

UICI - 5

ANNUAL

REPORT

2021

Annual Class I Well Report for 2021

August 11, 2022

Agua Moss, LLC

PO Box 600

Farmington, NM 87499

Permit UICI-005

API 30-045-28653

Submitted By:

Philana Thompson

Regulatory Compliance Specialist

Merrion Oil & Gas

610 Reilly Ave

Farmington, NM 87401

505-486-1171 cell

pthompson@merrion.bz

Appendices

Appendix A

Monthly Injection/disposal volumes
MAX and Average injection PSI

Appendix B

Quarterly Chemical Analyses Data

Appendix C

MIT
BH Test
FOT

Appendix D

Charts
C-138s

Appendix E

AOR

Appendix F

Monitor Well

Summary of Operations

At the request of the NMOCD and permit requirements, a Reservoir Pressure Evaluation Test (RPE) was performed on the Sunco SWD #1 Class I injection well (UICI-5-0) on 07/12/2021. Attached in this report is the summary of findings from the Reservoir Pressure Evaluation Test.

BH & MIT test conducted, both successful 7/12/2021



Souder, Miller & Associates ♦ 401 West Broadway ♦ Farmington, NM 87401
(505) 325-7535 ♦ (800) 519-0098 ♦ fax (505) 326-0045

April 2, 2021

Project No. 5129666

Ms. Philana Thompson
Agua Moss LLC
P.O. Box 600
Farmington, NM 87499
pthompson@merrion.bz
(505) 324-5300

RE: Sunco Disposal #1 Injection Water Monitoring – 1st Quarter 2021

Dear Ms. Thompson:

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 1st Quarter 2021. 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

Souder, Miller & Associates (SMA) personnel collected one injection water sample, S-17, from the process line inside the pump building on March 5, 2021. 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-17) was field screened for time sensitive parameters including pH, temperature, reduction potential, specific conductance, and total dissolved solids. 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 and reduction potential.

A dilution due to matrix qualifier is indicated on the laboratory report for total dissolved solids, reactive cyanide, selenium, lead, and arsenic.

A low recovery for the laboratory control spike was reported for reactive cyanide.

Ms. Philana Thompson

April 2, 2021

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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.

Closure and Limitations

This report is prepared for the exclusive use of Agua Moss LLC and is subject to the terms, conditions, and limitations stated in SMA's Master Professional Services Agreement with Agua Moss LLC. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Souder, Miller & Associates appreciates the opportunity to provide services to Agua Moss LLC. If you have any questions, please contact me at (505) 325-7535.

Sincerely,

MILLER ENGINEERS, INC. d/b/a
SOUDER, MILLER & ASSOCIATES



Heather M. Woods, P.G.

Project Geoscientist

Heather.Woods@soudermiller.com

Attachments:

Table 1. Summary of Field Screening and Laboratory Analytical Results
Laboratory Analytical Reports (Hall 2103428)

Table 1:
Summary of Field Screening and Laboratory Analytical Results

AGUA MOSS LLC
SUNCO DISPOSAL #1
1ST QUARTER 2021 MONITORING

Sample ID	S-17			
Collection Date	3/5/2021			
Analyte	Field Results	Laboratory Results	Units	Toxicity Characteristic Concentrations
Arsenic	--	<0.50 D	mg/L	5.0 mg/L
Barium	--	<100	mg/L	100.0 mg/L
Benzene	--	11	mg/L	0.5 mg/L
Cadmium	--	<1.0	mg/L	1 mg/L
Carbon tetrachloride	--	<0.50	mg/L	0.5 mg/L
Chlordane	--	<0.030	mg/L	0.03 mg/L
Chlorobenzene	--	<100	mg/L	100.0 mg/L
Chloroform	--	<6.0	mg/L	6.0 mg/L
Chromium	--	<5.0	mg/L	5.0 mg/L
o-Cresol	--	--	mg/L	200.0 mg/L
m+p-Cresol	--	--	mg/L	200.0 mg/L
Cresol	--	<200	mg/L	200.0 mg/L
1,4-Dichlorobenzene	--	<7.5	mg/L	7.5 mg/L
1,2-Dichloroethane	--	<0.50	mg/L	0.5 mg/L
1,1-Dichloroethylene	--	<0.70	mg/L	0.7 mg/L
2,4-Dinitrotoluene	--	<0.13	mg/L	0.13 mg/L
Hexachlorobenzene	--	<0.13	mg/L	0.13 mg/L
Hexachlorobutadiene	--	<0.50	mg/L	0.5 mg/L
Hexachloroethane	--	<3.0	mg/L	3.0 mg/L
Lead	--	<0.50 D	mg/L	5.0 mg/L
Mercury	--	<0.020	mg/L	0.2 mg/L
Methyl ethyl ketone	--	<200	mg/L	200.0 mg/L
Nitrobenzene	--	<2.0	mg/L	2.0 mg/L
Pentachlorophenol	--	<100	mg/L	100.0 mg/L
Pyridine	--	<5.0	mg/L	5.0 mg/L
Selenium	--	<0.10 D	mg/L	1.0 mg/L
Silver	--	<5.0	mg/L	5.0 mg/L
Tetrachloroethylene	--	<0.70	mg/L	0.7 mg/L
Trichloroethylene	--	<0.50	mg/L	0.5 mg/L
2,4,5-Trichlorophenol	--	<400	mg/L	400.0 mg/L
2,4,6-Trichlorophenol	--	<2.0	mg/L	2.0 mg/L
Vinyl chloride	--	<0.20	mg/L	0.2 mg/L
Reactive sulfide	--	0.732 D	mg/L	
Reactive cyanide	--	<0.00500 D,S	mg/L	
Corrosivity by pH	--	8.47 H	s.u.	
Ignitability	--	DNF at 170	deg F	
Specific conductance	16,820	28,000	µmhos/cm	
Specific gravity	--	1.004		
ORP	7.4	85.9 H	mV	
Fluoride	--	<0.50	mg/L	
Calcium	--	77	mg/L	
Potassium	--	28	mg/L	
Magnesium	--	35	mg/L	
Bicarbonate (as CaCO ₃)	--	1,916	mg/L Ca	
Carbonate (as CaCO ₃)	--	188.8	mg/L Ca	
Chloride	--	6,300	mg/L	
Sulfate	--	85	mg/L	
Total dissolved solids	10,200	12,400 D	mg/L	
pH	8.59	8.39 H		
Bromide	--	20	mg/L	
Temperature	14.2	--	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: clients.hallenvironmental.com

March 26, 2021

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

RE: Aqua Moss Sunco Disposal # 1

OrderNo.: 2103428

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 3/6/2021 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.

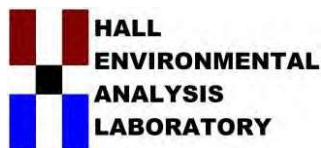
Please don't hesitate to contact HEAL for any additional information or clarifications.

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



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

Case Narrative

WO#: 2103428
Date: 3/26/2021

CLIENT: Souder, Miller and Associates
Project: Aqua Moss Sunco Disposal # 1

Analytical Notes Regarding EPA Method 8270:

The Laboratory Control Spike (LCS) had a low recovery for 2,4-Dinitrotoluene. The MS/MSD had acceptable recoveries.

Analytical Report

Lab Order 2103428

Date Reported: 3/26/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: S-17 (3/5/21)

Project: Aqua Moss Sunco Disposal # 1

Collection Date: 3/5/2021 5:45:00 PM

Lab ID: 2103428-001

Matrix: AQUEOUS

Received Date: 3/6/2021 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES TCLP							Analyst: LSB
Chlordane	ND	0.030		mg/L	1	3/18/2021 2:33:13 PM	58634
Surr: Decachlorobiphenyl	89.3	41.7-129		%Rec	1	3/18/2021 2:33:13 PM	58634
Surr: Tetrachloro-m-xylene	1170	31.8-88.5	S	%Rec	1	3/18/2021 2:33:13 PM	58634
EPA 200.8: METALS							Analyst: bcv
Arsenic	ND	0.50	D	mg/L	5	3/12/2021 1:59:17 PM	58669
Lead	ND	0.50	D	mg/L	5	3/12/2021 1:59:17 PM	58669
Selenium	ND	0.10	D	mg/L	5	3/12/2021 1:59:17 PM	58669
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	3/18/2021 4:08:02 PM	58664
3+4-Methylphenol	ND	200		mg/L	1	3/18/2021 4:08:02 PM	58664
2,4-Dinitrotoluene	ND	0.13		mg/L	1	3/18/2021 4:08:02 PM	58664
Hexachlorobenzene	ND	0.13		mg/L	1	3/18/2021 4:08:02 PM	58664
Hexachlorobutadiene	ND	0.50		mg/L	1	3/18/2021 4:08:02 PM	58664
Hexachloroethane	ND	3.0		mg/L	1	3/18/2021 4:08:02 PM	58664
Nitrobenzene	ND	2.0		mg/L	1	3/18/2021 4:08:02 PM	58664
Pentachlorophenol	ND	100		mg/L	1	3/18/2021 4:08:02 PM	58664
Pyridine	ND	5.0		mg/L	1	3/18/2021 4:08:02 PM	58664
2,4,5-Trichlorophenol	ND	400		mg/L	1	3/18/2021 4:08:02 PM	58664
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	3/18/2021 4:08:02 PM	58664
Cresols, Total	ND	200		mg/L	1	3/18/2021 4:08:02 PM	58664
Surr: 2-Fluorophenol	0	15-91.8	S	%Rec	1	3/18/2021 4:08:02 PM	58664
Surr: Phenol-d5	28.9	15-69.6		%Rec	1	3/18/2021 4:08:02 PM	58664
Surr: 2,4,6-Tribromophenol	63.2	15-115		%Rec	1	3/18/2021 4:08:02 PM	58664
Surr: Nitrobenzene-d5	45.5	15-109		%Rec	1	3/18/2021 4:08:02 PM	58664
Surr: 2-Fluorobiphenyl	42.1	15-96		%Rec	1	3/18/2021 4:08:02 PM	58664
Surr: 4-Terphenyl-d14	53.6	15-133		%Rec	1	3/18/2021 4:08:02 PM	58664
SPECIFIC GRAVITY							Analyst: JRR
Specific Gravity	1.004	0			1	3/25/2021 2:18:00 PM	R76216
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	0.50		mg/L	5	3/10/2021 1:53:53 PM	R75861
Chloride	6300	500	*	mg/L	1E+	3/20/2021 4:32:39 PM	R76100
Bromide	20	0.50		mg/L	5	3/10/2021 1:53:53 PM	R75861
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	3/10/2021 1:53:53 PM	R75861
Sulfate	85	2.5		mg/L	5	3/10/2021 1:53:53 PM	R75861
Nitrate+Nitrite as N	ND	10		mg/L	50	3/19/2021 2:30:29 AM	A76059
SM2510B: SPECIFIC CONDUCTANCE							Analyst: CAS
Conductivity	28000	100		µmhos/c	10	3/16/2021 3:47:50 PM	R76029

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

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Analytical Report

Lab Order 2103428

Date Reported: 3/26/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: S-17 (3/5/21)

Project: Aqua Moss Sunco Disposal # 1

Collection Date: 3/5/2021 5:45:00 PM

Lab ID: 2103428-001

Matrix: AQUEOUS

Received Date: 3/6/2021 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2320B: ALKALINITY							Analyst: CAS
Bicarbonate (As CaCO ₃)	1916	50.00		mg/L Ca	2.5	3/16/2021 3:52:22 PM	R76029
Carbonate (As CaCO ₃)	188.8	5.000		mg/L Ca	2.5	3/16/2021 3:52:22 PM	R76029
Total Alkalinity (as CaCO ₃)	2105	50.00		mg/L Ca	2.5	3/16/2021 3:52:22 PM	R76029
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: MH
Total Dissolved Solids	12400	200	*D	mg/L	1	3/12/2021 2:25:00 PM	58667
SM4500-H+B / 9040C: PH							Analyst: CAS
pH	8.39		H	pH units	1	3/12/2021 12:35:23 PM	R75940
EPA METHOD 200.7: METALS							Analyst: ELS
Barium	ND	100	*	mg/L	5	3/12/2021 1:48:13 PM	58669
Cadmium	ND	1.0		mg/L	1	3/12/2021 1:46:52 PM	58669
Chromium	ND	5.0		mg/L	1	3/12/2021 1:46:52 PM	58669
Silver	ND	5.0		mg/L	1	3/12/2021 1:46:52 PM	58669
Sulfur	46	2.0		mg/L	1	3/12/2021 1:46:52 PM	58669
EPA METHOD 245.1: MERCURY							Analyst: ags
Mercury	ND	0.020		mg/L	1	3/12/2021 2:40:57 PM	58690
EPA METHOD 6010B: DISSOLVED METALS							Analyst: JLF
Calcium	77	5.0		mg/L	5	3/18/2021 5:38:38 PM	A76078
Magnesium	35	5.0		mg/L	5	3/18/2021 5:38:38 PM	A76078
Potassium	28	5.0		mg/L	5	3/18/2021 5:38:38 PM	A76078
Sodium	4700	50		mg/L	50	3/18/2021 5:47:27 PM	A76078
TCLP VOLATILES BY 8260B							Analyst: JMR
Benzene	11	0.50		mg/L	200	3/17/2021 3:35:48 AM	D75990
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	200	3/17/2021 3:35:48 AM	D75990
2-Butanone	ND	200		mg/L	200	3/17/2021 3:35:48 AM	D75990
Carbon Tetrachloride	ND	0.50		mg/L	200	3/17/2021 3:35:48 AM	D75990
Chloroform	ND	6.0		mg/L	200	3/17/2021 3:35:48 AM	D75990
1,4-Dichlorobenzene	ND	7.5		mg/L	200	3/17/2021 3:35:48 AM	D75990
1,1-Dichloroethene	ND	0.70		mg/L	200	3/17/2021 3:35:48 AM	D75990
Tetrachloroethene (PCE)	ND	0.70		mg/L	200	3/17/2021 3:35:48 AM	D75990
Trichloroethene (TCE)	ND	0.50		mg/L	200	3/17/2021 3:35:48 AM	D75990
Vinyl chloride	ND	0.20		mg/L	200	3/17/2021 3:35:48 AM	D75990
Chlorobenzene	ND	100		mg/L	200	3/17/2021 3:35:48 AM	D75990
Surr: 1,2-Dichloroethane-d4	87.5	70-130		%Rec	200	3/17/2021 3:35:48 AM	D75990
Surr: 4-Bromofluorobenzene	101	70-130		%Rec	200	3/17/2021 3:35:48 AM	D75990
Surr: Dibromofluoromethane	89.6	70-130		%Rec	200	3/17/2021 3:35:48 AM	D75990
Surr: Toluene-d8	102	70-130		%Rec	200	3/17/2021 3:35:48 AM	D75990

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

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ANALYTICAL REPORT

March 17, 2021

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1325250

Samples Received: 03/10/2021

Project Number:

Description:

Report To: Jackie Bolte
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

Entire Report Reviewed By:

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
2103428-001F S-17 (3/5/21) L1325250-01	5	
2103428-001G S-17 (3/5/21) L1325250-02	6	⁴ Cn
Qc: Quality Control Summary	7	⁵ Sr
Wet Chemistry by Method 2580	7	
Wet Chemistry by Method 4500 CN E-2011	8	⁶ Qc
Wet Chemistry by Method 4500H+ B-2011	9	
Wet Chemistry by Method 9034-9030B	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

SAMPLE SUMMARY

2103428-001F S-17 (3/5/21) L1325250-01 WW

Collected by
Collected date/time
Received date/time

03/05/21 17:45 03/10/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 CN E-2011	WG1633983	1	03/12/21 20:01	03/14/21 04:10	SDL	Mt. Juliet, TN
Wet Chemistry by Method 4500H+ B-2011	WG1632660	1	03/11/21 01:19	03/11/21 01:19	WOS	Mt. Juliet, TN
Wet Chemistry by Method 9034-9030B	WG1631392	1	03/11/21 19:21	03/11/21 19:21	CO	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1635305	1	03/16/21 19:00	03/16/21 19:00	LRP	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2103428-001G S-17 (3/5/21) L1325250-02 GW

Collected by
Collected date/time
Received date/time

03/05/21 17:45 03/10/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2580	WG1632606	1	03/11/21 15:00	03/11/21 15:00	SRG	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.

