



August 4th, 2023

RE: Sunco Disposal #1 Injection Water Monitoring – 2nd Quarter 2023

This report summarizes sample collection, field screening, and laboratory analysis of the injection water at the Agua Moss LLC Sunco Disposal #1 well for the 2nd Quarter 2023. Injection water of the Class I/II Sunco Disposal #1 well is assessed on a quarterly basis in accordance with Paragraph (1) of Subsection B of 20.6.2.5207 New Mexico Administrative Code (NMAC).

Field Activities

Philana Thompson, Merrion Oil & Gas, collected one injection water sample, S-25, from the process line inside the pump building on June 29th, 2023. The injection water was discharged directly from the process line into laboratory sample containers and a clean container for field screening.

Sample Collection and Field Screening Procedures

The injection water sample (S-25) was field screened for time sensitive parameters including pH, temperature and reduction potential. Field screening was conducted utilizing a handheld water quality meter calibrated on the day of use with laboratory-grade standards.

The sampled injection water was placed into laboratory supplied containers, labeled, and maintained on ice until delivery to Hall Environmental Analysis Laboratory in Albuquerque, New Mexico.

Field Screening and Laboratory Analytical Results

The field screening and laboratory analytical results are summarized in the attached Table 1.

QA/QC Considerations

Field measurements for time sensitive parameters including pH, temperature, reduction potential, and specific conductance more accurately reflect the characteristics of the injection water than laboratory results for these parameters due to their rapidly changing nature when exposed to environmental factors. The hold time qualifier is indicated on the laboratory report for pH as the hold time of 15 minutes from collection was exceeded during transport prior to analysis. Similarly, the hold time was exceeded for corrosivity by pH, oxidation reduction potential (ORP), and total dissolved solids (TDS).

A dilution due to matrix qualifier is indicated on the laboratory report for total dissolved solids and chlordanes.

Data Evaluation

Laboratory analytical and field screening results report all applicable constituent concentrations below the maximum toxicity characteristic concentrations per 40 Code of Federal Regulation (CFR) 261.24 Table 1 except for benzene. The Sunco Disposal #1 accepts both Class I non-hazardous fluid and Class II exempt oil and gas fluids. The Sunco Disposal #1 therefore occasionally receives Class II fluids with common oil and association constituents, such as benzene, at concentrations in excess of the toxicity characteristic concentrations.

Sincerely,

Philana Thompson
Merrion Oil & Gas Corporation
HSE & Regulatory Compliance Specialist
pthompson@merrion.bz
505-486-1171

Attachments:

*Table 1. Summary of Field Screening and Laboratory Analytical Results
Laboratory Analytical Reports (Hall 2306G28)*

Table 1:
Summary of Field Screening and Laboratory Analytical Results

AGUA MOSS LLC
SUNCO DISPOSAL #1
2nd QUARTER 2023 MONITORING

Sample ID	S-26			
Collection Date	6/29/2023			
Analyte	Field Results	Laboratory Results	Units	Toxicity Characteristic Concentrations
Arsenic	--	ND	mg/L	5.0 mg/L
Barium	--	ND	mg/L	100.0 mg/L
Benzene	--	11.0	mg/L	0.5 mg/L
Cadmium	--	ND	mg/L	1 mg/L
Carbon tetrachloride	--	ND	mg/L	0.5 mg/L
Chlordane	--	ND	mg/L	0.03 mg/L
Chlorobenzene	--	ND	mg/L	100.0 mg/L
Chloroform	--	ND	mg/L	6.0 mg/L
Chromium	--	ND	mg/L	5.0 mg/L
o-Cresol	--	ND	mg/L	200.0 mg/L
m+p-Cresol	--	ND	mg/L	200.0 mg/L
Cresol	--	ND	mg/L	200.0 mg/L
1,4-Dichlorobenzene	--	ND	mg/L	7.5 mg/L
1,2-Dichloroethane	--	138	mg/L	0.5 mg/L
1,1-Dichloroethylene	--	ND	mg/L	0.7 mg/L
2,4-Dinitrotoluene	--	ND	mg/L	0.13 mg/L
Hexachlorobenzene	--	ND	mg/L	0.13 mg/L
Hexachlorobutadiene	--	ND	mg/L	0.5 mg/L
Hexachloroethane	--	ND	mg/L	3.0 mg/L
Lead	--	ND	mg/L	5.0 mg/L
Mercury	--	ND	mg/L	0.2 mg/L
Methyl ethyl ketone (But	--	ND	mg/L	200.0 mg/L
Nitrobenzene	--	ND	mg/L	2.0 mg/L
Pentachlorophenol	--	ND	mg/L	100.0 mg/L
Pyridine	--	ND	mg/L	5.0 mg/L
Selenium	--	ND	mg/L	1.0 mg/L
Silver	--	ND	mg/L	5.0 mg/L
Tetrachloroethylene	--	ND	mg/L	0.7 mg/L
Trichloroethylene	--	ND	mg/L	0.5 mg/L
2,4,5-Trichlorophenol	--	ND	mg/L	400.0 mg/L
2,4,6-Trichlorophenol	--	ND	mg/L	2.0 mg/L
Vinyl chloride	--	ND	mg/L	0.2 mg/L
Reactive sulfide	--	ND	mg/L	
Reactive cyanide	--	ND	mg/L	
Corrosivity by pH	--	7.84 H	s.u.	
Ignitability	--	DNF at 170	deg F	
Specific conductance		64,000	µmhos/cm	
Specific gravity	--	1.016		
ORP	-105	-18.3	mV	
Fluoride	--	ND	mg/L	
Calcium	--	540	mg/L	
Potassium	--	69	mg/L	
Magnesium	--	120	mg/L	
Bicarbonate (as CaCO3)	--	908.0	mg/L Ca	
Carbonate (as CaCO3)	--	ND	mg/L Ca	
Chloride	--	20,000	mg/L	
Sulfate	--	16	mg/L	
Total dissolved solids		34,000	mg/L	
pH	7.29	7.79		
Bromide	--	81	mg/L	
Temperature	33.1		deg C	

Notes: ORP - oxidation reduction potential
mg/L - milligrams per liter
s.u. - standard units
µmhos/cm - micromhos per centimeter
deg F - degrees Fahrenheit
deg C - degrees Celsius
mV - millivolts
DNF - does not flash

Qualifiers: D - sample diluted due to matrix
H - hold time for preparation or analysis exceeded
S - laboratory control spike recovery low



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

July 25, 2023

Philana Thompson
Merrion Oil and Gas
610 Reilly Avenue
Farmington, NM 87401
TEL: (505) 324-5300
FAX: (505) 327-1496

RE: Aqua Moss Sunco 1

OrderNo.: 2306G28

Dear Philana Thompson:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/30/2023 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,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a horizontal line.

