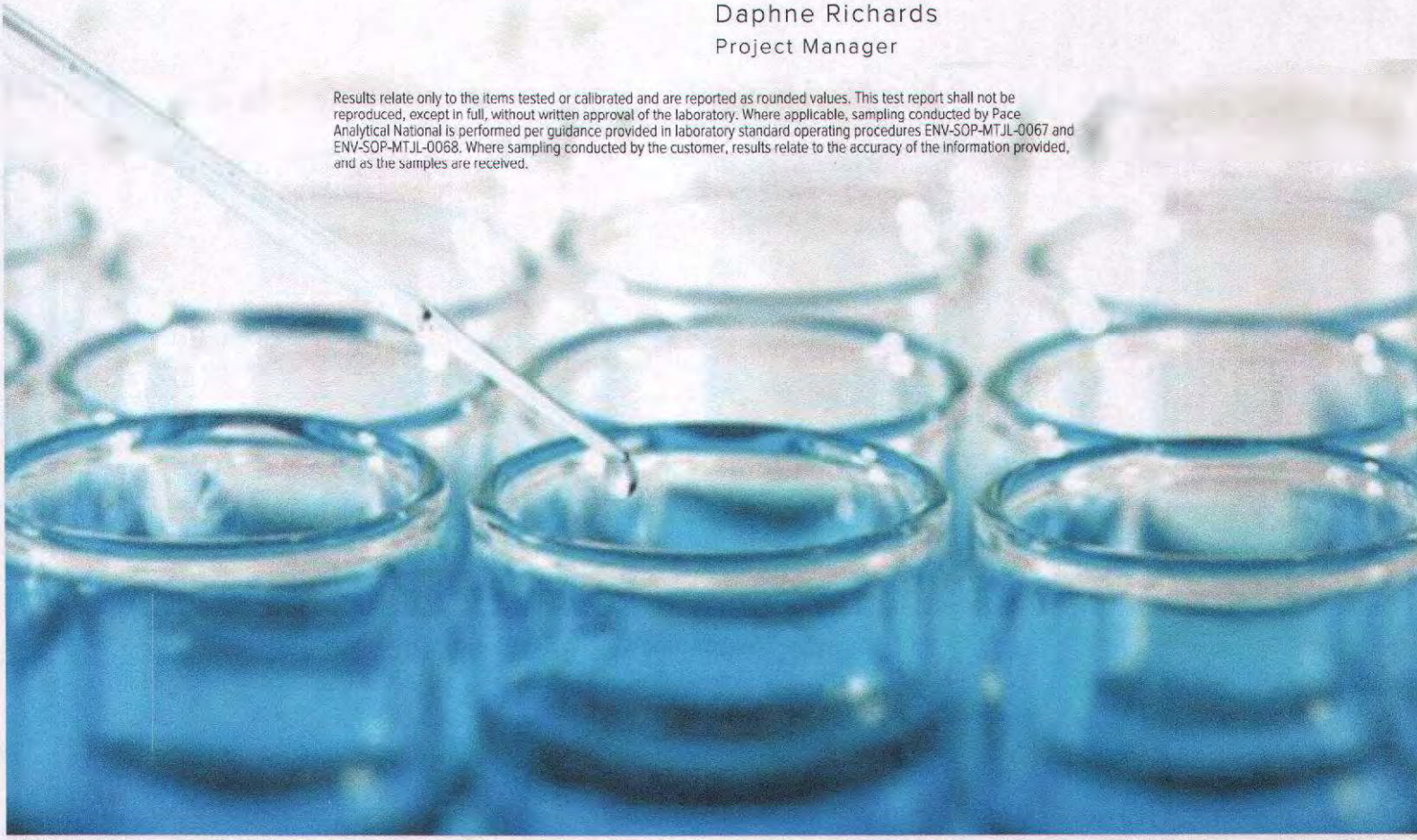
4901 Hawkins NE

Albuquerque, NM 87109

Entire Report Reviewed By: Daphne R Richards

Daphne Richards
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.



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SAMPLE SUMMARY

ONE LAB. NATIONWIDE.

	Collected by	Collected date/time	Received date/time
1911845-001D DURAN NON EXEMPT L1162674-01 WW		11/18/19 09:00	11/20/19 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 CN E-2011	WG1390298	1	12/03/19 20:31	12/04/19 10:57	SDL	Mt. Juliet, TN
Wet Chemistry by Method 4500H+ B-2011	WG1384269	1	11/20/19 20:00	11/20/19 20:00	ANP	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1386612	1	11/25/19 13:04	11/25/19 13:04	MJA	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1387864	1	12/02/29 16:33	12/02/29 16:33	KAB	Mt. Juliet, TN

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All Method and Batch Quality Control are within established criteria except where addressed in this case narrative, a non-conformance form or properly qualified within the sample results. By my digital signature below, I affirm to the best of my knowledge, all problems/anomalies observed by the laboratory as having the potential to affect the quality of the data have been identified by the laboratory, and no information or data have been knowingly withheld that would affect the quality of the data.