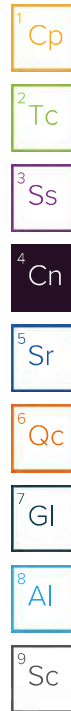


John Hawkins
Project Manager

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.



Collected date/time: 03/05/21 17:45

L1325250

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND	J3 J6	0.00500	1	03/14/2021 04:10	WG1633983

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	8.47	T8	1	03/11/2021 01:19	WG1632660

Sample Narrative:

L1325250-01 WG1632660: 8.47 at 19.8C

Wet Chemistry by Method 9034-9030B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	0.732	J6	0.0500	1	03/11/2021 19:21	WG1631392

Wet Chemistry by Method D93/1010A

Analyte	Result deg F	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170		1	03/16/2021 19:00	WG1635305

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 03/05/21 17:45

Wet Chemistry by Method 2580

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
ORP	85.9	T8	1	03/11/2021 15:00	WG1632606

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1323617-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1323617-01 03/11/21 15:00 • (DUP) R3629735-3 03/11/21 15:00						
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	<u>DUP Qualifier</u>	DUP Diff Limits mV
ORP	217	212	1	5.30		20

L1323617-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1323617-04 03/11/21 15:00 • (DUP) R3629735-4 03/11/21 15:00						
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	<u>DUP Qualifier</u>	DUP Diff Limits mV
ORP	224	223	1	0.900		20

L1323617-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1323617-05 03/11/21 15:00 • (DUP) R3629735-5 03/11/21 15:00						
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	<u>DUP Qualifier</u>	DUP Diff Limits mV
ORP	224	227	1	3.20		20

L1325250-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1325250-02 03/11/21 15:00 • (DUP) R3629735-6 03/11/21 15:00						
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	<u>DUP Qualifier</u>	DUP Diff Limits mV
ORP	85.9	89.3	1	3.40		20

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

(LCS) R3629735-1 03/11/21 15:00 • (LCSD) R3629735-2 03/11/21 15:00						
Analyte	Spike Amount mV	LCS Result mV	LCSD Result mV	LCS Rec. %	LCSD Rec. %	Rec. Limits %
ORP	106	106	105	99.8	98.6	86.0-105
					Diff mV	Diff Limits mV
					1.30	20

Method Blank (MB)

(MB) R3630469-1 03/14/21 04:03

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

L1325471-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1325471-05 03/14/21 04:25 • (DUP) R3630469-7 03/14/21 04:28

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	<u>DUP Qualifier</u> %	DUP RPD Limits %
Reactive Cyanide	0.0208	ND	1	200	P1	20

Laboratory Control Sample (LCS)

(LCS) R3630469-2 03/14/21 04:04

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u> %
Reactive Cyanide	0.100	0.110	110	90.0-117	

L1325250-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1325250-01 03/14/21 04:10 • (MS) R3630469-3 03/14/21 04:11 • (MSD) R3630469-4 03/14/21 04:12

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u> %	<u>MSD Qualifier</u> %	RPD %	RPD Limits %
Reactive Cyanide	0.100	ND	0.0244	0.0141	22.2	11.9	1	90.0-110	J6	J3 J6	53.5	20

L1325471-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1325471-01 03/14/21 04:20 • (MS) R3630469-5 03/14/21 04:21 • (MSD) R3630469-6 03/14/21 04:22

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u> %	<u>MSD Qualifier</u> %	RPD %	RPD Limits %
Reactive Cyanide	0.100	0.131	0.142	0.190	11.0	59.0	1	90.0-110	J6	J3 J6	28.9	20

Laboratory Control Sample (LCS)

(LCS) R3629499-1 03/11/21 01:19

Analyte	Spike Amount su	LCS Result su	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Corrosivity by pH	10.0	9.99	99.9	99.0-101	

Sample Narrative:

LCS: 9.99 at 21.6C

1C

2T

3S

4C

5S

6Qc

7Gl

8Al

9Sc

Method Blank (MB)

(MB) R3629878-1 03/11/21 19:12

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

Laboratory Control Sample (LCS)

(LCS) R3629878-2 03/11/21 19:12

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Reactive Sulfide	0.500	0.502	100	85.0-115	

L1325250-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1325250-01 03/11/21 19:21 • (MS) R3629878-4 03/11/21 19:22 • (MSD) R3629878-5 03/11/21 19:22

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u>	<u>MSD Qualifier</u>	RPD %	RPD Limits %
Reactive Sulfide	1.00	0.732	1.28	1.22	55.2	48.6	1	80.0-120	J6	J6	5.28	20

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

(LCS) R3631420-1 03/16/21 19:00 • (LCSD) R3631420-2 03/16/21 19:00

Analyte	Spike Amount		LCS Result		LCSD Result		LCS Rec.		LCSD Rec.		Rec. Limits		<u>LCS Qualifier</u>		<u>LCSD Qualifier</u>		RPD		RPD Limits	
	deg F		deg F		deg F		%		%		%		%		%	%		%		
Flashpoint	126		125		127		99.2		101		96.0-104				1.59		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.

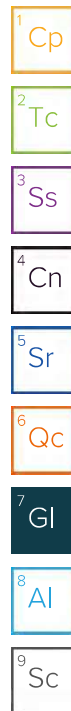
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
P1	RPD value not applicable for sample concentrations less than 5 times the reporting limit.
T8	Sample(s) received past/too close to holding time expiration.



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 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 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: clients.hallenvironmental.com

F082

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

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2103428-001F	S-17 (3/5/21)	500HDPE	Aqueous	3/5/2021 5:45:00 PM	3 RCI	L1325250 -01
2	2103428-001G	S-17 (3/5/21)	125HDP	Aqueous	3/5/2021 5:45:00 PM	1 ORP	-02

Fedex: 1749998 4241

Sample Receipt Checklist

COC Seal Present/Intact: ☒ N ☐ If Applicable

COC Signed/Accurate: ☒ N ☐ VOA Zero Headspace: ☒ N ☐ Pres. Correct/Check: ☒ N ☐ N

Bottles active intact: ☒ N ☐ Correct bottles used: ☒ N ☐ Sufficient volume sent: ☒ N ☐ RAD Screen <0.5 mR/hr: ☒ N ☐ N

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: <i>CL</i>	Date: 3/9/2021	Time: 9:58 AM	Received By: <i>Olivia Tan</i>	Date: <i>3/9/21</i>	Time: <i>9:00</i>
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 ☐

Temp of samples: *At Kt. 24.1 = 2.5*

Comments: *cosi*

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

WO#: 2103428

26-Mar-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco Disposal # 1

Sample ID: MB-58669	SampType: MBLK	TestCode: EPA Method 200.7: Metals								
Client ID: PBW	Batch ID: 58669	RunNo: 75907								
Prep Date: 3/11/2021	Analysis Date: 3/12/2021	SeqNo: 2685796	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0030								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Silver	ND	0.0050								

Sample ID: LLCS-58669	SampType: LCSLL	TestCode: EPA Method 200.7: Metals								
Client ID: BatchQC	Batch ID: 58669	RunNo: 75907								
Prep Date: 3/11/2021	Analysis Date: 3/12/2021	SeqNo: 2685798	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND	0.0030	0.002000	0	65.7	50	150			
Cadmium	ND	0.0020	0.002000	0	75.5	50	150			
Chromium	ND	0.0060	0.006000	0	85.6	50	150			
Silver	ND	0.0050	0.005000	0	98.1	50	150			

Sample ID: LCS-58669	SampType: LCS	TestCode: EPA Method 200.7: Metals								
Client ID: LCSW	Batch ID: 58669	RunNo: 75907								
Prep Date: 3/11/2021	Analysis Date: 3/12/2021	SeqNo: 2685800	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.50	0.0030	0.5000	0	99.5	85	115			
Cadmium	0.50	0.0020	0.5000	0	99.4	85	115			
Chromium	0.48	0.0060	0.5000	0	96.9	85	115			
Silver	0.090	0.0050	0.1000	0	90.5	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 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

Page 4 of 18

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

WO#: 2103428

26-Mar-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco Disposal # 1

Sample ID: MB-58669	SampType: MBLK	TestCode: EPA 200.8: Metals								
Client ID: PBW	Batch ID: 58669	RunNo: 75932								
Prep Date: 3/11/2021	Analysis Date: 3/12/2021	SeqNo: 2686969 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID: MSLLCS-58669		SampType: LCSLL		TestCode: EPA 200.8: Metals						
Client ID: BatchQC		Batch ID: 58669			RunNo: 75932					
Prep Date: 3/11/2021		Analysis Date: 3/12/2021			SeqNo: 2686970		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	95.8	50	150			
Lead	ND	0.00050	0.0005000	0	98.4	50	150			
Selenium	0.0013	0.0010	0.001000	0	133	50	150			

Sample ID: MSLCS-58669		SampType: LCS		TestCode: EPA 200.8: Metals						
Client ID: LCSW		Batch ID: 58669		RunNo: 75932						
Prep Date: 3/11/2021		Analysis Date: 3/12/2021		SeqNo: 2686971			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.4	85	115			
Lead	0.012	0.00050	0.01250	0	99.4	85	115			
Selenium	0.024	0.0010	0.02500	0	95.2	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 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#: 2103428

26-Mar-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco Disposal # 1

Sample ID: MB-58690		SampType: MBLK		TestCode: EPA Method 245.1: Mercury						
Client ID: PBW		Batch ID: 58690		RunNo: 75933						
Prep Date: 3/12/2021		Analysis Date: 3/12/2021		SeqNo: 2687046		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: LL LCS-58690		SampType: LCSLL		TestCode: EPA Method 245.1: Mercury						
Client ID: BatchQC		Batch ID: 58690		RunNo: 75933						
Prep Date: 3/12/2021		Analysis Date: 3/12/2021		SeqNo: 2687047		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020	0.0001500	0	88.7	50	150			

Sample ID: LCS-58690		SampType: LCS		TestCode: EPA Method 245.1: Mercury						
Client ID: LCSW		Batch ID: 58690		RunNo: 75933						
Prep Date: 3/12/2021		Analysis Date: 3/12/2021		SeqNo: 2687048		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0051	0.00020	0.005000	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 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#: 2103428

26-Mar-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco Disposal # 1

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R75861	RunNo: 75861								
Prep Date:	Analysis Date: 3/10/2021	SeqNo: 2684104 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: R75861	RunNo: 75861								
Prep Date:	Analysis Date: 3/10/2021	SeqNo: 2684105 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	105	90	110			
Bromide	2.7	0.10	2.500	0	107	90	110			
Phosphorus, Orthophosphate (As P	4.8	0.50	5.000	0	96.3	90	110			
Sulfate	9.9	0.50	10.00	0	99.0	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: A76059	RunNo: 76059								
Prep Date:	Analysis Date: 3/18/2021	SeqNo: 2692455 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: A76059	RunNo: 76059								
Prep Date:	Analysis Date: 3/18/2021	SeqNo: 2692456 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	96.5	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R76100	RunNo: 76100								
Prep Date:	Analysis Date: 3/20/2021	SeqNo: 2694279 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 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

Page 7 of 18

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2103428
26-Mar-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco Disposal # 1

Sample ID: LCS		SampType: lcs			TestCode: EPA Method 300.0: Anions					
Client ID: LCSW		Batch ID: R76100			RunNo: 76100					
Prep Date:		Analysis Date: 3/20/2021			SeqNo: 2694280		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.7	0.50	5.000	0	94.6	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 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#: 2103428

26-Mar-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco Disposal # 1

Sample ID: MB-58634	SampType: MBLK	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: PBW	Batch ID: 58634	RunNo: 76098								
Prep Date: 3/10/2021	Analysis Date: 3/18/2021	SeqNo: 2694218	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		85.2	41.7	129			
Surr: Tetrachloro-m-xylene	0.0015		0.002500		61.6	31.8	88.5			

Sample ID: LCS-58634	SampType: LCS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSW	Batch ID: 58634	RunNo: 76098								
Prep Date: 3/10/2021	Analysis Date: 3/18/2021	SeqNo: 2694219	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0021		0.002500		83.6	41.7	129			
Surr: Tetrachloro-m-xylene	0.0015		0.002500		58.2	31.8	88.5			

Sample ID: LCS-58634	SampType: LCS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSW	Batch ID: 58634	RunNo: 76098								
Prep Date: 3/10/2021	Analysis Date: 3/18/2021	SeqNo: 2694220	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0021		0.002500		85.6	41.7	129			
Surr: Tetrachloro-m-xylene	0.0015		0.002500		59.4	31.8	88.5			

Sample ID: MB-58634	SampType: MBLK	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: PBW	Batch ID: 58634	RunNo: 76098								
Prep Date: 3/10/2021	Analysis Date: 3/18/2021	SeqNo: 2694221	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		83.5	41.7	129			
Surr: Tetrachloro-m-xylene	0.0016		0.002500		63.6	31.8	88.5			

Sample ID: 2103428-001BMS	SampType: MS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: S-17 (3/5/21)	Batch ID: 58634	RunNo: 76098								
Prep Date: 3/10/2021	Analysis Date: 3/18/2021	SeqNo: 2694223	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0020		0.002500		79.6	41.7	129			
Surr: Tetrachloro-m-xylene	0.021		0.002500		853	31.8	88.5			S