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2306G28

Date Reported: 7/25/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Merrion Oil and Gas

Client Sample ID: S-26 (6/29/23)

Project: Aqua Moss Sunco 1

Collection Date: 6/29/2023 10:00:00 AM

Lab ID: 2306G28-001

Matrix: AQUEOUS

Received Date: 6/30/2023 6:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8081: PESTICIDES TCLP						Analyst: SB
Chlordane	ND	0.030		mg/L	1	7/11/2023 3:30:22 PM
Surr: Decachlorobiphenyl	57.5	40.9-111		%Rec	1	7/11/2023 3:30:22 PM
Surr: Tetrachloro-m-xylene	54.6	15-107		%Rec	1	7/11/2023 3:30:22 PM
EPA METHOD 300.0: ANIONS						Analyst: JTT
Fluoride	ND	2.0		mg/L	20	6/30/2023 9:52:35 PM
Chloride	20000	1000	*	mg/L	2000	7/19/2023 11:34:50 PM
Bromide	81	2.0		mg/L	20	6/30/2023 9:52:35 PM
Phosphorus, Orthophosphate (As P)	ND	10		mg/L	20	6/30/2023 9:52:35 PM
Sulfate	16	10		mg/L	20	6/30/2023 9:52:35 PM
Nitrate+Nitrite as N	ND	20		mg/L	100	7/20/2023 10:07:07 PM
EPA METHOD 6020A: TOTAL METALS						Analyst: ELS
Arsenic	ND	5.0		mg/L	50	7/13/2023 1:46:29 PM
Lead	ND	5.0		mg/L	50	7/14/2023 10:10:23 AM
Selenium	ND	1.0		mg/L	50	7/13/2023 1:46:29 PM
EPA METHOD 7470A: MERCURY						Analyst: VP
Mercury	ND	0.020		mg/L	5	7/13/2023 3:34:58 PM
EPA METHOD 6010B: DISSOLVED METALS						Analyst: VP
Calcium	540	10		mg/L	10	7/13/2023 9:05:54 AM
Magnesium	120	5.0		mg/L	5	7/3/2023 8:50:57 AM
Potassium	69	5.0		mg/L	5	7/3/2023 8:50:57 AM
Sodium	13000	1000		mg/L	1000	7/13/2023 9:07:01 AM
EPA 6010B: TOTAL RECOVERABLE METALS						Analyst: VP
Barium	ND	100		mg/L	50	7/13/2023 8:14:38 AM
Cadmium	ND	1.0		mg/L	1	7/12/2023 11:18:32 AM
Chromium	ND	5.0		mg/L	1	7/12/2023 11:18:32 AM
Silver	ND	5.0		mg/L	1	7/12/2023 11:18:32 AM
EPA METHOD 8270C TCLP						Analyst: SB
2-Methylphenol	ND	200		mg/L	1	7/10/2023 12:38:39 PM
3+4-Methylphenol	ND	200		mg/L	1	7/10/2023 12:38:39 PM
2,4-Dinitrotoluene	ND	0.13		mg/L	1	7/10/2023 12:38:39 PM
Hexachlorobenzene	ND	0.13		mg/L	1	7/10/2023 12:38:39 PM
Hexachlorobutadiene	ND	0.50		mg/L	1	7/10/2023 12:38:39 PM
Hexachloroethane	ND	3.0		mg/L	1	7/10/2023 12:38:39 PM
Nitrobenzene	ND	2.0		mg/L	1	7/10/2023 12:38:39 PM
Pentachlorophenol	ND	100		mg/L	1	7/10/2023 12:38:39 PM
Pyridine	ND	5.0		mg/L	1	7/10/2023 12:38:39 PM

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 standard limits. If undiluted results may be estimated.

B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Analytical Report

Lab Order 2306G28

Date Reported: 7/25/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Merrion Oil and Gas

Client Sample ID: S-26 (6/29/23)

Project: Aqua Moss Sunco 1

Collection Date: 6/29/2023 10:00:00 AM

Lab ID: 2306G28-001

Matrix: AQUEOUS

Received Date: 6/30/2023 6:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 8270C TCLP						Analyst: SB
2,4,5-Trichlorophenol	ND	400		mg/L	1	7/10/2023 12:38:39 PM
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	7/10/2023 12:38:39 PM
Cresols, Total	ND	200		mg/L	1	7/10/2023 12:38:39 PM
Surr: 2-Fluorophenol	58.1	20.8-71.9		%Rec	1	7/10/2023 12:38:39 PM
Surr: Phenol-d5	43.9	16.2-54.5		%Rec	1	7/10/2023 12:38:39 PM
Surr: 2,4,6-Tribromophenol	82.7	18.8-117		%Rec	1	7/10/2023 12:38:39 PM
Surr: Nitrobenzene-d5	71.8	33-85.9		%Rec	1	7/10/2023 12:38:39 PM
Surr: 2-Fluorobiphenyl	67.0	26.3-79.6		%Rec	1	7/10/2023 12:38:39 PM
Surr: 4-Terphenyl-d14	91.4	53.9-124		%Rec	1	7/10/2023 12:38:39 PM
TCLP VOLATILES BY 8260B						Analyst: RAA
Benzene	11	0.50		mg/L	200	7/5/2023 10:25:36 PM
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	200	7/5/2023 10:25:36 PM
2-Butanone	ND	200		mg/L	200	7/5/2023 10:25:36 PM
Carbon Tetrachloride	ND	0.50		mg/L	200	7/5/2023 10:25:36 PM
Chloroform	ND	6.0		mg/L	200	7/5/2023 10:25:36 PM
1,4-Dichlorobenzene	ND	7.5		mg/L	200	7/5/2023 10:25:36 PM
1,1-Dichloroethene	ND	0.70		mg/L	200	7/5/2023 10:25:36 PM
Tetrachloroethene (PCE)	ND	0.70		mg/L	200	7/5/2023 10:25:36 PM
Trichloroethene (TCE)	ND	0.50		mg/L	200	7/5/2023 10:25:36 PM
Vinyl chloride	ND	0.20		mg/L	200	7/5/2023 10:25:36 PM
Chlorobenzene	ND	100		mg/L	200	7/5/2023 10:25:36 PM
Surr: 1,2-Dichloroethane-d4	138	70-130	S	%Rec	200	7/5/2023 10:25:36 PM
Surr: 4-Bromofluorobenzene	93.6	70-130		%Rec	200	7/5/2023 10:25:36 PM
Surr: Dibromofluoromethane	138	70-130	S	%Rec	200	7/5/2023 10:25:36 PM
Surr: Toluene-d8	99.8	70-130		%Rec	200	7/5/2023 10:25:36 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: CAS
Conductivity	64000	100		µmhos/c	10	7/14/2023 7:25:08 PM
SM4500-H+B / 9040C: PH						Analyst: RBC
pH	7.84		H	pH units	1	7/6/2023 3:28:19 PM
SM2320B: ALKALINITY						Analyst: RBC
Bicarbonate (As CaCO3)	908.0	20.00		mg/L Ca	1	7/6/2023 3:28:19 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	7/6/2023 3:28:19 PM
Total Alkalinity (as CaCO3)	908.0	20.00		mg/L Ca	1	7/6/2023 3:28:19 PM
SPECIFIC GRAVITY						Analyst: CAS
Specific Gravity	1.016	0			1	7/1/2023 4:46:00 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: JAG