Daphne R Richards

Daphne Richards
Project Manager

Project Narrative

All Reactive Cyanide results reported in the attached report were determined as totals using method 9012B.

All Reactive Sulfide results reported in the attached report were determined as totals using method 9034/9030B.

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Cyanide	ND		0.00500	1	12/04/2019 10:57	WG1390298

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	su			date / time	
Corrosivity by pH	7.52	T8	1	11/20/2019 20:00	WG1384269

Sample Narrative:

L1162674-01 WG1384269: 7.52 at 19.2C

Wet Chemistry by Method 9034-9030B

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Reactive Sulfide	0.681		0.0500	1	11/25/2019 13:04	WG1386612

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis	Batch
	deg F			date / time	
Flashpoint	150		1	12/02/2029 16:33	WG1387864

Method Blank (MB)

(MB) R3478933-1 12/04/19 10:53

Analyte	MB Result	MB Qualifier	MB MDL	MB RDL
	mg/l		mg/l	mg/l
Reactive Cyanide	U		0.00180	0.00500

L1163773-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1163773-02 12/04/19 11:01 • (DUP) R3478933-3 12/04/19 11:02

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Reactive Cyanide	0.0175	0.0197	1	11.8		20

L1163787-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1163787-03 12/04/19 11:08 • (DUP) R3478933-6 12/04/19 11:09

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	mg/l	mg/l		%		%
Reactive Cyanide	ND	0.000	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3478933-2 12/04/19 10:54

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	mg/l	mg/l	%	%	
Reactive Cyanide	0.100	0.0937	93.7	85.0-115	

L1163787-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1163787-02 12/04/19 11:05 • (MS) R3478933-4 12/04/19 11:06 • (MSD) R3478933-5 12/04/19 11:07

Analyte	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Reactive Cyanide	0.100	ND	0.0833	0.0863	83.3	86.3	1	75.0-125			3.54	20

L1162674-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1162674-01 11/20/19 20:00 • (DUP) R3474312-5 11/20/19 20:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
Corrosivity by pH	7.52	7.52	1	0.000		1

Sample Narrative:
OS: 7.52 at 19.2C
DUP: 7.52 at 19.5C

L1162704-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1162704-01 11/20/19 20:00 • (DUP) R3474312-6 11/20/19 20:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
Corrosivity by pH	5.79	5.77	1	0.346		1

Sample Narrative:
OS: 5.79 at 19C
DUP: 5.77 at 19C

L1162704-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1162704-02 11/20/19 20:00 • (DUP) R3474312-7 11/20/19 20:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
Corrosivity by pH	5.26	5.28	1	0.380		1

Sample Narrative:
OS: 5.26 at 18.8C
DUP: 5.28 at 19.1C

L1162704-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1162704-03 11/20/19 20:00 • (DUP) R3474312-8 11/20/19 20:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
Corrosivity by pH	6.22	6.20	1	0.322		1

Sample Narrative:

Cp
2 Tc
3 Ss
4 Cn
5 Sr
6 Qc
7 Gl
8 Al
9 Sc

L1162704-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1162704-03 11/20/19 20:00 • (DUP) R3474312-8 11/20/19 20:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%

OS: 6.22 at 19C
DUP: 6.2 at 19.2C

L1162704-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1162704-04 11/20/19 20:00 • (DUP) R3474312-9 11/20/19 20:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
	su	su		%		%
Corrosivity by pH	5.75	5.76	1	0.174		1

Sample Narrative:
OS: 5.75 at 19.2C
DUP: 5.76 at 19.3C

Laboratory Control Sample (LCS)

(LCS) R3474312-1 11/20/19 20:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	su	su	%	%	
Corrosivity by pH	10.0	9.91	99.1	99.0-101	

Sample Narrative:
LCS: 9.91 at 18.8C

Method Blank (MB)

(MB) R3475935-1 11/25/19 12:58

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Reactive Sulfide	U		0.00650	0.0500

Laboratory Control Sample (LCS)

(LCS) R3475935-2 11/25/19 12:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Sulfide	0.500	0.462	92.4	85.0-115	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

COMMENTS

Action 284238

COMMENTS

Operator: AGUA MOSS, LLC P.O. Box 600 Farmington, NM 87499	OGRID: 247130
	Action Number: 284238
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

COMMENTS

Created By	Comment	Comment Date
cchavez	Quarterly Waste Analyses Information 2020 Submittal	11/9/2023

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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CONDITIONS

Action 284238

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Operator: AGUA MOSS, LLC P.O. Box 600 Farmington, NM 87499	OGRID: 247130
	Action Number: 284238
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

CONDITIONS

Created By	Condition	Condition Date
cchavez	Condition of Approval: 1. Follow Discharge Permit Quarterly Report Guidelines, Content, and Deadline Dates for submittal of future reports.	11/9/2023