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

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

WO#: 2103428

26-Mar-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco Disposal # 1

Sample ID: 2103428-001BMSD	SampType: MSD	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: S-17 (3/5/21)	Batch ID: 58634	RunNo: 76098								
Prep Date: 3/10/2021	Analysis Date: 3/18/2021	SeqNo: 2694224	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0022		0.002500		89.9	41.7	129	0	0	
Surr: Tetrachloro-m-xylene	0.024		0.002500		968	31.8	88.5	0	0	S

Sample ID: MDL 58634	SampType: LCS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSW	Batch ID: 58634	RunNo: 76098								
Prep Date: 3/10/2021	Analysis Date: 3/18/2021	SeqNo: 2694225	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0024		0.002500		95.5	41.7	129			
Surr: Tetrachloro-m-xylene	0.0017		0.002500		67.8	31.8	88.5			

Sample ID: MDL 58634	SampType: LCS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSW	Batch ID: 58634	RunNo: 76098								
Prep Date: 3/10/2021	Analysis Date: 3/18/2021	SeqNo: 2694226	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0024		0.002500		94.8	41.7	129			
Surr: Tetrachloro-m-xylene	0.0017		0.002500		69.2	31.8	88.5			

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#: 2103428

26-Mar-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco Disposal # 1

Sample ID: 100ng lcs	SampType: LCS	TestCode: TCLP Volatiles by 8260B								
Client ID: LCSW	Batch ID: D75990	RunNo: 75990								
Prep Date:	Analysis Date: 3/16/2021	SeqNo: 2689517	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.018	0.010	0.02000	0	88.4	70	130			
1,1-Dichloroethene	0.016	0.010	0.02000	0	80.4	70	130			
Trichloroethene (TCE)	0.015	0.010	0.02000	0	77.4	70	130			
Chlorobenzene	0.019	0.010	0.02000	0	95.3	70	130			
Surr: 1,2-Dichloroethane-d4	0.0095		0.01000		94.9	70	130			
Surr: 4-Bromofluorobenzene	0.0093		0.01000		92.6	70	130			
Surr: Dibromofluoromethane	0.0092		0.01000		91.8	70	130			
Surr: Toluene-d8	0.010		0.01000		102	70	130			

Sample ID: mb1	SampType: MBLK	TestCode: TCLP Volatiles by 8260B								
Client ID: PBW	Batch ID: D75990	RunNo: 75990								
Prep Date:	Analysis Date: 3/16/2021	SeqNo: 2689518	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	0.0096		0.01000		95.8	70	130			
Surr: 4-Bromofluorobenzene	0.0094		0.01000		93.8	70	130			
Surr: Dibromofluoromethane	0.0092		0.01000		92.4	70	130			
Surr: Toluene-d8	0.010		0.01000		105	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

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

WO#: 2103428

26-Mar-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco Disposal # 1

Sample ID: mb-58664	SampType: MBLK	TestCode: EPA Method 8270C TCLP								
Client ID: PBW	Batch ID: 58664	RunNo: 76057								
Prep Date: 3/11/2021	Analysis Date: 3/18/2021	SeqNo: 2692330 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	0.083		0.2000		41.7	15	91.8			
Surr: Phenol-d5	0.066		0.2000		33.1	15	69.6			
Surr: 2,4,6-Tribromophenol	0.092		0.2000		46.1	15	115			
Surr: Nitrobenzene-d5	0.049		0.1000		49.3	15	109			
Surr: 2-Fluorobiphenyl	0.048		0.1000		47.9	15	96			
Surr: 4-Terphenyl-d14	0.059		0.1000		58.6	15	133			

Sample ID: lcs-58664	SampType: LCS	TestCode: EPA Method 8270C TCLP								
Client ID: LCSW	Batch ID: 58664	RunNo: 76057								
Prep Date: 3/11/2021	Analysis Date: 3/18/2021	SeqNo: 2692331 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.050	0.0010	0.1000	0	49.7	33.8	121			
3+4-Methylphenol	0.097	0.0010	0.2000	0	48.4	33.6	109			
2,4-Dinitrotoluene	0.039	0.0010	0.1000	0	39.5	50.4	124			S
Hexachlorobenzene	0.070	0.0010	0.1000	0	69.5	50.1	120			
Hexachlorobutadiene	0.044	0.0010	0.1000	0	44.3	16.1	103			
Hexachloroethane	0.044	0.0010	0.1000	0	44.2	15	94.2			
Nitrobenzene	0.057	0.0010	0.1000	0	57.0	32.4	125			
Pentachlorophenol	0.057	0.0010	0.1000	0	57.1	44.6	114			
Pyridine	0.044	0.0010	0.1000	0	44.3	15	67			
2,4,5-Trichlorophenol	0.052	0.0010	0.1000	0	52.2	49.4	118			
2,4,6-Trichlorophenol	0.056	0.0010	0.1000	0	56.4	50.3	116			
Cresols, Total	0.15	0.0010	0.3000	0	49.1	33.8	109			
Surr: 2-Fluorophenol	0.091		0.2000		45.3	15	91.8			
Surr: Phenol-d5	0.069		0.2000		34.6	15	69.6			
Surr: 2,4,6-Tribromophenol	0.10		0.2000		51.5	15	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 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

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

WO#: 2103428

26-Mar-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco Disposal # 1

Sample ID: Ics-58664	SampType: LCS	TestCode: EPA Method 8270C TCLP								
Client ID: LCSW	Batch ID: 58664	RunNo: 76057								
Prep Date: 3/11/2021	Analysis Date: 3/18/2021	SeqNo: 2692331	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	0.054		0.1000		54.0	15	109			
Surr: 2-Fluorobiphenyl	0.055		0.1000		55.3	15	96			
Surr: 4-Terphenyl-d14	0.072		0.1000		72.4	15	133			

Sample ID: 2103428-001bms	SampType: MS	TestCode: EPA Method 8270C TCLP								
Client ID: S-17 (3/5/21)	Batch ID: 58664	RunNo: 76057								
Prep Date: 3/11/2021	Analysis Date: 3/18/2021	SeqNo: 2692333	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.055	0.0010	0.1000	0.005184	49.5	30.5	98.2			
3+4-Methylphenol	0.10	0.0010	0.2000	0.003756	48.8	27.4	98.6			
2,4-Dinitrotoluene	0.060	0.0010	0.1000	0	59.5	34.3	87.4			
Hexachlorobenzene	0.073	0.0010	0.1000	0	73.5	36.5	100			
Hexachlorobutadiene	0.048	0.0010	0.1000	0	47.8	15	108			
Hexachloroethane	0.043	0.0010	0.1000	0	42.8	15	90.7			
Nitrobenzene	0.053	0.0010	0.1000	0	52.7	39	100			
Pentachlorophenol	0.074	0.0010	0.1000	0	74.5	15	97.5			
Pyridine	0.046	0.0010	0.1000	0.003571	42.5	15	65.8			
2,4,5-Trichlorophenol	0.084	0.0010	0.1000	0	83.9	36.1	109			
2,4,6-Trichlorophenol	0.079	0.0010	0.1000	0	78.7	37.8	104			
Cresols, Total	0.16	0.0010	0.3000	0.01743	49.1	27.1	99.8			
Surr: 2-Fluorophenol	0.079		0.2000		39.3	15	91.8			
Surr: Phenol-d5	0.064		0.2000		32.1	15	69.6			
Surr: 2,4,6-Tribromophenol	0.18		0.2000		89.5	15	115			
Surr: Nitrobenzene-d5	0.049		0.1000		49.4	15	109			
Surr: 2-Fluorobiphenyl	0.051		0.1000		51.1	15	96			
Surr: 4-Terphenyl-d14	0.070		0.1000		70.0	15	133			

Sample ID: 2103428-001bmsd	SampType: MSD	TestCode: EPA Method 8270C TCLP								
Client ID: S-17 (3/5/21)	Batch ID: 58664	RunNo: 76057								
Prep Date: 3/11/2021	Analysis Date: 3/18/2021	SeqNo: 2692334	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.048	0.0010	0.1000	0.005184	42.8	30.5	98.2	13.1	44.3	
3+4-Methylphenol	0.084	0.0010	0.2000	0.003756	40.1	27.4	98.6	18.7	50	
2,4-Dinitrotoluene	0.045	0.0010	0.1000	0	45.3	34.3	87.4	27.2	45.1	
Hexachlorobenzene	0.061	0.0010	0.1000	0	61.3	36.5	100	18.0	47.2	
Hexachlorobutadiene	0.039	0.0010	0.1000	0	39.5	15	108	18.9	43.4	
Hexachloroethane	0.038	0.0010	0.1000	0	37.9	15	90.7	12.0	39.2	
Nitrobenzene	0.047	0.0010	0.1000	0	46.6	39	100	12.3	42.1	

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

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

WO#: 2103428

26-Mar-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco Disposal # 1

Sample ID: 2103428-001bmsd		SampType: MSD		TestCode: EPA Method 8270C TCLP						
Client ID: S-17 (3/5/21)		Batch ID: 58664		RunNo: 76057						
Prep Date: 3/11/2021		Analysis Date: 3/18/2021		SeqNo: 2692334		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Pentachlorophenol	0.062	0.0010	0.1000	0	62.1	15	97.5	18.2	50	
Pyridine	0.039	0.0010	0.1000	0.003571	35.7	15	65.8	15.9	50	
2,4,5-Trichlorophenol	0.065	0.0010	0.1000	0	64.7	36.1	109	25.8	49.7	
2,4,6-Trichlorophenol	0.064	0.0010	0.1000	0	64.2	37.8	104	20.3	47	
Cresols, Total	0.14	0.0010	0.3000	0.01743	40.7	27.1	99.8	16.6	27.4	
Surr: 2-Fluorophenol	0		0.2000		0	15	91.8	0	0	S
Surr: Phenol-d5	0.053		0.2000		26.6	15	69.6	0	0	
Surr: 2,4,6-Tribromophenol	0.14		0.2000		71.6	15	115	0	0	
Surr: Nitrobenzene-d5	0.043		0.1000		42.7	15	109	0	0	
Surr: 2-Fluorobiphenyl	0.042		0.1000		42.0	15	96	0	0	
Surr: 4-Terphenyl-d14	0.057		0.1000		57.1	15	133	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#: 2103428
26-Mar-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco Disposal # 1

Sample ID: Ics-1 99.5uS eC		SampType: Ics		TestCode: SM2510B: Specific Conductance						
Client ID: LCSW		Batch ID: R76029		RunNo: 76029						
Prep Date:		Analysis Date: 3/16/2021		SeqNo: 2691352		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	99.50	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 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#: 2103428

26-Mar-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco Disposal # 1

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: PBW	Batch ID: A76078	RunNo: 76078								
Prep Date:	Analysis Date: 3/18/2021	SeqNo: 2693041 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: LCSW	Batch ID: A76078	RunNo: 76078								
Prep Date:	Analysis Date: 3/18/2021	SeqNo: 2693043 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	49	1.0	50.00	0	98.5	80	120			
Magnesium	51	1.0	50.00	0	101	80	120			
Potassium	50	1.0	50.00	0	99.4	80	120			
Sodium	49	1.0	50.00	0	97.8	80	120			

Sample ID: 2103428-001DMS	SampType: MS	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: S-17 (3/5/21)	Batch ID: A76078	RunNo: 76078								
Prep Date:	Analysis Date: 3/18/2021	SeqNo: 2693045 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	330	5.0	250.0	77.36	101	75	125			
Magnesium	290	5.0	250.0	34.94	100	75	125			
Potassium	270	5.0	250.0	28.01	97.8	75	125			

Sample ID: 2103428-001DMSD	SampType: MSD	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: S-17 (3/5/21)	Batch ID: A76078	RunNo: 76078								
Prep Date:	Analysis Date: 3/18/2021	SeqNo: 2693046 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	330	5.0	250.0	77.36	99.1	75	125	1.46	20	
Magnesium	280	5.0	250.0	34.94	99.5	75	125	0.520	20	
Potassium	270	5.0	250.0	28.01	97.9	75	125	0.144	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#: 2103428

26-Mar-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco Disposal # 1

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R76029	RunNo: 76029								
Prep Date:	Analysis Date: 3/16/2021	SeqNo: 2691289	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: R76029	RunNo: 76029								
Prep Date:	Analysis Date: 3/16/2021	SeqNo: 2691290	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	72.52	20.00	80.00	0	90.6	90	110			

Sample ID: mb-2 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R76029	RunNo: 76029								
Prep Date:	Analysis Date: 3/16/2021	SeqNo: 2691312	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: R76029	RunNo: 76029								
Prep Date:	Analysis Date: 3/16/2021	SeqNo: 2691313	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	72.08	20.00	80.00	0	90.1	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 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

Page 17 of 18

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2103428
26-Mar-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco Disposal # 1

Sample ID: MB-58667	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 58667	RunNo: 75916								
Prep Date: 3/11/2021	Analysis Date: 3/12/2021	SeqNo: 2686077	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-58667	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 58667	RunNo: 75916								
Prep Date: 3/11/2021	Analysis Date: 3/12/2021	SeqNo: 2686078	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	988	20.0	1000	0	98.8	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 range due to dilution or matrix
- B

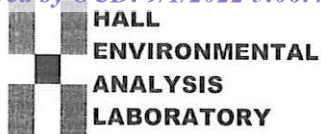
Analyte detected in the associated Method Blank
- E

Value above quantitation range
- J

Analyte detected below quantitation limits
- P

Sample pH Not In Range
- RL

Reporting Limit



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

Sample Log-In Check List

Client Name: **Souder, Miller and Associates**

Work Order Number: **2103428**

RcptNo: 1

Received By: **Juan Rojas**

3/6/2021 8:55:00 AM

Juan Rojas

Completed By: **Cheyenne Cason**

3/9/2021 9:54:41 AM

Reviewed By: **SPA 3.9.21**

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 $>0^{\circ}\text{C}$ 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 ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☒ No ☐ NA ☐
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: 3, 2
(2 or 12 unless noted)
Adjusted? yes
Checked by: JD 3/9/21

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 0.5ml HNO₃ to sample -COLE for proper pH. Also added 0.4ml HNO₃ to sample -COID for proper pH. JD 3/9/21
17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.2	Good				

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	6.0
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	Hexachloroethane	8121	3.0
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 mg/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.