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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		

Analytical Report

Lab Order 2306G28

Date Reported: 7/25/2023

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Merrion Oil and Gas

Client Sample ID: S-26 (6/29/23)

Project: Aqua Moss Sunco 1

Collection Date: 6/29/2023 10:00:00 AM

Lab ID: 2306G28-001

Matrix: AQUEOUS

Received Date: 6/30/2023 6:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: JAG
Total Dissolved Solids	34000	500	*D	mg/L	1	7/7/2023 1:00:00 PM

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	Above Quantitation Range/Estimated Value
	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 standard limits. If undiluted results may be estimated.		



ANALYTICAL REPORT

July 14, 2023

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1632504

Samples Received: 07/06/2023

Project Number:

Description:

Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹Cp²Tc³Ss⁴Cn⁵Sr⁶Qc⁷Gl⁸Al⁹Sc

Entire Report Reviewed By:

A handwritten signature in blue ink that reads "John V. Hawkins".

John Hawkins
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.

Pace Analytical National12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	³ Ss
2306G28-001F S-26 (6/29/23) L1632504-01	5	⁴ Cn
Qc: Quality Control Summary	6	
Wet Chemistry by Method 2580	6	⁵ Sr
Wet Chemistry by Method 4500 CN E-2016	8	
Wet Chemistry by Method 4500 S2 D-2011	9	⁶ Qc
Wet Chemistry by Method 9040C	10	⁷ Gl
Wet Chemistry by Method D93/1010A	11	
Gl: Glossary of Terms	12	⁸ Al
Al: Accreditations & Locations	13	
Sc: Sample Chain of Custody	14	⁹ Sc

2306G28-001F S-26 (6/29/23) L1632504-01 GW

Collected by
Collected date/time
Received date/time

06/29/23 10:0007/06/23 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2580	WG2090110	1	07/12/23 14:21	07/12/23 14:21	NTG	Mt. Juliet, TN
Wet Chemistry by Method 4500 CN E-2016	WG2090231	1	07/06/23 18:30	07/06/23 23:39	LDT	Mt. Juliet, TN
Wet Chemistry by Method 4500 S2 D-2011	WG2090390	1	07/06/23 16:09	07/06/23 16:09	JAS	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG2090055	1	07/07/23 09:00	07/07/23 09:00	MCC	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG2091715	1	07/10/23 02:16	07/10/23 02:16	WOS	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

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.



John Hawkins
Project Manager

Project Narrative

All Reactive Cyanide results reported in the attached report were determined as totals using method 4500 CN E-2016.
All Reactive Sulfide results reported in the attached report were determined as totals using method 4500 S2 D-2011.



Collected date/time: 06/29/23 10:00

L1632504

Wet Chemistry by Method 2580

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
ORP	-18.3	T8	1	07/12/2023 14:21	WG2090110

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 4500 CN E-2016

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND		0.00500	1	07/06/2023 23:39	WG2090231

Wet Chemistry by Method 4500 S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND	T8	0.0500	1	07/06/2023 16:09	WG2090390

Wet Chemistry by Method 9040C

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
pH	7.79	T8	1	07/07/2023 09:00	WG2090055

Sample Narrative:

L1632504-01 WG2090055: 7.79 at 21.9C

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170		1	07/10/2023 02:16	WG2091715

L1632454-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1632454-01 07/12/23 14:21 • (DUP) R3947717-3 07/12/23 14:21					
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	DUP Qualifier mV
ORP	195	196	1	1.20	20

L1632468-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1632468-01 07/12/23 14:21 • (DUP) R3947717-4 07/12/23 14:21					
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	DUP Qualifier mV
ORP	128	127	1	1.30	20

L1632504-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1632504-01 07/12/23 14:21 • (DUP) R3947717-5 07/12/23 14:21					
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	DUP Qualifier mV
ORP	-18.3	-19.5	1	0.000	20

L1632936-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1632936-01 07/12/23 14:21 • (DUP) R3947717-6 07/12/23 14:21					
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	DUP Qualifier mV
ORP	97.0	96.8	1	0.200	20

L1632936-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1632936-02 07/12/23 14:21 • (DUP) R3947717-7 07/12/23 14:21					
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	DUP Qualifier mV
ORP	135	134	1	0.900	20

L1632936-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1632936-03 07/12/23 14:21 • (DUP) R3947717-8 07/12/23 14:21					
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	DUP Qualifier mV
ORP	133	134	1	0.900	20

L1632936-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1632936-04 07/12/23 14:21 • (DUP) R3947717-9 07/12/23 14:21						
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	<u>DUP Qualifier</u>	DUP Diff Limits mV
ORP	141	142	1	0.400		20

L1632936-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1632936-05 07/12/23 14:21 • (DUP) R3947717-10 07/12/23 14:21						
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	<u>DUP Qualifier</u>	DUP Diff Limits mV
ORP	140	142	1	1.20		20

L1632936-06 Original Sample (OS) • Duplicate (DUP)

(OS) L1632936-06 07/12/23 14:21 • (DUP) R3947717-11 07/12/23 14:21						
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	<u>DUP Qualifier</u>	DUP Diff Limits mV
ORP	147	146	1	1.60		20

L1632936-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1632936-07 07/12/23 14:21 • (DUP) R3947717-12 07/12/23 14:21						
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	<u>DUP Qualifier</u>	DUP Diff Limits mV
ORP	159	155	1	4.20		20