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

July 23, 2021

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

RE: Aqua Moss Sunco # 1

OrderNo.: 2106F12

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/29/2021 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 2106F12

Date Reported: 7/23/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: S-18 (6/28/21)

Project: Aqua Moss Sunco # 1

Collection Date: 6/28/2021 11:00:00 AM

Lab ID: 2106F12-001

Matrix: AQUEOUS

Received Date: 6/29/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES TCLP							Analyst: JME
Chlordane	ND	0.030		mg/L	1	7/2/2021 9:43:16 AM	61046
Surr: Decachlorobiphenyl	104	41.7-129		%Rec	1	7/2/2021 9:43:16 AM	61046
Surr: Tetrachloro-m-xylene	93.1	31.8-88.5	S	%Rec	1	7/2/2021 9:43:16 AM	61046
EPA METHOD 8270C TCLP							Analyst: JME
2-Methylphenol	ND	200		mg/L	1	7/9/2021 4:25:33 AM	61067
3+4-Methylphenol	ND	200		mg/L	1	7/9/2021 4:25:33 AM	61067
2,4-Dinitrotoluene	ND	0.13		mg/L	1	7/9/2021 4:25:33 AM	61067
Hexachlorobenzene	ND	0.13		mg/L	1	7/9/2021 4:25:33 AM	61067
Hexachlorobutadiene	ND	0.50		mg/L	1	7/9/2021 4:25:33 AM	61067
Hexachloroethane	ND	3.0		mg/L	1	7/9/2021 4:25:33 AM	61067
Nitrobenzene	ND	2.0		mg/L	1	7/9/2021 4:25:33 AM	61067
Pentachlorophenol	ND	100		mg/L	1	7/9/2021 4:25:33 AM	61067
Pyridine	ND	5.0		mg/L	1	7/9/2021 4:25:33 AM	61067
2,4,5-Trichlorophenol	ND	400		mg/L	1	7/9/2021 4:25:33 AM	61067
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	7/9/2021 4:25:33 AM	61067
Cresols, Total	ND	200		mg/L	1	7/9/2021 4:25:33 AM	61067
Surr: 2-Fluorophenol	46.9	15-91.8		%Rec	1	7/9/2021 4:25:33 AM	61067
Surr: Phenol-d5	34.5	15-69.6		%Rec	1	7/9/2021 4:25:33 AM	61067
Surr: 2,4,6-Tribromophenol	67.2	15-115		%Rec	1	7/9/2021 4:25:33 AM	61067
Surr: Nitrobenzene-d5	54.7	15-109		%Rec	1	7/9/2021 4:25:33 AM	61067
Surr: 2-Fluorobiphenyl	52.8	15-96		%Rec	1	7/9/2021 4:25:33 AM	61067
Surr: 4-Terphenyl-d14	81.9	15-133		%Rec	1	7/9/2021 4:25:33 AM	61067
SPECIFIC GRAVITY							Analyst: JRR
Specific Gravity	1.014	0			1	7/14/2021 11:06:00 AM	R79788
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/29/2021 7:40:47 PM	R79465
Chloride	16000	500	*	mg/L	1E+	7/9/2021 5:25:39 PM	R79711
Bromide	23	1.0		mg/L	10	6/29/2021 7:40:47 PM	R79465
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	6/29/2021 7:40:47 PM	R79465
Sulfate	ND	5.0		mg/L	10	6/29/2021 7:40:47 PM	R79465
Nitrate+Nitrite as N	ND	10		mg/L	50	7/14/2021 2:59:54 AM	A79773
SM2510B: SPECIFIC CONDUCTANCE							Analyst: CAS
Conductivity	51000	100		µmhos/c	10	7/2/2021 2:26:35 PM	R79556
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	886.3	50.00	H	mg/L Ca	2.5	7/15/2021 10:37:37 PM	R79813
Carbonate (As CaCO3)	ND	5.000	H	mg/L Ca	2.5	7/15/2021 10:37:37 PM	R79813
Total Alkalinity (as CaCO3)	886.3	50.00	H	mg/L Ca	2.5	7/15/2021 10:37:37 PM	R79813

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

Page 1 of 17

Analytical Report

Lab Order 2106F12

Date Reported: 7/23/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: S-18 (6/28/21)

Project: Aqua Moss Sunco # 1

Collection Date: 6/28/2021 11:00:00 AM

Lab ID: 2106F12-001

Matrix: AQUEOUS

Received Date: 6/29/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: JMT
Total Dissolved Solids	29300	200	*D	mg/L	1	7/6/2021 11:27:00 AM	61072
SM4500-H+B / 9040C: PH							Analyst: CAS
pH	5.83		H	pH units	1	6/30/2021 4:47:19 PM	R79516
EPA METHOD 7470: MERCURY							Analyst: ags
Mercury	ND	0.020		mg/L	1	7/9/2021 11:04:54 AM	61188
EPA METHOD 6010B: DISSOLVED METALS							Analyst: ags
Calcium	470	10		mg/L	10	6/30/2021 5:23:52 PM	A79508
Magnesium	80	10		mg/L	10	6/30/2021 5:23:52 PM	A79508
Potassium	39	10		mg/L	10	6/30/2021 5:23:52 PM	A79508
Sodium	8500	100		mg/L	100	6/30/2021 5:52:29 PM	A79508
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: ags
Arsenic	ND	5.0		mg/L	1	6/30/2021 4:58:00 PM	61023
Barium	110	100		mg/L	500	7/13/2021 1:12:40 PM	61023
Cadmium	ND	1.0		mg/L	1	6/30/2021 4:58:00 PM	61023
Chromium	ND	5.0		mg/L	1	6/30/2021 4:58:00 PM	61023
Lead	ND	5.0		mg/L	1	7/16/2021 3:32:09 PM	61023
Selenium	ND	1.0		mg/L	1	6/30/2021 4:58:00 PM	61023
Silver	ND	5.0		mg/L	1	6/30/2021 4:58:00 PM	61023
TCLP VOLATILES BY 8260B							Analyst: RAA
Benzene	11	0.50		mg/L	200	7/1/2021 6:03:56 AM	T79505
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	200	7/1/2021 6:03:56 AM	T79505
2-Butanone	ND	200		mg/L	200	7/1/2021 6:03:56 AM	T79505
Carbon Tetrachloride	ND	0.50		mg/L	200	7/1/2021 6:03:56 AM	T79505
Chloroform	ND	6.0		mg/L	200	7/1/2021 6:03:56 AM	T79505
1,4-Dichlorobenzene	ND	7.5		mg/L	200	7/1/2021 6:03:56 AM	T79505
1,1-Dichloroethene	ND	0.70		mg/L	200	7/1/2021 6:03:56 AM	T79505
Tetrachloroethene (PCE)	ND	0.70		mg/L	200	7/1/2021 6:03:56 AM	T79505
Trichloroethene (TCE)	ND	0.50		mg/L	200	7/1/2021 6:03:56 AM	T79505
Vinyl chloride	ND	0.20		mg/L	200	7/1/2021 6:03:56 AM	T79505
Chlorobenzene	ND	100		mg/L	200	7/1/2021 6:03:56 AM	T79505
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	200	7/1/2021 6:03:56 AM	T79505
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	200	7/1/2021 6:03:56 AM	T79505
Surr: Dibromofluoromethane	101	70-130		%Rec	200	7/1/2021 6:03:56 AM	T79505
Surr: Toluene-d8	94.3	70-130		%Rec	200	7/1/2021 6:03:56 AM	T79505

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

Page 2 of 17

Analytical Report

Lab Order 2106F12

Date Reported: 7/23/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Trip Blank

Project: Aqua Moss Sunco # 1

Collection Date:

Lab ID: 2106F12-002

Matrix: TRIP BLANK

Received Date: 6/29/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
TCLP VOLATILES BY 8260B							Analyst: RAA
Benzene	ND	0.50		mg/L	1	7/1/2021 6:31:12 AM	T79505
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	1	7/1/2021 6:31:12 AM	T79505
2-Butanone	ND	200		mg/L	1	7/1/2021 6:31:12 AM	T79505
Carbon Tetrachloride	ND	0.50		mg/L	1	7/1/2021 6:31:12 AM	T79505
Chloroform	ND	6.0		mg/L	1	7/1/2021 6:31:12 AM	T79505
1,4-Dichlorobenzene	ND	7.5		mg/L	1	7/1/2021 6:31:12 AM	T79505
1,1-Dichloroethene	ND	0.70		mg/L	1	7/1/2021 6:31:12 AM	T79505
Tetrachloroethene (PCE)	ND	0.70		mg/L	1	7/1/2021 6:31:12 AM	T79505
Trichloroethene (TCE)	ND	0.50		mg/L	1	7/1/2021 6:31:12 AM	T79505
Vinyl chloride	ND	0.20		mg/L	1	7/1/2021 6:31:12 AM	T79505
Chlorobenzene	ND	100		mg/L	1	7/1/2021 6:31:12 AM	T79505
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	7/1/2021 6:31:12 AM	T79505
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	7/1/2021 6:31:12 AM	T79505
Surr: Dibromofluoromethane	102	70-130		%Rec	1	7/1/2021 6:31:12 AM	T79505
Surr: Toluene-d8	98.9	70-130		%Rec	1	7/1/2021 6:31:12 AM	T79505

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		

Page 3 of 17



ANALYTICAL REPORT

July 23, 2021

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1372907

Samples Received: 06/30/2021

Project Number:

Description:

Report To: Jackie Bolte
4901 Hawkins NE
Albuquerque, NM 87109

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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	<div><div>1</div>Cp</div>
Tc: Table of Contents	2	
Ss: Sample Summary	3	<div><div>2</div>Tc</div>
Cn: Case Narrative	4	
Sr: Sample Results	5	<div><div>3</div>Ss</div>
2106F12-001F S-18 (6/28/21) L1372907-01	5	
2106F12-001G S-18 (6/28/21) L1372907-02	6	<div><div>4</div>Cn</div>
2106F12-001H S-18 (6/28/21) L1372907-03	7	<div><div>5</div>Sr</div>
2106F12-001I S-18 (6/28/21) L1372907-04	8	
Qc: Quality Control Summary	9	<div><div>6</div>Qc</div>
Wet Chemistry by Method 2580	9	
Wet Chemistry by Method 4500 CN E-2011	10	<div><div>7</div>Gl</div>
Wet Chemistry by Method 4500 S2 D-2011	11	<div><div>8</div>Al</div>
Wet Chemistry by Method 4500H+ B-2011	12	
Wet Chemistry by Method D93/1010A	13	<div><div>9</div>Sc</div>
Gl: Glossary of Terms	14	
Al: Accreditations & Locations	15	
Sc: Sample Chain of Custody	16	

2106F12-001F S-18 (6/28/21) L1372907-01 WW

Collected by
Collected date/time
Received date/time

06/28/21 11:00
06/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500H+ B-2011	WG1700812	1	07/07/21 14:00	07/07/21 14:00	GJA	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1703776	1	07/13/21 02:04	07/13/21 02:04	CAT	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2106F12-001G S-18 (6/28/21) L1372907-02 WW

Collected by
Collected date/time
Received date/time

06/28/21 11:00
06/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 S2 D-2011	WG1700481	1	07/05/21 22:03	07/05/21 22:03	JIC	Mt. Juliet, TN

2106F12-001H S-18 (6/28/21) L1372907-03 WW

Collected by
Collected date/time
Received date/time

06/28/21 11:00
06/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 CN E-2011	WG1708500	1	07/20/21 20:52	07/21/21 12:44	KEG	Mt. Juliet, TN

2106F12-001I S-18 (6/28/21) L1372907-04 GW

Collected by
Collected date/time
Received date/time

06/28/21 11:00
06/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2580	WG1700745	1	07/06/21 15:52	07/06/21 15:52	AMH	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.



John Hawkins
Project Manager

Project Narrative

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

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 06/28/21 11:00

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	5.90	T8	1	07/07/2021 14:00	WG1700812

Sample Narrative:

L1372907-01 WG1700812: 5.9 at 21.3C

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170		1	07/13/2021 02:04	WG1703776

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 06/28/21 11:00

Wet Chemistry by Method 4500 S2 D-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	0.330		0.0500	1	07/05/2021 22:03	WG1700481

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 06/28/21 11:00

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	0.0162	J4	0.00500	1	07/21/2021 12:44	WG1708500

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 06/28/21 11:00

Wet Chemistry by Method 2580

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
ORP	42.5	T8	1	07/06/2021 15:52	WG1700745

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1372907-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1372907-04 07/06/21 15:52 • (DUP) R3676180-3 07/06/21 15:52

Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	<u>DUP Qualifier</u>	DUP Diff Limits mV
ORP	42.5	44.0	1	1.50		20

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

(LCS) R3676180-1 07/06/21 15:52 • (LCSD) R3676180-2 07/06/21 15:52

Analyte	Spike Amount mV	LCS Result mV	LCSD Result mV	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	Diff mV	Diff Limits mV
ORP	106	106	106	100	100	86.0-105			0.000	20

Received by OCD: 9/1/2022 5:06:47 PM

1 C

2 T

3 S

4 C

5 S

6 Qc

7 GI

8 AI

9 Sc

Method Blank (MB)

(MB) R3682171-1 07/21/21 12:36

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

L1373848-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1373848-03 07/21/21 12:46 • (DUP) R3682171-4 07/21/21 12:49

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

L1377992-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1377992-01 07/21/21 13:09 • (DUP) R3682171-7 07/21/21 13:10

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) R3682171-3 07/21/21 12:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Cyanide	0.100	0.0820	82.0	87.1-120	J4

L1377792-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1377792-01 07/21/21 13:06 • (MS) R3682171-5 07/21/21 13:07 • (MSD) R3682171-6 07/21/21 13:08

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	0.110	0.103	1	90.0-110		6.57	20

Method Blank (MB)

(MB) R3675772-1 07/05/21 21:20

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

Laboratory Control Sample (LCS)

(LCS) R3675772-2 07/05/21 21:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Reactive Sulfide	0.500	0.536	107	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R3676727-1 07/07/21 14:00

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

Sample Narrative:

LCS: 10.04 at 21.2C

Received by OCD: 9/1/2022

5:06:47 PM

1 C

2 T

3 S

4 C

5 S

6 Qc

7 GI

8 AI

9 Sc

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

(LCS) R3678532-1 07/13/21 02:04 • (LCSD) R3678532-2 07/13/21 02:04

Spike Amount		LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD	RPD Limits
deg F	deg F	deg F	deg F	%	%	%			%	%
126	131	131	131	104	104	96.0-104			0.000	10

Analyte

Flashpoint



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.

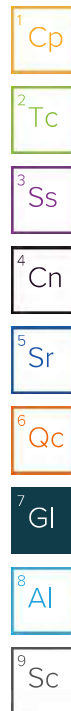
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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



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

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

E183

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

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2106F12-001F	S-18 (6/28/21)	500HDPE	Aqueous	6/28/2021 11:00:00 AM	1 RCI	U372907 -c1
2	2106F12-001G	S-18 (6/28/21)	500PLNAOH ZnAC	Aqueous	6/28/2021 11:00:00 AM	1 RCI	-c2
3	2106F12-001H	S-18 (6/28/21)	500PL-NaOH	Aqueous	6/28/2021 11:00:00 AM	1 RCI	-c3
4	2106F12-001I	S-18 (6/28/21)	125HDP	Aqueous	6/28/2021 11:00:00 AM	1 ORP	-c4

Sample Receipt Checklist:

COC Seal Present/Intact: ☒ N ☐ N ☐ N ☐ N ☐ N ☐ N

COC Signed/Accurate: ☒ N ☐ N ☐ N ☐ N ☐ N ☐ N

Bottles arrive intact: ☒ N ☐ N ☐ N ☐ N ☐ N ☐ N

Correct bottles used: ☒ N ☐ N ☐ N ☐ N ☐ N ☐ N

Sufficient volume sent: ☒ N ☐ N ☐ N ☐ N ☐ N ☐ N

RAD Screen <0.5 mR/hr: ☒ N ☐ N ☐ N ☐ N ☐ N ☐ N

If Applicable
VOA Zero Headspace: ☒ N ☐ N ☐ N ☐ N ☐ N ☐ N

Pres. Correct/Check: ☒ Y ☐ N ☐ N ☐ N ☐ N ☐ N

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>SC</u>	Date: 6/29/2021	Time: 10:47 AM	Received By:	Date:	Time:	REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARD COPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE		
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	FOR LAB USE ONLY		
Relinquished By:	Date:	Time:	Received By: <u>[Signature]</u>	Date: <u>6/28/21</u>	Time: <u>9:19</u>	Temp of samples: <u>4.6 + 2.48</u>	Attempt to Cool? <u>ARP</u>	Comments:
TAT: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH	Next BD: <input type="checkbox"/>	2nd BD: <input type="checkbox"/>	3rd BD: <input type="checkbox"/>					

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

WO#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R79465	RunNo: 79465								
Prep Date:	Analysis Date: 6/29/2021	SeqNo: 2793674 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: R79465	RunNo: 79465								
Prep Date:	Analysis Date: 6/29/2021	SeqNo: 2793675 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.3	90	110			
Sulfate	9.8	0.50	10.00	0	98.4	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R79711	RunNo: 79711								
Prep Date:	Analysis Date: 7/9/2021	SeqNo: 2803588 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: R79711	RunNo: 79711								
Prep Date:	Analysis Date: 7/9/2021	SeqNo: 2803594 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.0	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: A79773	RunNo: 79773								
Prep Date:	Analysis Date: 7/13/2021	SeqNo: 2806400 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	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#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: LCS		SampType: lcs		TestCode: EPA Method 300.0: Anions						
Client ID: LCSW		Batch ID: A79773		RunNo: 79773						
Prep Date:		Analysis Date: 7/14/2021		SeqNo: 2806401		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.9	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 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#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: MB-61046	SampType: MBLK	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: PBW	Batch ID: 61046	RunNo: 79529								
Prep Date: 6/30/2021	Analysis Date: 7/1/2021	SeqNo: 2796336 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Surr: Decachlorobiphenyl	0.0031		0.002500		124	41.7	129			
Surr: Tetrachloro-m-xylene	0.0015		0.002500		62.0	31.8	88.5			

Sample ID: MB-61046	SampType: MBLK	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: PBW	Batch ID: 61046	RunNo: 79529								
Prep Date: 6/30/2021	Analysis Date: 7/1/2021	SeqNo: 2796337 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Surr: Decachlorobiphenyl	0.0033		0.002500		133	41.7	129			S
Surr: Tetrachloro-m-xylene	0.0017		0.002500		68.7	31.8	88.5			

Sample ID: LCS-61046	SampType: LCS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSW	Batch ID: 61046	RunNo: 79529								
Prep Date: 6/30/2021	Analysis Date: 7/1/2021	SeqNo: 2796338 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0031		0.002500		124	41.7	129			
Surr: Tetrachloro-m-xylene	0.0018		0.002500		70.4	31.8	88.5			

Sample ID: 2106F12-001BMS	SampType: MS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: S-18 (6/28/21)	Batch ID: 61046	RunNo: 79547								
Prep Date: 6/30/2021	Analysis Date: 7/2/2021	SeqNo: 2797400 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0041		0.002500		164	41.7	129			S
Surr: Tetrachloro-m-xylene	0.0031		0.002500		122	31.8	88.5			S

Sample ID: 2106F12-001BMSD	SampType: MSD	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: S-18 (6/28/21)	Batch ID: 61046	RunNo: 79547								
Prep Date: 6/30/2021	Analysis Date: 7/2/2021	SeqNo: 2797402 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0026		0.002500		102	41.7	129	0	0	
Surr: Tetrachloro-m-xylene	0.0024		0.002500		94.7	31.8	88.5	0	0	S

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

Page 6 of 17

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: LCS-61046		SampType: LCS		TestCode: EPA Method 8081: Pesticides TCLP						
Client ID: LCSW		Batch ID: 61046		RunNo: 79529						
Prep Date: 6/30/2021		Analysis Date: 7/1/2021		SeqNo: 2797408		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0030		0.002500		119	41.7	129			
Surr: Tetrachloro-m-xylene	0.0018		0.002500		71.2	31.8	88.5			

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#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: 100ng lcs2	SampType: LCS			TestCode: TCLP Volatiles by 8260B						
Client ID: LCSW	Batch ID: T79505			RunNo: 79505						
Prep Date:	Analysis Date: 7/1/2021			SeqNo: 2795327		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.022	0.00023	0.02000	0	110	70	130			
1,1-Dichloroethene	0.020	0.00013	0.02000	0	102	70	130			
Trichloroethene (TCE)	0.020	0.00020	0.02000	0	101	70	130			
Chlorobenzene	0.020	0.00014	0.02000	0	99.7	70	130			
Surr: 1,2-Dichloroethane-d4	0.011		0.01000		107	70	130			
Surr: 4-Bromofluorobenzene	0.010		0.01000		105	70	130			
Surr: Dibromofluoromethane	0.010		0.01000		102	70	130			
Surr: Toluene-d8	0.010		0.01000		102	70	130			

Sample ID: mb2	SampType: MBLK			TestCode: TCLP Volatiles by 8260B						
Client ID: PBW	Batch ID: T79505			RunNo: 79505						
Prep Date:	Analysis Date: 7/1/2021			SeqNo: 2795330		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	0.010		0.01000		104	70	130			
Surr: 4-Bromofluorobenzene	0.011		0.01000		106	70	130			
Surr: Dibromofluoromethane	0.010		0.01000		101	70	130			
Surr: Toluene-d8	0.0098		0.01000		98.2	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

Page 8 of 17

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

WO#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: MB-61067	SampType: MBLK	TestCode: EPA Method 8270C TCLP								
Client ID: PBW	Batch ID: 61067	RunNo: 79674								
Prep Date: 7/1/2021	Analysis Date: 7/8/2021	SeqNo: 2802563	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	0.074		0.2000		37.1	15	91.8			
Surr: Phenol-d5	0.061		0.2000		30.5	15	69.6			
Surr: 2,4,6-Tribromophenol	0.11		0.2000		54.5	15	115			
Surr: Nitrobenzene-d5	0.047		0.1000		46.6	15	109			
Surr: 2-Fluorobiphenyl	0.046		0.1000		46.0	15	96			
Surr: 4-Terphenyl-d14	0.071		0.1000		71.4	15	133			

Sample ID: LCS-61067	SampType: LCS	TestCode: EPA Method 8270C TCLP								
Client ID: LCSW	Batch ID: 61067	RunNo: 79674								
Prep Date: 7/1/2021	Analysis Date: 7/8/2021	SeqNo: 2802564	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.053	0.00010	0.1000	0	53.2	33.8	121			
3+4-Methylphenol	0.11	0.00010	0.2000	0	55.3	33.6	109			
2,4-Dinitrotoluene	0.045	0.00010	0.1000	0	45.1	50.4	124			S
Hexachlorobenzene	0.060	0.00010	0.1000	0	60.5	50.1	120			
Hexachlorobutadiene	0.050	0.00010	0.1000	0	50.2	16.1	103			
Hexachloroethane	0.047	0.00010	0.1000	0	47.0	15	94.2			
Nitrobenzene	0.056	0.00010	0.1000	0	56.4	32.4	125			
Pentachlorophenol	0.055	0.00010	0.1000	0	54.8	44.6	114			
Pyridine	0.039	0.00010	0.1000	0	39.2	15	67			
2,4,5-Trichlorophenol	0.064	0.00010	0.1000	0	63.9	49.4	118			
2,4,6-Trichlorophenol	0.062	0.00010	0.1000	0	61.5	50.3	116			
Cresols, Total	0.16	0.00010	0.3000	0	54.6	33.8	109			
Surr: 2-Fluorophenol	0.093		0.2000		46.6	15	91.8			
Surr: Phenol-d5	0.075		0.2000		37.3	15	69.6			
Surr: 2,4,6-Tribromophenol	0.13		0.2000		66.6	15	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 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#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: LCS-61067		SampType: LCS		TestCode: EPA Method 8270C TCLP						
Client ID: LCSW		Batch ID: 61067		RunNo: 79674						
Prep Date: 7/1/2021		Analysis Date: 7/8/2021		SeqNo: 2802564		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	0.056		0.1000		56.4	15	109			
Surr: 2-Fluorobiphenyl	0.060		0.1000		59.7	15	96			
Surr: 4-Terphenyl-d14	0.083		0.1000		82.6	15	133			

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

Page 10 of 17

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: Ics-1 98.7uS eC		SampType: Ics		TestCode: SM2510B: Specific Conductance						
Client ID: LCSW		Batch ID: R79556		RunNo: 79556						
Prep Date:		Analysis Date: 7/2/2021		SeqNo: 2798408		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	97	10	98.70	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 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#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: MB-61188		SampType: MBLK		TestCode: EPA Method 7470: Mercury						
Client ID: PBW		Batch ID: 61188		RunNo: 79686						
Prep Date: 7/8/2021		Analysis Date: 7/9/2021		SeqNo: 2802512		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: LL LCS-61188		SampType: LCSLL		TestCode: EPA Method 7470: Mercury						
Client ID: BatchQC		Batch ID: 61188		RunNo: 79686						
Prep Date: 7/8/2021		Analysis Date: 7/9/2021		SeqNo: 2802513		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020	0.0001500	0	79.5	50	150			

Sample ID: LCS-61188		SampType: LCS		TestCode: EPA Method 7470: Mercury						
Client ID: LCSW		Batch ID: 61188		RunNo: 79686						
Prep Date: 7/8/2021		Analysis Date: 7/9/2021		SeqNo: 2802514			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 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#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: MB		SampType: MBLK				TestCode: EPA Method 6010B: Dissolved Metals					
Client ID: PBW		Batch ID: A79508				RunNo: 79508					
Prep Date:		Analysis Date: 6/30/2021				SeqNo: 2795572		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									
Sodium	ND	1.0									

Sample ID: LCS		SampType: LCS				TestCode: EPA Method 6010B: Dissolved Metals					
Client ID: LCSW		Batch ID: A79508				RunNo: 79508					
Prep Date:		Analysis Date: 6/30/2021				SeqNo: 2795576		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Magnesium	48	1.0	50.00	0	97.0	80	120				
Potassium	48	1.0	50.00	0	95.9	80	120				
Sodium	49	1.0	50.00	0	97.5	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 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

Page 13 of 17

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

WO#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: MB-61023	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals								
Client ID: PBW	Batch ID: 61023	RunNo: 79508								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2795520	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.030								
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.020								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID: LCS-61023	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals								
Client ID: LCSW	Batch ID: 61023	RunNo: 79508								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2795522	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.030	0.5000	0	97.5	80	120			
Barium	0.48	0.0020	0.5000	0	96.3	80	120			
Cadmium	0.49	0.0020	0.5000	0	97.3	80	120			
Chromium	0.48	0.0060	0.5000	0	96.5	80	120			
Lead	0.50	0.020	0.5000	0	99.3	80	120			
Selenium	0.50	0.050	0.5000	0	99.2	80	120			
Silver	0.098	0.0050	0.1000	0	98.4	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 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#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R79813	RunNo: 79813								
Prep Date:	Analysis Date: 7/15/2021	SeqNo: 2809111	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: R79813	RunNo: 79813								
Prep Date:	Analysis Date: 7/15/2021	SeqNo: 2809112	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.92	20.00	80.00	0	98.6	90	110			

Sample ID: mb-2 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R79813	RunNo: 79813								
Prep Date:	Analysis Date: 7/15/2021	SeqNo: 2809134	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: R79813	RunNo: 79813								
Prep Date:	Analysis Date: 7/15/2021	SeqNo: 2809135	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.88	20.00	80.00	0	98.6	90	110			

Sample ID: mb-3 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R79813	RunNo: 79813								
Prep Date:	Analysis Date: 7/15/2021	SeqNo: 2809158	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-3 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R79813	RunNo: 79813								
Prep Date:	Analysis Date: 7/15/2021	SeqNo: 2809159	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.24	20.00	80.00	0	99.0	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 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#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: 2106F12-001C DUP		SampType: DUP		TestCode: Specific Gravity						
Client ID: S-18 (6/28/21)		Batch ID: R79788		RunNo: 79788						
Prep Date:		Analysis Date: 7/14/2021		SeqNo: 2806734		Units:				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Gravity	1.014	0						0.0592	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

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: MB-61072	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 61072	RunNo: 79588								
Prep Date: 7/1/2021	Analysis Date: 7/6/2021	SeqNo: 2798905 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-61072	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 61072	RunNo: 79588								
Prep Date: 7/1/2021	Analysis Date: 7/6/2021	SeqNo: 2798906 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	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 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



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

Sample Log-In Check List

Client Name: Souder, Miller and Associates

Work Order Number: 2106F12

RcptNo: 1

Received By: Juan Rojas

6/29/2021 8:00:00 AM

Completed By: Sean Livingston

6/29/2021 10:40:57 AM

Reviewed By:

6/29/21

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 $>0^{\circ}\text{C}$ 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 ☒ See 6/29/21 NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
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: 3 or 3 (unless noted)

Adjusted? yes

Checked by: See 6/29/21

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 ~ 4.0mL HNO₃ to sample 001E, added ~ 0.4mL HNO₃ to sample 001D checked for preferred pH 7.2 paired off ~ 100mL for ORP analysis

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good				
2	1.5	Good				

See 6/29/21

Source 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 Method	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	Hexachloroethane	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	§091 §270D	2.0
D037	Pentachlorophenol	§041	100.0
D038	Pyridine	§260B §270D	5.0
D010	Selenium	§111	1.0
D011	Silver	§111	5.0
D039	Tetrachloroethylene	§260B	0.7
D040	Trichloroethylene	§021B §260B	0.5
D041	2,4,5-Trichlorophenol	§270D	100.0
D042	2,4,6-Trichlorophenol	§041A §270D	2.0
D043	Vinyl chloride	§021B §260B	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 mg/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:

RCl, 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.