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3947717-1 07/12/23 14:21 • (LCSD) R3947717-2 07/12/23 14:21						
Analyte	Spike Amount mV	LCS Result mV	LCSD Result mV	LCS Rec. %	LCSD Rec. %	Rec. Limits %
ORP	98.0	103	103	105	105	90.0-110
					<u>Diff</u> mV	<u>Diff Limits</u> mV
					0.400	20

Method Blank (MB)

(MB) R3945628-1 07/06/23 23:05

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

L1632454-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1632454-01 07/06/23 23:12 • (DUP) R3945628-3 07/06/23 23:14

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

L1632496-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1632496-01 07/06/23 23:26 • (DUP) R3945628-6 07/06/23 23:28

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

Laboratory Control Sample (LCS)

(LCS) R3945628-2 07/06/23 23:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Cyanide	0.100	0.112	112	87.1-120	

L1632492-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1632492-01 07/06/23 23:18 • (MS) R3945628-4 07/06/23 23:22 • (MSD) R3945628-5 07/06/23 23:24

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	Dilution	Rec. Limits %	MS Qualifier	RPD %	RPD Limits %
Reactive Cyanide	0.100	ND	0.107	0.103	1	90.0-110		3.81	20

Method Blank (MB)

(MB) R3945514-1 07/06/23 16:04

Analyte	MB Result mg/l	<u>MB Qualifier</u> mg/l	MB MDL mg/l	MB RDL mg/l
Reactive Sulfide	U	0.0250	0.0250	0.0500

-1632504-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1632504-01 07/06/23 16:09 • (DUP) R3945514-5 07/06/23 16:09

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	<u>DUP Qualifier</u> %	DUP RPD Limits %
Reactive Sulfide	ND	ND	1	15.4		20

Laboratory Control Sample (LCS)

(LCS) R3945514-2 07/06/23 16:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u> %
Reactive Sulfide	0.500	0.492	98.4	85.0-115	

L1632428-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1632428-01 07/07/23 09:00 • (DUP) R3945763-2 07/07/23 09:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	8.39	8.39	1	0.000	%	1
Sample Narrative:						
OS: 8.39 at 22.1C						
DUP: 8.39 at 22.1C						

L1632562-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1632562-02 07/07/23 09:00 • (DUP) R3945763-3 07/07/23 09:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
pH	8.43	8.44	1	0.119	%	1
Sample Narrative:						
OS: 8.43 at 22.6C						
DUP: 8.44 at 22.6C						

Laboratory Control Sample (LCS)

(LCS) R3945763-1 07/07/23 09:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
pH	10.0	10.0	100	99.0-101	
Sample Narrative:					
LCS: 10 at 22.1C					

L1632662-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1632662-02 07/10/23 02:16 • (DUP) R3946457-3 07/10/23 02:16

Analyte	Original Result deg F	DUP Result deg F	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Flashpoint	105	109	1	3.74		10

Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)

(LCS) R3946457-1 07/10/23 02:16 • (LCSD) R3946457-2 07/10/23 02:16

Analyte	Spike Amount deg F	LCS Result deg F	LCSD Result deg F	LCS Rec. %	LCSD Rec. %	Rec. Limits %	LCS Qualifier	LCSD Qualifier	RPD %	RPD Limits %
Flashpoint	126	129	131	102	104	96.0-104		1.54		10

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.

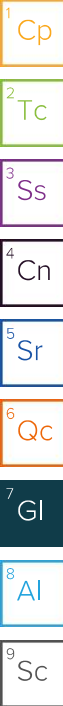
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location. 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.
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Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

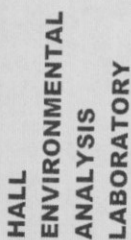
Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	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}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1 4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
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

* 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 Analytical.

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc



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

H167

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

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2306G28-001F S-26 (6/29/23)		500HDPE	Aqueous	6/29/2023 10:00:00 AM	3 RCI	>12 RCI ✓
2	2306G28-001G S-26 (6/29/23)		125HDP	Aqueous	6/29/2023 10:00:00 AM	1 ORP	TOI

L692504

Sample Receipt Checklist

COC Seal Present/Intact: Y N If Applicable
 COC Signed/Accurate: Y N VOA Zero Headspace: Y N
 Bottles arrive intact: Y N Pres. Correct/Check: Y N
 Correct bottles used: Y N
 Sufficient volume sent: Y N
 RAD Screen <0.5 mR/hr: Y N

6525 5572 5875

PH-1081-A321-RC-21-04-14
CRB-2022 IV

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: <u>[Signature]</u>	Date: <u>6/30/2023</u>	Time: <u>9:57 AM</u>	Received By: <u>[Signature]</u>	Date: <u>7/10/23</u>	Time: <u>8:40</u>
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

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

REPORT TRANSMITTAL DESIRED:		
☐ HARDCOPY (extra cost)	☐ FAX	☐ EMAIL
FOR LAB USE ONLY		
Temp of samples	4.5 to 4.8	Attempt to Cool?
Comments	6BAG	

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2306G28

25-Jul-23

Client: Merrion Oil and Gas**Project:** Aqua Moss Sunco 1

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R97867	RunNo: 97867								
Prep Date:	Analysis Date: 6/30/2023	SeqNo: 3559953 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								
Sulfate	ND	0.50								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R97867	RunNo: 97867								
Prep Date:	Analysis Date: 6/30/2023	SeqNo: 3559954 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	101	90	110			
Bromide	2.4	0.10	2.500	0	95.2	90	110			
Phosphorus, Orthophosphate (As P)	4.6	0.50	5.000	0	91.8	90	110			
Sulfate	9.6	0.50	10.00	0	95.7	90	110			

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R98365	RunNo: 98365								
Prep Date:	Analysis Date: 7/19/2023	SeqNo: 3580362 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R98365	RunNo: 98365								
Prep Date:	Analysis Date: 7/19/2023	SeqNo: 3580363 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	97.4	90	110			

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R98365	RunNo: 98365								
Prep Date:	Analysis Date: 7/19/2023	SeqNo: 3580413 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306G28
25-Jul-23

Client: Merrion Oil and Gas
Project: Aqua Moss Sunco 1

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R98365	RunNo: 98365								
Prep Date:	Analysis Date: 7/19/2023	SeqNo: 3580414	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.9	0.50	5.000	0	98.6	90	110			

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R98395	RunNo: 98395								
Prep Date:	Analysis Date: 7/20/2023	SeqNo: 3581614	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R98395	RunNo: 98395								
Prep Date:	Analysis Date: 7/20/2023	SeqNo: 3581615	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	98.8	90	110			