Souder, Miller & Associates ♦ 401 West Broadway ♦ Farmington, NM 87401
(505) 325-7535 ♦ (800) 519-0098 ♦ fax (505) 326-0045

November 12, 2021

SMA Project No. 5129666

Ms. Philana Thompson
Agua Moss LLC
P.O. Box 600
Farmington, NM 87499
pthompson@merrion.bz
(505) 324-5300

RE: Sunco Disposal #1 Injection Water Monitoring – 3rd Quarter 2021

Dear Ms. Thompson:

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 3rd Quarter 2021. 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

Souder, Miller & Associates (SMA) personnel collected one injection water sample, S-19, from the process line inside the pump building on September 15, 2021. 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-19) was field screened for time sensitive parameters including pH, temperature, reduction potential, specific conductance, and total dissolved solids. 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 and reduction potential.

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

Ms. Philana Thompson
November 12, 2021
Page 2

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.

Closure and Limitations

This report is prepared for the exclusive use of Agua Moss LLC and is subject to the terms, conditions, and limitations stated in SMA's Master Professional Services Agreement with Agua Moss LLC. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Souder, Miller & Associates appreciates the opportunity to provide services to Agua Moss LLC. If you have any questions, please contact me at (505) 325-7535.

Sincerely,

MILLER ENGINEERS, INC. d/b/a
SOUDER, MILLER & ASSOCIATES



Heather M. Woods, P.G.
Project Geoscientist
Heather.Woods@soudermiller.com

Attachments:

*Table 1. Summary of Field Screening and Laboratory Analytical Results
Laboratory Analytical Reports (Hall 2109847)*

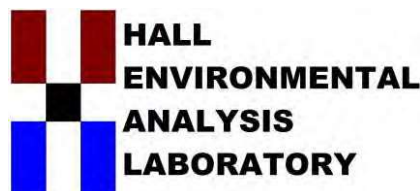
Table 1:
Summary of Field Screening and Laboratory Analytical Results

AGUA MOSS LLC
SUNCO DISPOSAL #1
3RD QUARTER 2021 MONITORING

Sample ID	S-19			
Collection Date	9/15/2021			
Analyte	Field Results	Laboratory Results	Units	Toxicity Characteristic Concentrations
Arsenic	--	<5.0	mg/L	5.0 mg/L
Barium	--	<100	mg/L	100.0 mg/L
Benzene	--	5.4	mg/L	0.5 mg/L
Cadmium	--	<1.0	mg/L	1 mg/L
Carbon tetrachloride	--	<0.50	mg/L	0.5 mg/L
Chlordane	--	<0.030	mg/L	0.03 mg/L
Chlorobenzene	--	<100	mg/L	100.0 mg/L
Chloroform	--	<6.0	mg/L	6.0 mg/L
Chromium	--	<5.0	mg/L	5.0 mg/L
o-Cresol	--	--	mg/L	200.0 mg/L
m+p-Cresol	--	--	mg/L	200.0 mg/L
Cresols, Total	--	<200	mg/L	200.0 mg/L
1,4-Dichlorobenzene	--	<7.5	mg/L	7.5 mg/L
1,2-Dichloroethane	--	<0.50	mg/L	0.5 mg/L
1,1-Dichloroethylene	--	<0.70	mg/L	0.7 mg/L
2,4-Dinitrotoluene	--	<0.13	mg/L	0.13 mg/L
Hexachlorobenzene	--	<0.13	mg/L	0.13 mg/L
Hexachlorobutadiene	--	<0.50	mg/L	0.5 mg/L
Hexachloroethane	--	<3.0	mg/L	3.0 mg/L
Lead	--	<5.0	mg/L	5.0 mg/L
Mercury	--	<0.020	mg/L	0.2 mg/L
Methyl ethyl ketone	--	<200	mg/L	200.0 mg/L
Nitrobenzene	--	<2.0	mg/L	2.0 mg/L
Pentachlorophenol	--	<100	mg/L	100.0 mg/L
Pyridine	--	<5.0	mg/L	5.0 mg/L
Selenium	--	<1.0	mg/L	1.0 mg/L
Silver	--	<5.0	mg/L	5.0 mg/L
Tetrachloroethylene	--	<0.70	mg/L	0.7 mg/L
Trichloroethylene	--	<0.50	mg/L	0.5 mg/L
2,4,5-Trichlorophenol	--	<400	mg/L	400.0 mg/L
2,4,6-Trichlorophenol	--	<2.0	mg/L	2.0 mg/L
Vinyl chloride	--	<0.20	mg/L	0.2 mg/L
Reactive sulfide	--	<0.0500	mg/L	
Reactive cyanide	--	0.0102	mg/L	
Corrosivity by pH	--	6.32 H	s.u.	
Ignitability	--	DNF at 170	deg F	
Specific conductance	9,440	9,800	µmhos/cm	
Specific gravity	--	1.005		
ORP	109.8	20.3 H	mV	
Fluoride	--	<10	mg/L	
Calcium	--	100	mg/L	
Potassium	--	30	mg/L	
Magnesium	--	13	mg/L	
Bicarbonate (as CaCO3)	--	1,726	mg/L Ca	
Carbonate (as CaCO3)	--	<5.000	mg/L Ca	
Chloride	--	2,100	mg/L	
Sulfate	--	5.3	mg/L	
Total dissolved solids	6,422	5,900 D	mg/L	
pH	6.38	6.40 H		
Bromide	--	3.1	mg/L	
Temperature	22.3	--	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: clients.hallenvironmental.com

October 14, 2021

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

RE: Agua Moss Sunco 1

OrderNo.: 2109847

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 9/16/2021 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 2109847

Date Reported: 10/14/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: S-19 (9/15/21)

Project: Agua Moss Sunco 1

Collection Date: 9/15/2021 10:15:00 AM

Lab ID: 2109847-001

Matrix: AQUEOUS

Received Date: 9/16/2021 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES TCLP							Analyst: JME
Chlordane	ND	0.030		mg/L	1	9/23/2021 12:09:26 PM	62710
Surr: Decachlorobiphenyl	87.9	41.7-129		%Rec	1	9/23/2021 12:09:26 PM	62710
Surr: Tetrachloro-m-xylene	62.7	31.8-88.5		%Rec	1	9/23/2021 12:09:26 PM	62710
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	9/25/2021 2:44:54 AM	62742
3+4-Methylphenol	ND	200		mg/L	1	9/25/2021 2:44:54 AM	62742
2,4-Dinitrotoluene	ND	0.13		mg/L	1	9/25/2021 2:44:54 AM	62742
Hexachlorobenzene	ND	0.13		mg/L	1	9/25/2021 2:44:54 AM	62742
Hexachlorobutadiene	ND	0.50		mg/L	1	9/25/2021 2:44:54 AM	62742
Hexachloroethane	ND	3.0		mg/L	1	9/25/2021 2:44:54 AM	62742
Nitrobenzene	ND	2.0		mg/L	1	9/25/2021 2:44:54 AM	62742
Pentachlorophenol	ND	100		mg/L	1	9/25/2021 2:44:54 AM	62742
Pyridine	ND	5.0		mg/L	1	9/25/2021 2:44:54 AM	62742
2,4,5-Trichlorophenol	ND	400		mg/L	1	9/25/2021 2:44:54 AM	62742
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	9/25/2021 2:44:54 AM	62742
Cresols, Total	ND	200		mg/L	1	9/25/2021 2:44:54 AM	62742
Surr: 2-Fluorophenol	67.6	15-118		%Rec	1	9/25/2021 2:44:54 AM	62742
Surr: Phenol-d5	50.8	15-92.9		%Rec	1	9/25/2021 2:44:54 AM	62742
Surr: 2,4,6-Tribromophenol	82.8	15-150		%Rec	1	9/25/2021 2:44:54 AM	62742
Surr: Nitrobenzene-d5	77.8	15-136		%Rec	1	9/25/2021 2:44:54 AM	62742
Surr: 2-Fluorobiphenyl	70.9	15-134		%Rec	1	9/25/2021 2:44:54 AM	62742
Surr: 4-Terphenyl-d14	99.9	15-168		%Rec	1	9/25/2021 2:44:54 AM	62742
SPECIFIC GRAVITY							Analyst: CAS
Specific Gravity	1.005	0			1	10/12/2021 4:09:00 PM	R81985
EPA METHOD 300.0: ANIONS							Analyst: LRN
Fluoride	ND	10		mg/L	100	9/16/2021 5:00:20 PM	R81353
Chloride	2100	100	*	mg/L	200	9/22/2021 12:00:59 PM	R81507
Nitrogen, Nitrite (As N)	ND	1.0		mg/L	10	9/16/2021 4:47:58 PM	R81353
Bromide	3.1	1.0		mg/L	10	9/16/2021 4:47:58 PM	R81353
Nitrogen, Nitrate (As N)	ND	1.0		mg/L	10	9/16/2021 4:47:58 PM	R81353
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	9/16/2021 4:47:58 PM	R81353
Sulfate	5.3	5.0		mg/L	10	9/16/2021 4:47:58 PM	R81353
SM2510B: SPECIFIC CONDUCTANCE							Analyst: CAS
Conductivity	9800	10		µmhos/c	1	9/21/2021 3:35:08 PM	R81457
SM2320B: ALKALINITY							Analyst: LRN
Bicarbonate (As CaCO3)	1728	50.00		mg/L Ca	2.5	9/24/2021 1:48:12 AM	R81582
Carbonate (As CaCO3)	ND	5.000		mg/L Ca	2.5	9/24/2021 1:48:12 AM	R81582

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

Page 1 of 16

Analytical Report

Lab Order 2109847

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 10/14/2021

CLIENT: Souder, Miller and Associates

Client Sample ID: S-19 (9/15/21)

Project: Agua Moss Sunco 1

Collection Date: 9/15/2021 10:15:00 AM

Lab ID: 2109847-001

Matrix: AQUEOUS

Received Date: 9/16/2021 8:10:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM2320B: ALKALINITY							Analyst: LRN
Total Alkalinity (as CaCO ₃)	1728	50.00		mg/L Ca	2.5	9/24/2021 1:48:12 AM	R81582
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	5900	2000	*D	mg/L	1	9/20/2021 5:26:00 PM	62650
SM4500-H+B / 9040C: PH							Analyst: CAS
pH	6.40		H	pH units	1	9/21/2021 3:35:08 PM	R81457
EPA METHOD 7470A: MERCURY							Analyst: ags
Mercury	ND	0.020		mg/L	1	9/24/2021 10:40:13 AM	62783
EPA METHOD 6010B: DISSOLVED METALS							Analyst: JLF
Calcium	100	5.0		mg/L	5	9/21/2021 4:59:20 PM	A81440
Magnesium	13	1.0		mg/L	1	9/21/2021 3:24:38 PM	A81440
Potassium	30	1.0		mg/L	1	9/21/2021 3:24:38 PM	A81440
Sodium	1500	50		mg/L	50	9/21/2021 5:09:05 PM	A81440
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: JLF
Arsenic	ND	5.0		mg/L	1	9/21/2021 5:11:56 PM	62644
Barium	ND	100		mg/L	20	9/21/2021 5:19:58 PM	62644
Cadmium	ND	1.0		mg/L	1	9/21/2021 3:20:34 PM	62644
Chromium	ND	5.0		mg/L	1	9/21/2021 3:20:34 PM	62644
Lead	ND	5.0		mg/L	1	9/21/2021 3:20:34 PM	62644
Selenium	ND	1.0		mg/L	1	9/21/2021 3:20:34 PM	62644
Silver	ND	5.0		mg/L	1	9/21/2021 3:20:34 PM	62644
TCLP VOLATILES BY 8260B							Analyst: CCM
Benzene	5.4	0.50		mg/L	200	9/23/2021 8:33:00 AM	T81470
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	200	9/23/2021 8:33:00 AM	T81470
2-Butanone	ND	200		mg/L	200	9/23/2021 8:33:00 AM	T81470
Carbon Tetrachloride	ND	0.50		mg/L	200	9/23/2021 8:33:00 AM	T81470
Chloroform	ND	6.0		mg/L	200	9/23/2021 8:33:00 AM	T81470
1,4-Dichlorobenzene	ND	7.5		mg/L	200	9/23/2021 8:33:00 AM	T81470
1,1-Dichloroethene	ND	0.70		mg/L	200	9/23/2021 8:33:00 AM	T81470
Tetrachloroethene (PCE)	ND	0.70		mg/L	200	9/23/2021 8:33:00 AM	T81470
Trichloroethene (TCE)	ND	0.50		mg/L	200	9/23/2021 8:33:00 AM	T81470
Vinyl chloride	ND	0.20		mg/L	200	9/23/2021 8:33:00 AM	T81470
Chlorobenzene	ND	100		mg/L	200	9/23/2021 8:33:00 AM	T81470
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec	200	9/23/2021 8:33:00 AM	T81470
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	200	9/23/2021 8:33:00 AM	T81470
Surr: Dibromofluoromethane	100	70-130		%Rec	200	9/23/2021 8:33:00 AM	T81470
Surr: Toluene-d8	98.0	70-130		%Rec	200	9/23/2021 8:33:00 AM	T81470

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

September 27, 2021

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1405375

Samples Received: 09/17/2021

Project Number:

Description:

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

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 National

12065 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
2019847-001F/G/H/I S-19 (9/15/21) L1405375-01	5	⁴ Cn
Qc: Quality Control Summary	6	
Wet Chemistry by Method 2580	6	⁵ Sr
Wet Chemistry by Method 4500 CN E-2011	7	
Wet Chemistry by Method 4500 S2 D-2011	8	⁶ Qc
Wet Chemistry by Method 4500H+ B-2011	9	
Wet Chemistry by Method D93/1010A	10	⁷ Gl
Gl: Glossary of Terms	11	⁸ Al
Al: Accreditations & Locations	12	
Sc: Sample Chain of Custody	13	⁹ Sc

2019847-001F/G/H/I S-19 (9/15/21) L1405375-01 WW

Collected by
Collected date/time
Received date/time

09/15/21 10:15
09/17/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2580	WG1743333	1	09/23/21 23:34	09/23/21 23:34	AMH	Mt. Juliet, TN
Wet Chemistry by Method 4500 CN E-2011	WG1746276	1	09/26/21 12:52	09/27/21 12:02	KEG	Mt. Juliet, TN
Wet Chemistry by Method 4500 S2 D-2011	WG1743918	1	09/21/21 18:18	09/21/21 18:18	BFG	Mt. Juliet, TN
Wet Chemistry by Method 4500H+ B-2011	WG1745855	1	09/24/21 11:00	09/24/21 11:00	MRM	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1742750	1	09/20/21 02:13	09/20/21 02:13	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

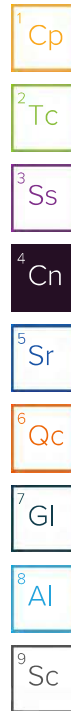
Project Narrative

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

Sample Delivery Group (SDG) Narrative

The following analysis were performed from an unpreserved, insufficiently or inadequately preserved sample.

<u>Lab Sample ID</u>	<u>Project Sample ID</u>	<u>Method</u>
L1405375-01	2019847-001F/G/H/I S-19 (9/15/21)	4500 CN E-2011



Collected date/time: 09/15/21 10:15

L1405375

Wet Chemistry by Method 2580

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
ORP	20.3	T8	1	09/23/2021 23:34	WG1743333

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-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Reactive Cyanide	0.0102		0.00500	1	09/27/2021 12:02	WG1746276

Wet Chemistry by Method 4500 S2 D-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Reactive Sulfide	ND		0.0500	1	09/21/2021 18:18	WG1743918

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	6.32	T8	1	09/24/2021 11:00	WG1745855

Sample Narrative:

L1405375-01 WG1745855: 6.32 at 19.4C

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170		1	09/20/2021 02:13	WG1742750

L1405375-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1405375-01 09/23/21 23:34 • (DUP) R3708148-3 09/23/21 23:34

Analyte	Original Result mV	DUP Result mV	DUP Diff mV	<u>DUP Qualifier</u>	DUP Diff Limits mV
ORP	20.3	20.6	1	0.300	20

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

(LCS) R3708148-1 09/23/21 23:34 • (LCSD) R3708148-2 09/23/21 23:34

Analyte	Spike Amount mV	LCS Result mV	LCSD Result mV	LCS Rec. %	LCSD Rec. %	Rec. Limits %	Diff mV	LCSD Qualifier	Diff Limits mV
ORP	106	106	106	100	99.8	86.0-105	0.300		20

Method Blank (MB)

(MB) R3709045-1 09/27/21 11:41

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

L1405016-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1405016-02 09/27/21 11:50 • (DUP) R3709045-5 09/27/21 11:53

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

L1405252-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1405252-01 09/27/21 11:59 • (DUP) R3709045-8 09/27/21 12:00

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

Laboratory Control Sample (LCS)

(LCS) R3709045-2 09/27/21 11:42

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u> %
Reactive Cyanide	0.200	0.194	97.0	87.1-120	

L1403882-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1403882-02 09/27/21 11:46 • (MS) R3709045-3 09/27/21 11:47 • (MSD) R3709045-4 09/27/21 11:48

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	Dilution	Rec. Limits %	<u>MS Qualifier</u> %	<u>MSD Qualifier</u> %	RPD %	RPD Limits %
Reactive Cyanide	0.100	ND	0.0932	0.0917	1	90.0-110	93.2	91.7	1.62	20

L1405180-05 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1405180-05 09/27/21 11:54 • (MS) R3709045-6 09/27/21 11:55 • (MSD) R3709045-7 09/27/21 11:56

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	Dilution	Rec. Limits %	<u>MS Qualifier</u> %	<u>MSD Qualifier</u> %	RPD %	RPD Limits %
Reactive Cyanide	0.100	ND	0.0470	0.0924	1	90.0-110	47.0	92.4	65.1	20

Method Blank (MB)

(MB) R3707020-1 09/21/21 18:15				
Analyte	MB Result mg/l	<u>MB Qualifier</u>	MB MDL mg/l	MB RDL mg/l
Reactive Sulfide	U		0.0250	0.0500

Laboratory Control Sample (LCS)

(LCS) R3707020-2 09/21/21 18:16				
	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %
Analyte				<u>LCS Qualifier</u>
Reactive Sulfide	0.500	0.497	99.4	85.0-115

L1405730-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1405730-01 09/21/21 18:25 • (MS) R3707020-4 09/21/21 18:26 • (MSD) R3707020-5 09/21/21 18:27									
	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	RPD Limits %
Analyte									
Reactive Sulfide	1.00	ND	0.980	0.971	96.6	95.7	1	80.0-120	20

Laboratory Control Sample (LCS)

(LCS) R3708366-1 09/24/21 11:00

Analyte	Spike Amount su	LCS Result su	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Corrosivity by pH	10.0	10.1	101	99.0-101	

Sample Narrative:

LCS: 10.07 at 19.9C

1C

2T

3S

4C

5S

6Qc

7Gl

8Al

9Sc

L1405375-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1405375-01 09/20/21 02:13 • (DUP) R3706102-3 09/20/21 02:13						
Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Flashpoint	deg F	deg F		%	%	%
	DNF at 170	DNF at 170	1	0.000		10

L1405730-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1405730-01 09/20/21 02:13 • (DUP) R3706102-4 09/20/21 02:13						
Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Flashpoint	deg F	deg F		%	%	%
	DNF at 170	DNF at 170	1	0.000		10

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

(LCS) R3706102-1 09/20/21 02:13 • (LCSD) R3706102-2 09/20/21 02:13						
Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits
Flashpoint	deg F	deg F	deg F	%	%	%
	126	125	128	99.0	101	96.0-104
					2.38	10
					LCSD Qualifier	RPD Limits
					%	%

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.

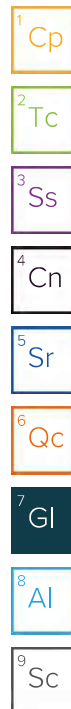
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
T8	Sample(s) received past/too close to holding time expiration.



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 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY

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

F077

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

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2109847-001F	S-19 (9/15/21)	500HDPE	Aqueous	9/15/2021 10:15:00 AM	1 RCI	L1465375 -21 I
2	2109847-001G	S-19 (9/15/21)	500PLNAOH ZNAAC	Aqueous	9/15/2021 10:15:00 AM	1 RCI	
3	2109847-001H	S-19 (9/15/21)	500PL-NAOH	Aqueous	9/15/2021 10:15:00 AM	1 RCI	
4	2109847-001I	S-19 (9/15/21)	125HDP	Aqueous	9/15/2021 10:15:00 AM	1 ORP	

Sample Receipt Checklist
COC Seal Present/Intact: ☒ Y ☐ N
COC Signed/Accurate: ☒ Y ☐ N
Bottles active intact: ☒ Y ☐ N
Correct bottles used: ☒ Y ☐ N
Sufficient volume sent: ☒ Y ☐ N
RAD Screen <0.5 mR/hr: ☒ Y ☐ N

TRK # 2837 8304 5746

2.075-20
Hdd

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: <i>me</i>	Date: 9/16/2021	Time: 1:37 PM	Received By: <i>MSJ</i>	Date: 9/17/21	Time: 9:00 AM
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:

TAT: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH	Next BD <input type="checkbox"/>	2nd BD <input type="checkbox"/>	3rd BD <input type="checkbox"/>
---	----------------------------------	---------------------------------	---------------------------------

REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARD COPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE	
FOR LAB USE ONLY	
Temp of samples _____ °C	Attempt to Cool? _____
Comments: _____	

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

WO#: 2109847

14-Oct-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R81353	RunNo: 81353								
Prep Date:	Analysis Date: 9/16/2021	SeqNo: 2873075 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	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: R81353	RunNo: 81353								
Prep Date:	Analysis Date: 9/16/2021	SeqNo: 2873076 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.49	0.10	0.5000	0	98.1	90	110			
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	96.1	90	110			
Bromide	2.5	0.10	2.500	0	98.4	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P)	4.5	0.50	5.000	0	90.4	90	110			
Sulfate	9.7	0.50	10.00	0	97.0	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R81507	RunNo: 81507								
Prep Date:	Analysis Date: 9/22/2021	SeqNo: 2879514 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: R81507	RunNo: 81507								
Prep Date:	Analysis Date: 9/22/2021	SeqNo: 2879515 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	5.0	0.50	5.000	0	99.4	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 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

Page 3 of 16

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

WO#: 2109847

14-Oct-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: 2109847-001BMS	SampType: MS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: S-19 (9/15/21)	Batch ID: 62710	RunNo: 81863								
Prep Date: 9/21/2021	Analysis Date: 9/23/2021	SeqNo: 2896549	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0022		0.002500		86.5	41.7	129			
Surr: Tetrachloro-m-xylene	0.0016		0.002500		65.7	31.8	88.5			

Sample ID: 2109847-001BMSD	SampType: MSD	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: S-19 (9/15/21)	Batch ID: 62710	RunNo: 81863								
Prep Date: 9/21/2021	Analysis Date: 9/23/2021	SeqNo: 2896550	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0023		0.002500		91.1	41.7	129	0	0	
Surr: Tetrachloro-m-xylene	0.0016		0.002500		65.5	31.8	88.5	0	0	

Sample ID: MB-62710	SampType: MBLK	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: PBW	Batch ID: 62710	RunNo: 81863								
Prep Date: 9/21/2021	Analysis Date: 9/23/2021	SeqNo: 2896556	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Surr: Decachlorobiphenyl	0.0025		0.002500		100	41.7	129			
Surr: Tetrachloro-m-xylene	0.0016		0.002500		64.6	31.8	88.5			

Sample ID: MB-62710	SampType: MBLK	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: PBW	Batch ID: 62710	RunNo: 81863								
Prep Date: 9/21/2021	Analysis Date: 9/23/2021	SeqNo: 2896557	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Surr: Decachlorobiphenyl	0.0025		0.002500		98.3	41.7	129			
Surr: Tetrachloro-m-xylene	0.0015		0.002500		60.0	31.8	88.5			

Sample ID: LCS-62710	SampType: LCS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSW	Batch ID: 62710	RunNo: 81863								
Prep Date: 9/21/2021	Analysis Date: 9/23/2021	SeqNo: 2896558	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0025		0.002500		102	41.7	129			
Surr: Tetrachloro-m-xylene	0.0014		0.002500		56.4	31.8	88.5			

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#: 2109847
14-Oct-21

Client: Souder, Miller and Associates
Project: Agua Moss Sunco 1

Sample ID: LCS-62710		SampType: LCS		TestCode: EPA Method 8081: Pesticides TCLP						
Client ID: LCSW		Batch ID: 62710		RunNo: 81863						
Prep Date: 9/21/2021		Analysis Date: 9/23/2021		SeqNo: 2896559		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0025		0.002500		99.5	41.7	129			
Surr: Tetrachloro-m-xylene	0.0013		0.002500		52.5	31.8	88.5			

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

Page 5 of 16

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

WO#: 2109847

14-Oct-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: mb2	SampType: MBLK			TestCode: TCLP Volatiles by 8260B						
Client ID: PBW	Batch ID: T81470			RunNo: 81470						
Prep Date:	Analysis Date: 9/23/2021			SeqNo: 2879507		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	0.010		0.01000		104	70	130			
Surr: 4-Bromofluorobenzene	0.010		0.01000		101	70	130			
Surr: Dibromofluoromethane	0.010		0.01000		104	70	130			
Surr: Toluene-d8	0.0096		0.01000		96.2	70	130			

Sample ID: 100ng 8260 Ics	SampType: LCS			TestCode: TCLP Volatiles by 8260B						
Client ID: LCSW	Batch ID: T81470			RunNo: 81470						
Prep Date:	Analysis Date: 9/23/2021			SeqNo: 2879508		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.020	0.00023	0.02000	0	101	70	130			
1,1-Dichloroethene	0.019	0.00020	0.02000	0	94.3	70	130			
Trichloroethene (TCE)	0.019	0.00020	0.02000	0	94.0	70	130			
Chlorobenzene	0.019	0.00016	0.02000	0	95.3	70	130			
Surr: 1,2-Dichloroethane-d4	0.010		0.01000		105	70	130			
Surr: 4-Bromofluorobenzene	0.010		0.01000		102	70	130			
Surr: Dibromofluoromethane	0.010		0.01000		104	70	130			
Surr: Toluene-d8	0.0097		0.01000		97.0	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

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

WO#: 2109847

14-Oct-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: mb-62742	SampType: MBLK	TestCode: EPA Method 8270C TCLP								
Client ID: PBW	Batch ID: 62742	RunNo: 81566								
Prep Date: 9/22/2021	Analysis Date: 9/25/2021	SeqNo: 2882406 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	0.10		0.2000		50.9	15	118			
Surr: Phenol-d5	0.077		0.2000		38.3	15	92.9			
Surr: 2,4,6-Tribromophenol	0.11		0.2000		56.9	15	150			
Surr: Nitrobenzene-d5	0.061		0.1000		60.5	15	136			
Surr: 2-Fluorobiphenyl	0.056		0.1000		55.8	15	134			
Surr: 4-Terphenyl-d14	0.11		0.1000		114	15	168			

Sample ID: lcs-62742	SampType: LCS	TestCode: EPA Method 8270C TCLP								
Client ID: LCSW	Batch ID: 62742	RunNo: 81566								
Prep Date: 9/22/2021	Analysis Date: 9/25/2021	SeqNo: 2882407 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.054	0.0010	0.1000	0	54.3	19	106			
3+4-Methylphenol	0.11	0.0010	0.2000	0	55.8	16.3	112			
2,4-Dinitrotoluene	0.045	0.0010	0.1000	0	45.0	15	99.6			
Hexachlorobenzene	0.070	0.0010	0.1000	0	70.4	41.8	111			
Hexachlorobutadiene	0.048	0.0010	0.1000	0	48.3	15	91.5			
Hexachloroethane	0.047	0.0010	0.1000	0	47.4	15	87.5			
Nitrobenzene	0.058	0.0010	0.1000	0	58.3	19.3	114			
Pentachlorophenol	0.060	0.0010	0.1000	0	59.9	29	103			
Pyridine	0.035	0.0010	0.1000	0	34.5	15	92.6			
2,4,5-Trichlorophenol	0.054	0.0010	0.1000	0	54.0	25.2	114			
2,4,6-Trichlorophenol	0.055	0.0010	0.1000	0	54.8	25.7	112			
Cresols, Total	0.17	0.0010	0.3000	0	55.3	15	145			
Surr: 2-Fluorophenol	0.099		0.2000		49.3	15	118			
Surr: Phenol-d5	0.074		0.2000		37.1	15	92.9			
Surr: 2,4,6-Tribromophenol	0.12		0.2000		59.7	15	150			

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

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

WO#: 2109847

14-Oct-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: lcs-62742	SampType: LCS	TestCode: EPA Method 8270C TCLP								
Client ID: LCSW	Batch ID: 62742	RunNo: 81566								
Prep Date: 9/22/2021	Analysis Date: 9/25/2021	SeqNo: 2882407	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	0.059		0.1000		58.8	15	136			
Surr: 2-Fluorobiphenyl	0.057		0.1000		57.3	15	134			
Surr: 4-Terphenyl-d14	0.11		0.1000		113	15	168			