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R98395	RunNo: 98395								
Prep Date:	Analysis Date: 7/20/2023	SeqNo: 3581660	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R98395	RunNo: 98395								
Prep Date:	Analysis Date: 7/20/2023	SeqNo: 3581661	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.3	0.20	3.500	0	95.3	90	110			

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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 5 of 18

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2306G28

25-Jul-23

Client: Merrion Oil and Gas**Project:** Aqua Moss Sunco 1

Sample ID: MB-76129	SampType: MBLK	TestCode: EPA Method 6020A: Total Metals								
Client ID: PBW	Batch ID: 76129	RunNo: 98191								
Prep Date: 7/11/2023	Analysis Date: 7/13/2023	SeqNo: 3572965	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic ND 0.0010

Lead ND 0.0010

Selenium ND 0.0010

Sample ID: MSLCSLL-76129	SampType: LCSLL	TestCode: EPA Method 6020A: Total Metals								
Client ID: BatchQC	Batch ID: 76129	RunNo: 98191								
Prep Date: 7/11/2023	Analysis Date: 7/13/2023	SeqNo: 3572966	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic 0.0012 0.0010 0.001000 0 122 70 130

Lead ND 0.0010 0.001000 0 92.4 70 130

Selenium ND 0.0010 0.001000 0 74.3 70 130

Sample ID: MSLCS-76129	SampType: LCS	TestCode: EPA Method 6020A: Total Metals								
Client ID: LCSW	Batch ID: 76129	RunNo: 98191								
Prep Date: 7/11/2023	Analysis Date: 7/13/2023	SeqNo: 3572967	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Arsenic 0.046 0.0010 0.05000 0 91.5 80 120

Lead 0.045 0.0010 0.05000 0 89.5 80 120

Selenium 0.047 0.0010 0.05000 0 93.1 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 Quantitative Limit
S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

Page 6 of 18

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306G28

25-Jul-23

Client: Merrion Oil and Gas

Project: Aqua Moss Sunco 1

Sample ID: MB-75991	SampType: MBLK			TestCode: EPA Method 8081: Pesticides TCLP						
Client ID: PBW	Batch ID: 75991			RunNo: 98126						
Prep Date: 7/5/2023	Analysis Date: 7/11/2023			SeqNo: 3570639		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Surr: Decachlorobiphenyl	0.0021		0.002500		83.7	40.9	111			
Surr: Tetrachloro-m-xylene	0.0016		0.002500		65.9	15	107			

Sample ID: LCS-75991	SampType: LCS			TestCode: EPA Method 8081: Pesticides TCLP						
Client ID: LCSW	Batch ID: 75991			RunNo: 98126						
Prep Date: 7/5/2023	Analysis Date: 7/11/2023			SeqNo: 3570640		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0019		0.002500		77.3	40.9	111			
Surr: Tetrachloro-m-xylene	0.0012		0.002500		48.6	15	107			

Sample ID: LCSD-75991	SampType: LCSD			TestCode: EPA Method 8081: Pesticides TCLP						
Client ID: LCSS02	Batch ID: 75991			RunNo: 98126						
Prep Date: 7/5/2023	Analysis Date: 7/11/2023			SeqNo: 3570665		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0014		0.002500		57.7	40.9	111	0	0	
Surr: Tetrachloro-m-xylene	0.00096		0.002500		38.5	15	107	0	0	

Sample ID: MB-75991	SampType: MBLK			TestCode: EPA Method 8081: Pesticides TCLP						
Client ID: PBW	Batch ID: 75991			RunNo: 98126						
Prep Date: 7/5/2023	Analysis Date: 7/11/2023			SeqNo: 3570668		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Surr: Decachlorobiphenyl	0.0022		0.002500		86.4	40.9	111			
Surr: Tetrachloro-m-xylene	0.0017		0.002500		69.2	15	107			

Sample ID: LCS-75991	SampType: LCS			TestCode: EPA Method 8081: Pesticides TCLP						
Client ID: LCSW	Batch ID: 75991			RunNo: 98126						
Prep Date: 7/5/2023	Analysis Date: 7/11/2023			SeqNo: 3570669		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0020		0.002500		81.5	40.9	111			
Surr: Tetrachloro-m-xylene	0.0012		0.002500		49.8	15	107			

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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2306G28
25-Jul-23

Client: Merrion Oil and Gas
Project: Aqua Moss Sunco 1

Sample ID: LCSD-75991	SampType: LCSD	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSS02	Batch ID: 75991	RunNo: 98126								
Prep Date: 7/5/2023	Analysis Date: 7/11/2023	SeqNo: 3570670			Units: %Rec					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0015		0.002500		60.9	40.9	111	0	0	
Surr: Tetrachloro-m-xylene	0.00099		0.002500		39.4	15	107	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 standard limits. If undiluted results may be estimated.

B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2306G28

25-Jul-23

Client: Merrion Oil and Gas**Project:** Aqua Moss Sunco 1

Sample ID: 100ng lcs	SampType: LCS			TestCode: TCLP Volatiles by 8260B						
Client ID: LCSW	Batch ID: T97954			RunNo: 97954						
Prep Date:	Analysis Date: 7/5/2023			SeqNo: 3563825		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.020	0.010	0.02000	0	102	70	130			
1,1-Dichloroethene	0.020	0.010	0.02000	0	101	70	130			
Trichloroethene (TCE)	0.021	0.010	0.02000	0	105	70	130			
Chlorobenzene	0.019	0.010	0.02000	0	94.9	70	130			
Surr: 1,2-Dichloroethane-d4	0.012		0.01000		120	70	130			
Surr: 4-Bromofluorobenzene	0.0099		0.01000		98.6	70	130			
Surr: Dibromofluoromethane	0.011		0.01000		114	70	130			
Surr: Toluene-d8	0.0098		0.01000		98.5	70	130			

Sample ID: mb	SampType: MBLK			TestCode: TCLP Volatiles by 8260B						
Client ID: PBW	Batch ID: T97954			RunNo: 97954						
Prep Date:	Analysis Date: 7/5/2023			SeqNo: 3563827		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.50								
1,2-Dichloroethane (EDC)	ND	0.50								
2-Butanone	ND	200								
Carbon Tetrachloride	ND	0.50								
Chloroform	ND	6.0								
1,4-Dichlorobenzene	ND	7.5								
1,1-Dichloroethene	ND	0.70								
Tetrachloroethene (PCE)	ND	0.70								
Trichloroethene (TCE)	ND	0.50								
Vinyl chloride	ND	0.20								
Chlorobenzene	ND	100								
Surr: 1,2-Dichloroethane-d4	0.012		0.01000		116	70	130			
Surr: 4-Bromofluorobenzene	0.010		0.01000		101	70	130			
Surr: Dibromofluoromethane	0.012		0.01000		118	70	130			
Surr: Toluene-d8	0.010		0.01000		100	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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**WO#: **2306G28****25-Jul-23****Client:** Merrion Oil and Gas**Project:** Aqua Moss Sunco 1

Sample ID: MB-76008	SampType: MBLK			TestCode: EPA Method 8270C TCLP						
Client ID: PBW	Batch ID: 76008			RunNo: 98078						
Prep Date: 7/6/2023	Analysis Date: 7/10/2023			SeqNo: 3569117		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	ND	200								
3+4-Methylphenol	ND	200								
2,4-Dinitrotoluene	ND	0.13								
Hexachlorobenzene	ND	0.13								
Hexachlorobutadiene	ND	0.50								
Hexachloroethane	ND	3.0								
Nitrobenzene	ND	2.0								
Pentachlorophenol	ND	100								
Pyridine	ND	5.0								
2,4,5-Trichlorophenol	ND	400								
2,4,6-Trichlorophenol	ND	2.0								
Cresols, Total	ND	200								
Surr: 2-Fluorophenol	0.12		0.2000		59.3	20.8	71.9			
Surr: Phenol-d5	0.086		0.2000		42.9	16.2	54.5			
Surr: 2,4,6-Tribromophenol	0.14		0.2000		70.6	18.8	117			
Surr: Nitrobenzene-d5	0.072		0.1000		72.2	33	85.9			
Surr: 2-Fluorobiphenyl	0.060		0.1000		60.2	26.3	79.6			
Surr: 4-Terphenyl-d14	0.10		0.1000		105	53.9	124			

Sample ID: LCS-76008	SampType: LCS			TestCode: EPA Method 8270C TCLP						
Client ID: LCSW	Batch ID: 76008			RunNo: 98078						
Prep Date: 7/6/2023	Analysis Date: 7/10/2023			SeqNo: 3569118		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.065	0.00010	0.1000	0	64.8	26.8	92.9			
3+4-Methylphenol	0.14	0.00010	0.2000	0	67.6	23.7	100			
2,4-Dinitrotoluene	0.060	0.00010	0.1000	0	59.9	22.3	71.2			
Hexachlorobenzene	0.073	0.00010	0.1000	0	72.8	26.1	91.6			
Hexachlorobutadiene	0.038	0.00010	0.1000	0	38.3	15	74.2			
Hexachloroethane	0.042	0.00010	0.1000	0	42.1	15	85.4			
Nitrobenzene	0.064	0.00010	0.1000	0	63.8	26.1	89.6			
Pentachlorophenol	0.059	0.00010	0.1000	0	59.4	21.7	89.4			
Pyridine	0.037	0.00010	0.1000	0	36.8	15	68.4			
2,4,5-Trichlorophenol	0.070	0.00010	0.1000	0	70.4	27	97.9			
2,4,6-Trichlorophenol	0.075	0.00010	0.1000	0	74.6	27.9	92.6			
Cresols, Total	0.20	0.00010	0.3000	0	66.7	24.8	97.7			
Surr: 2-Fluorophenol	0.12		0.2000		57.5	20.8	71.9			
Surr: Phenol-d5	0.086		0.2000		43.1	16.2	54.5			
Surr: 2,4,6-Tribromophenol	0.17		0.2000		86.0	18.8	117			

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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

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QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2306G28

25-Jul-23

Client: Merrion Oil and Gas**Project:** Aqua Moss Sunco 1

Sample ID: LCS-76008	SampType: LCS	TestCode: EPA Method 8270C TCLP								
Client ID: LCSW	Batch ID: 76008	RunNo: 98078								
Prep Date: 7/6/2023	Analysis Date: 7/10/2023	SeqNo: 3569118	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	0.071		0.1000		71.3	33	85.9			
Surr: 2-Fluorobiphenyl	0.062		0.1000		62.5	26.3	79.6			
Surr: 4-Terphenyl-d14	0.11		0.1000		108	53.9	124			

Sample ID: LCSD-76008	SampType: LCSD	TestCode: EPA Method 8270C TCLP								
Client ID: LCSS02	Batch ID: 76008	RunNo: 98078								
Prep Date: 7/6/2023	Analysis Date: 7/10/2023	SeqNo: 3569119	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.065	0.00010	0.1000	0	65.0	26.8	92.9	0.316	20	RS
3+4-Methylphenol	0.14	0.00010	0.2000	0	69.3	23.7	100	2.43	20	
2,4-Dinitrotoluene	0.058	0.00010	0.1000	0	58.5	22.3	71.2	2.44	20	
Hexachlorobenzene	0.071	0.00010	0.1000	0	70.7	26.1	91.6	2.91	20	
Hexachlorobutadiene	0.039	0.00010	0.1000	0	38.7	15	74.2	0.952	20	
Hexachloroethane	0.042	0.00010	0.1000	0	42.3	15	85.4	0.468	20	
Nitrobenzene	0.069	0.00010	0.1000	0	69.0	26.1	89.6	7.90	20	
Pentachlorophenol	0.057	0.00010	0.1000	0	57.2	21.7	89.4	3.61	20	
Pyridine	0.011	0.00010	0.1000	0	11.2	15	68.4	107	20	
2,4,5-Trichlorophenol	0.065	0.00010	0.1000	0	65.1	27	97.9	7.74	20	
2,4,6-Trichlorophenol	0.074	0.00010	0.1000	0	73.8	27.9	92.6	1.09	20	
Cresols, Total	0.20	0.00010	0.3000	0	67.9	24.8	97.7	1.75	20	
Surr: 2-Fluorophenol	0.12		0.2000		60.1	20.8	71.9	0	20	
Surr: Phenol-d5	0.087		0.2000		43.4	16.2	54.5	0	20	
Surr: 2,4,6-Tribromophenol	0.15		0.2000		73.8	18.8	117	0	20	
Surr: Nitrobenzene-d5	0.076		0.1000		75.6	33	85.9	0	20	
Surr: 2-Fluorobiphenyl	0.065		0.1000		64.5	26.3	79.6	0	20	
Surr: 4-Terphenyl-d14	0.093		0.1000		93.1	53.9	124	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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306G28
25-Jul-23

Client: Merrion Oil and Gas
Project: Aqua Moss Sunco 1

Sample ID: lcs-1 99.3uS eC		SampType: lcs		TestCode: SM2510B: Specific Conductance						
Client ID: LCSW		Batch ID: R98235		RunNo: 98235						
Prep Date:		Analysis Date: 7/14/2023		SeqNo: 3575042			Units: µmhos/cm			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	99.30	0	101	85	115			

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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2306G28
25-Jul-23

Client: Merrion Oil and Gas
Project: Aqua Moss Sunco 1

Sample ID: MB-76174	SampType: MBLK	TestCode: EPA Method 7470A: Mercury
Client ID: PBW	Batch ID: 76174	RunNo: 98185
Prep Date: 7/13/2023	Analysis Date: 7/13/2023	SeqNo: 3572629 Units: mg/L
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Mercury	ND 0.00020	

Sample ID: LCSLL-76174	SampType: LCSLL	TestCode: EPA Method 7470A: Mercury
Client ID: BatchQC	Batch ID: 76174	RunNo: 98185
Prep Date: 7/13/2023	Analysis Date: 7/13/2023	SeqNo: 3572630 Units: mg/L
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Mercury	ND 0.00020 0.0001500	0 107 50 150

Sample ID: LCS-76174	SampType: LCS	TestCode: EPA Method 7470A: Mercury
Client ID: LCSW	Batch ID: 76174	RunNo: 98185
Prep Date: 7/13/2023	Analysis Date: 7/13/2023	SeqNo: 3572631 Units: mg/L
Analyte	Result	PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Mercury	0.0049 0.00020 0.005000	0 97.9 85 115

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 standard limits. If undiluted results may be estimated.

B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT**Hall Environmental Analysis Laboratory, Inc.**

WO#: 2306G28

25-Jul-23

Client: Merrion Oil and Gas**Project:** Aqua Moss Sunco 1

Sample ID: MB-A	SampType: MBLK	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: PBW	Batch ID: A97884	RunNo: 97884								
Prep Date:	Analysis Date: 7/3/2023	SeqNo: 3560949 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	ND	1.0								
Potassium	ND	1.0								

Sample ID: LCS-A	SampType: LCS	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: LCSW	Batch ID: A97884	RunNo: 97884								
Prep Date:	Analysis Date: 7/3/2023	SeqNo: 3560951 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	50	1.0	50.00	0	100	80	120			
Potassium	50	1.0	50.00	0	99.0	80	120			

Sample ID: MB-A	SampType: MBLK	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: PBW	Batch ID: A98145	RunNo: 98145								
Prep Date:	Analysis Date: 7/13/2023	SeqNo: 3571281 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LCS-A	SampType: LCS	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: LCSW	Batch ID: A98145	RunNo: 98145								
Prep Date:	Analysis Date: 7/13/2023	SeqNo: 3571283 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	52	1.0	50.00	0	104	80	120			
Sodium	53	1.0	50.00	0	105	80	120			

Sample ID: LCSD-A	SampType: LCSD	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: LCSS02	Batch ID: A98145	RunNo: 98145								
Prep Date:	Analysis Date: 7/13/2023	SeqNo: 3571284 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	52	1.0	50.00	0	104	80	120	0.0880	20	
Sodium	53	1.0	50.00	0	106	80	120	0.833	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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2306G28
25-Jul-23

Client: Merrion Oil and Gas
Project: Aqua Moss Sunco 1

Sample ID: MB-76129	SampType: MBLK	TestCode: EPA 6010B: Total Recoveable Metals								
Client ID: PBW	Batch ID: 76129	RunNo: 98131								
Prep Date: 7/11/2023	Analysis Date: 7/12/2023	SeqNo: 3570710	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Silver	ND	0.0050								

Sample ID: LCS-76129	SampType: LCS	TestCode: EPA 6010B: Total Recoveable Metals								
Client ID: LCSW	Batch ID: 76129	RunNo: 98131								
Prep Date: 7/11/2023	Analysis Date: 7/12/2023	SeqNo: 3570712	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Barium	0.46	0.0020	0.5000	0	93.0	80	120			
Cadmium	0.47	0.0020	0.5000	0	94.9	80	120			
Chromium	0.47	0.0060	0.5000	0	94.2	80	120			
Silver	0.091	0.0050	0.1000	0	91.4	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 Quantitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.

B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306G28

25-Jul-23

Client: Merrion Oil and Gas

Project: Aqua Moss Sunco 1

Sample ID: mb-1 alk	SampType: MBLK		TestCode: SM2320B: Alkalinity							
Client ID: PBW	Batch ID: R97982		RunNo: 97982							
Prep Date:	Analysis Date: 7/6/2023		SeqNo: 3565365		Units: mg/L CaCO3					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-1 alk	SampType: LCS		TestCode: SM2320B: Alkalinity							
Client ID: LCSW	Batch ID: R97982		RunNo: 97982							
Prep Date:	Analysis Date: 7/6/2023		SeqNo: 3565366		Units: mg/L CaCO3					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.96	20.00	80.00	0	100	90	110			

Sample ID: mb-2 alk	SampType: MBLK		TestCode: SM2320B: Alkalinity							
Client ID: PBW	Batch ID: R97982		RunNo: 97982							
Prep Date:	Analysis Date: 7/6/2023		SeqNo: 3565388		Units: mg/L CaCO3					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-2 alk	SampType: LCS		TestCode: SM2320B: Alkalinity							
Client ID: LCSW	Batch ID: R97982		RunNo: 97982							
Prep Date:	Analysis Date: 7/6/2023		SeqNo: 3565389		Units: mg/L CaCO3					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80.72	20.00	80.00	0	101	90	110			

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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank
E Above Quantitation Range/Estimated Value
J Analyte detected below quantitation limits
P Sample pH Not In Range
RL Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306G28

25-Jul-23

Client: Merrion Oil and Gas

Project: Aqua Moss Sunco 1

Sample ID: 2306G28-001CDUP		SampType: DUP		TestCode: Specific Gravity						
Client ID: S-26 (6/29/23)		Batch ID: R97877		RunNo: 97877						
Prep Date:		Analysis Date: 7/1/2023		SeqNo: 3560399		Units:				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Gravity	1.018	0						0.236	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 standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2306G28
25-Jul-23

Client: Merrion Oil and Gas
Project: Aqua Moss Sunco 1

Sample ID: MB-76015	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 76015	RunNo: 98008								
Prep Date: 7/6/2023	Analysis Date: 7/7/2023	SeqNo: 3566103		Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	50.0								

Sample ID: LCS-76015	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 76015	RunNo: 98008								
Prep Date: 7/6/2023	Analysis Date: 7/7/2023	SeqNo: 3566104		Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	989	50.0	1000	0	98.9	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 Quantitative Limit

S % Recovery outside of standard limits. If undiluted results may be estimated.

B Analyte detected in the associated Method Blank

E Above Quantitation Range/Estimated Value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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: Merrion Oil and Gas

Work Order Number: 2306G28

RcptNo: 1

Received By: Tracy Casarrubias 6/30/2023 6:25:00 AM

Completed By: Tracy Casarrubias 6/30/2023 9:19:58 AM

Reviewed By: *JA* 6-30-23Chain 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 $>0^{\circ}\text{C}$ 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 ☐ *scm 06/30/23*
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☒ NA ☐ *scm 06/30/23*
10. Were any sample containers received broken? Yes ☐ No ☒ *3:1*
of preserved bottles checked for pH: *YES*
(<2 or >12 unless noted)
11. Does paperwork match bottle labels?
(Note discrepancies on chain of custody) Yes ☒ No ☐ Adjusted? *YES*
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 ☐ Checked by: *scm*

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:

*ADDED ~ 0.5 mLs HNO₃ (Lot# 7162) TO SAMPLE 001E FOR pH < 2.
POURED OFF ~ 175 mLs FROM SAMPLE 001C FOR SAMPLE 001G
FOR ORP ANALYSIS scm 06/30/23 scm 06/30/23
ALL VOA'S RECEIVED WITH AIR 06/30/23*

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal No	Seal No	Signed By
1	5.4	Good	Yes	Yogi			
2	3.2	Good	Yes	Yogi			

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Chain-of-Custody Record

Client: merriam oil & gas

Mailing Address: 610 Reilly Ave

Farmington Nm 8740

Phone #: 5054961171

email or Fax#: Thompson@erotion.biz

QA/QC Package:

☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC

☐ Other

☐ EDD (Type)

Date	Time	Matrix	Sample Name
------	------	--------	-------------

16/29/23 10:00 AQ 5-26(6/29/23))

(2) 500ml P	ADN
500ml	Zinc Acetate

(1) 500 mL of $\frac{\text{conc HCl}}{\text{NaOH}}$

[illegible][illegible]

125 ml p H-504

710-10 01 (m) 2 (1)

(1) 250ml NaOH

13) 40mL HCl

104	104
-----	-----

250 M _p	NO
--------------------	----

Date:	Time:	Relinquished by:
-------	-------	------------------

6/29/22	1604	Wynn/Caplan
---------	------	-------------

Date:	Time:	Relinquished by:
-------	-------	------------------

2007-2008

Received by:	Via:	Date	Time
--------------	------	------	------

Mr Vas 6/29/23 1604

Received by: Via: *cash* Date: Time:

6/30/13 6:25

Remarks:

Remarks: Direct Bill Agua Moss LLC

Rates Per Andy

Reporting Limits per Attached

Any sub-contracted data will be clearly notated on the analytical report. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Sunco Disposal #1
Quarterly Laboratory Analytical List
Page 1

Characteristic of toxicity using the Toxicity Characteristic Leaching Procedure, EPA SW-846
Test Method 1311 (see Table 1, 40 CFR 261.24(b)).

QUARTERLY MONITORING LIST			
EPA HW No.	Contaminant	SW-846 Methods	Regulatory Level (mg/L)
D004	Arsenic	1311	5.0
D005	Barium	1311	100.0
D018	Benzene	8021B	0.5
D006	Cadmium	1311	1.0
D019	Carbon tetrachloride	8021B 8260B	0.5
D020	Chlordane	8081A	0.03
D021	Chlorobenzene	8021B 8260B	100.0
D022	Chloroform	8021B 8260B	5.0
D007	Chromium	1311	5.0
D023	o-Cresol	8270D	200.0
D024	m-Cresol	8270D	200.0
D025	p-Cresol	8270D	200.0
D026	Cresol	8270D	200.0
D027	1,4-Dichlorobenzene	8021B 8121 8260B 8270D	7.5
D028	1,2-Dichloroethane	8021B 8260B	0.5
D029	1,1-Dichloroethylene	8021B 8260B	0.7
D030	2,4-Dinitrotoluene	8091 8270D	0.13
D032	Hexachlorobenzene	8121	0.13
D033	Hexachlorobutadiene	8021B 8121 8260B	0.5
D034	Hexachlorocyclopentadiene	8121	0.0
D008	Lead	1311	5.0
D009	Mercury	7470A 7471B	0.2
D035	Methyl ethyl ketone	8015B 8260B	200.0

Sunco Disposal #1
Quarterly Laboratory Analytical List
Page 2

D036	Nitrobenzene	8091 8270D	2.0
D037	Pentachlorophenol	8041	100.0
D038	Pyridine	8260B 8270D	5.0
D010	Selenium	1311	1.0
D011	Silver	1311	5.0
D039	Tetrachloroethylene	8260B	0.7
D040	Trichloroethylene	8021B 8260B	0.5
D041	2,4,5-Trichlorophenol	8270D	400.0
D042	2,4,6-Trichlorophenol	8041A 8270D	2.0
D043	Vinyl chloride	8021B 8260B	0.2

*If o-, m-, and p-cresol concentrations cannot be differentiated, then the total cresol (D026) concentration is used.
The regulatory level of total cresol is 200 µg/L.
If the quantitation limit is greater than the regulatory level, then the quantitation limit becomes the regulatory level.
If metals (dissolved), the EPA 1311 TCLP Laboratory Method is required with the exception of Mercury (total).*

ADDITIONALLY:

RCI, specific conductance, specific gravity, ORP, and general water quality parameters (general chemistry/cations and anions, including: fluoride, calcium, potassium, magnesium, sodium bicarbonate, carbonate, chloride, sulfate, total dissolved solids, cation/anion balance, pH, and bromide) using the methods specified at 40 CFR 136.3.

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 269810

COMMENTS

Operator: AGUA MOSS, LLC P.O. Box 600 Farmington, NM 87499	OGRID: 247130
	Action Number: 269810
	Action Type: [UF-DP] Discharge Permit (DISCHARGE PERMIT)

COMMENTS

Created By	Comment	Comment Date
cchavez	Quarterly Report- QR FY23 Q3 Submittal	10/4/2023

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CONDITIONS

Created By	Condition	Condition Date
cchavez	None	10/4/2023