Sample ID: 2109847-001bms	SampType: MS	TestCode: EPA Method 8270C TCLP								
Client ID: S-19 (9/15/21)	Batch ID: 62742	RunNo: 81566								
Prep Date: 9/22/2021	Analysis Date: 9/25/2021	SeqNo: 2882409	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.075	0.0010	0.1000	0.004194	70.4	15.8	101			
3+4-Methylphenol	0.19	0.0010	0.2000	0.03693	75.2	16.9	97.9			
2,4-Dinitrotoluene	0.066	0.0010	0.1000	0	66.5	20.1	90.5			
Hexachlorobenzene	0.076	0.0010	0.1000	0	76.2	34	108			
Hexachlorobutadiene	0.069	0.0010	0.1000	0	68.7	15	99.7			
Hexachloroethane	0.061	0.0010	0.1000	0	61.3	15	86.4			
Nitrobenzene	0.076	0.0010	0.1000	0	75.9	15	109			
Pentachlorophenol	0.079	0.0010	0.1000	0	78.9	15	130			
Pyridine	0.0074	0.0010	0.1000	0	7.41	15	82			S
2,4,5-Trichlorophenol	0.083	0.0010	0.1000	0	82.5	28.1	105			
2,4,6-Trichlorophenol	0.072	0.0010	0.1000	0	71.7	21.5	110			
Cresols, Total	0.32	0.0010	0.3000	0.1075	71.8	15	127			
Surr: 2-Fluorophenol	0.12		0.2000		60.2	15	118			
Surr: Phenol-d5	0.091		0.2000		45.7	15	92.9			
Surr: 2,4,6-Tribromophenol	0.18		0.2000		90.0	15	150			
Surr: Nitrobenzene-d5	0.079		0.1000		79.5	15	136			
Surr: 2-Fluorobiphenyl	0.071		0.1000		71.0	15	134			
Surr: 4-Terphenyl-d14	0.11		0.1000		107	15	168			

Sample ID: 2109847-001bmsd	SampType: MSD	TestCode: EPA Method 8270C TCLP								
Client ID: S-19 (9/15/21)	Batch ID: 62742	RunNo: 81566								
Prep Date: 9/22/2021	Analysis Date: 9/25/2021	SeqNo: 2882410	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.078	0.0010	0.1000	0.004194	73.4	15.8	101	3.92	20	
3+4-Methylphenol	0.19	0.0010	0.2000	0.03693	77.9	16.9	97.9	2.80	20	
2,4-Dinitrotoluene	0.070	0.0010	0.1000	0	69.8	20.1	90.5	4.88	20	
Hexachlorobenzene	0.068	0.0010	0.1000	0	67.9	34	108	11.5	20	
Hexachlorobutadiene	0.065	0.0010	0.1000	0	65.0	15	99.7	5.55	20	
Hexachloroethane	0.066	0.0010	0.1000	0	65.9	15	86.4	7.14	20	
Nitrobenzene	0.073	0.0010	0.1000	0	73.4	15	109	3.23	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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2109847

14-Oct-21

Client: Souder, Miller and Associates

Project: Agua Moss Sunco 1

Sample ID: 2109847-001bmsd		SampType: MSD			TestCode: EPA Method 8270C TCLP					
Client ID: S-19 (9/15/21)		Batch ID: 62742			RunNo: 81566					
Prep Date: 9/22/2021		Analysis Date: 9/25/2021			SeqNo: 2882410		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Pentachlorophenol	0.079	0.0010	0.1000	0	78.9	15	130	0.0305	20	RS
Pyridine	0.0059	0.0010	0.1000	0	5.86	15	82	23.4	20	
2,4,5-Trichlorophenol	0.086	0.0010	0.1000	0	85.9	28.1	105	4.04	20	
2,4,6-Trichlorophenol	0.080	0.0010	0.1000	0	79.7	21.5	110	10.6	20	
Cresols, Total	0.33	0.0010	0.3000	0.1075	75.3	15	127	3.20	20	
Surr: 2-Fluorophenol	0.12		0.2000		62.5	15	118	0	0	
Surr: Phenol-d5	0.095		0.2000		47.4	15	92.9	0	0	
Surr: 2,4,6-Tribromophenol	0.17		0.2000		84.5	15	150	0	0	
Surr: Nitrobenzene-d5	0.077		0.1000		77.0	15	136	0	0	
Surr: 2-Fluorobiphenyl	0.075		0.1000		74.5	15	134	0	0	
Surr: 4-Terphenyl-d14	0.10		0.1000		99.9	15	168	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

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2109847
14-Oct-21

Client: Souder, Miller and Associates
Project: Agua Moss Sunco 1

Sample ID: Ics-1 98.7uS eC		SampType: Ics		TestCode: SM2510B: Specific Conductance						
Client ID: LCSW		Batch ID: R81457		RunNo: 81457						
Prep Date:		Analysis Date: 9/21/2021		SeqNo: 2877896		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	98.70	0	102	85	115			

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#: 2109847

14-Oct-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: MB-62783	SampType: MBLK	TestCode: EPA Method 7470A: Mercury								
Client ID: PBW	Batch ID: 62783	RunNo: 81549								
Prep Date: 9/23/2021	Analysis Date: 9/24/2021	SeqNo: 2881593	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: LLCS-62783	SampType: LCSLL	TestCode: EPA Method 7470A: Mercury								
Client ID: BatchQC	Batch ID: 62783	RunNo: 81549								
Prep Date: 9/23/2021	Analysis Date: 9/24/2021	SeqNo: 2881594	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020	0.0001501	0	69.7	50	150			

Sample ID: LCS-62783	SampType: LCS	TestCode: EPA Method 7470A: Mercury								
Client ID: LCSW	Batch ID: 62783	RunNo: 81549								
Prep Date: 9/23/2021	Analysis Date: 9/24/2021	SeqNo: 2881595	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	98.1	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 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#: 2109847

14-Oct-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: PBW	Batch ID: A81440	RunNo: 81440								
Prep Date:	Analysis Date: 9/21/2021	SeqNo: 2877205	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: LCSW	Batch ID: A81440	RunNo: 81440								
Prep Date:	Analysis Date: 9/21/2021	SeqNo: 2877207	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	48	1.0	50.00	0	96.5	80	120			
Magnesium	49	1.0	50.00	0	97.6	80	120			
Potassium	49	1.0	50.00	0	97.3	80	120			
Sodium	49	1.0	50.00	0	98.3	80	120			

Sample ID: 2109847-001DMS	SampType: MS	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: S-19 (9/15/21)	Batch ID: A81440	RunNo: 81440								
Prep Date:	Analysis Date: 9/21/2021	SeqNo: 2878490	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	58	1.0	50.00	12.89	90.5	75	125			
Potassium	76	1.0	50.00	30.28	92.3	75	125			

Sample ID: 2109847-001DMSD	SampType: MSD	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: S-19 (9/15/21)	Batch ID: A81440	RunNo: 81440								
Prep Date:	Analysis Date: 9/21/2021	SeqNo: 2878491	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Magnesium	59	1.0	50.00	12.89	91.8	75	125	1.06	20	
Potassium	76	1.0	50.00	30.28	91.1	75	125	0.813	20	

Sample ID: 2109847-001DMS	SampType: MS	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: S-19 (9/15/21)	Batch ID: A81440	RunNo: 81440								
Prep Date:	Analysis Date: 9/21/2021	SeqNo: 2878496	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	99.71	98.9	75	125			

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#: 2109847
14-Oct-21

Client: Souder, Miller and Associates
Project: Agua Moss Sunco 1

Sample ID: 2109847-001DMSD		SampType: MSD		TestCode: EPA Method 6010B: Dissolved Metals						
Client ID: S-19 (9/15/21)		Batch ID: A81440		RunNo: 81440						
Prep Date:		Analysis Date: 9/21/2021		SeqNo: 2878497		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	350	5.0	250.0	99.71	98.4	75	125	0.333	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#: 2109847

14-Oct-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: MB-62644	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals								
Client ID: PBW	Batch ID: 62644	RunNo: 81440								
Prep Date: 9/16/2021	Analysis Date: 9/21/2021	SeqNo: 2877195	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.030								
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.020								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID: LCS-62644	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals								
Client ID: LCSW	Batch ID: 62644	RunNo: 81440								
Prep Date: 9/16/2021	Analysis Date: 9/21/2021	SeqNo: 2877197	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.48	0.030	0.5000	0	96.9	80	120			
Barium	0.49	0.0020	0.5000	0	97.1	80	120			
Cadmium	0.48	0.0020	0.5000	0	95.7	80	120			
Chromium	0.48	0.0060	0.5000	0	96.9	80	120			
Lead	0.49	0.020	0.5000	0	98.0	80	120			
Selenium	0.48	0.050	0.5000	0	95.1	80	120			
Silver	0.10	0.0050	0.1000	0	99.5	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 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#: 2109847

14-Oct-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R81582	RunNo: 81582								
Prep Date:	Analysis Date: 9/23/2021	SeqNo: 2883100	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: R81582	RunNo: 81582								
Prep Date:	Analysis Date: 9/23/2021	SeqNo: 2883101	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	80.64	20.00	80.00	0	101	90	110			

Sample ID: mb-2 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R81582	RunNo: 81582								
Prep Date:	Analysis Date: 9/23/2021	SeqNo: 2883126	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: R81582	RunNo: 81582								
Prep Date:	Analysis Date: 9/23/2021	SeqNo: 2883127	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	84.32	20.00	80.00	0	105	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 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#: 2109847
14-Oct-21

Client: Souder, Miller and Associates
Project: Agua Moss Sunco 1

Sample ID: MB-62650	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 62650	RunNo: 81408								
Prep Date: 9/17/2021	Analysis Date: 9/20/2021	SeqNo: 2875570			Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-62650	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 62650	RunNo: 81408								
Prep Date: 9/17/2021	Analysis Date: 9/20/2021	SeqNo: 2875571			Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	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

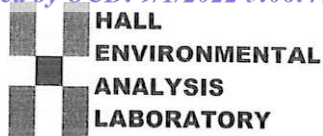
S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit



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

Sample Log-In Check List

Client Name: Souder, Miller and Associates

Work Order Number: 2109847

RcptNo: 1

Received By: Sean Livingston

9/16/2021 8:10:00 AM

Sean Livingston

Completed By: Sean Livingston

9/16/2021 11:59:05 AM

Sean Livingston

Reviewed By:

JR 9/16/21

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 $>0^{\circ}\text{C}$ 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 ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☒ No ☐ NA ☐
10. Were any sample containers received broken? Yes ☐ No ☒
11. Does paperwork match bottle labels? Yes ☒ No ☐
(Note discrepancies on chain of custody)
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? Yes ☒ No ☐
(If no, notify customer for authorization.)

of preserved bottles checked for pH:

3 2

(<2 or >12 unless noted)

Adjusted? *yes*

Checked by: *KPG 9/16/21*

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: *001G Did not pH. Added 1.0ml to 001H of NaOH.*

17. Cooler Information *Added* *Added 0.5 to sample 001E of HNO₃. Added 0.4 of HNO₃ to sample 001D.*

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	-0.3	Good				
2	3.7	Good				

Poud of from 001 into a 125 ml too bottle
KPG 9/16/21

KPG 9/16/21

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	6.0
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	Hexachloroethane	8121	3.0
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 mg/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.



Souder, Miller & Associates ♦ 401 West Broadway ♦ Farmington, NM 87401
(505) 325-7535 ♦ (800) 519-0098 ♦ fax (505) 326-0045

January 27, 2022

SMA Project No. 5129666

Ms. Philana Thompson
Agua Moss LLC
P.O. Box 600
Farmington, NM 87499
pthompson@merrion.bz
(505) 324-5300

RE: Sunco Disposal #1 Injection Water Monitoring – 4th Quarter 2021

Dear Ms. Thompson:

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 4th Quarter 2021. 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

Souder, Miller & Associates (SMA) personnel collected one injection water sample, S-20, from the process line inside the pump building on December 30, 2021. 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-20) was field screened for time sensitive parameters including pH, temperature, reduction potential, specific conductance, and total dissolved solids. 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, reduction potential, alkalinity, reactive cyanide, and reactive sulfide.

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

Ms. Philana Thompson

January 27, 2022

Page 2

The calibration curve for pyridine did not meet the method requirements which is marked with an "E" flag on the laboratory report to represent an estimated value. However, pyridine was not detected in the sample.

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.

Closure and Limitations

This report is prepared for the exclusive use of Agua Moss LLC and is subject to the terms, conditions, and limitations stated in SMA's Master Professional Services Agreement with Agua Moss LLC. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Souder, Miller & Associates appreciates the opportunity to provide services to Agua Moss LLC. If you have any questions, please contact me at (505) 325-7535.

Sincerely,

MILLER ENGINEERS, INC. d/b/a

SOUDER, MILLER & ASSOCIATES



Heather M. Woods, P.G.

Project Geoscientist

Heather.Woods@soudermiller.com

Attachments:

Table 1. Summary of Field Screening and Laboratory Analytical Results

Laboratory Analytical Reports (Hall 2201050)

Table 1:
Summary of Field Screening and Laboratory Analytical Results

AGUA MOSS LLC
SUNCO DISPOSAL #1
4TH QUARTER 2021 MONITORING

Sample ID	S-20			
Collection Date	12/30/2021			
Analyte	Field Results	Laboratory Results	Units	Toxicity Characteristic Concentrations
Arsenic	--	<5.0	mg/L	5.0 mg/L
Barium	--	<100	mg/L	100.0 mg/L
Benzene	--	<0.50	mg/L	0.5 mg/L
Cadmium	--	<1.0	mg/L	1 mg/L
Carbon tetrachloride	--	<0.50	mg/L	0.5 mg/L
Chlordane	--	<0.030	mg/L	0.03 mg/L
Chlorobenzene	--	<100	mg/L	100.0 mg/L
Chloroform	--	<6.0	mg/L	6.0 mg/L
Chromium	--	<5.0	mg/L	5.0 mg/L
o-Cresol	--	--	mg/L	200.0 mg/L
m+p-Cresol	--	--	mg/L	200.0 mg/L
Cresols, Total	--	<200	mg/L	200.0 mg/L
1,4-Dichlorobenzene	--	<7.5	mg/L	7.5 mg/L
1,2-Dichloroethane	--	<0.50	mg/L	0.5 mg/L
1,1-Dichloroethylene	--	<0.70	mg/L	0.7 mg/L
2,4-Dinitrotoluene	--	<0.13	mg/L	0.13 mg/L
Hexachlorobenzene	--	<0.13	mg/L	0.13 mg/L
Hexachlorobutadiene	--	<0.50	mg/L	0.5 mg/L
Hexachloroethane	--	<3.0	mg/L	3.0 mg/L
Lead	--	<5.0	mg/L	5.0 mg/L
Mercury	--	<0.020	mg/L	0.2 mg/L
Methyl ethyl ketone	--	<200	mg/L	200.0 mg/L
Nitrobenzene	--	<2.0	mg/L	2.0 mg/L
Pentachlorophenol	--	<100	mg/L	100.0 mg/L
Pyridine	--	<5.0 E	mg/L	5.0 mg/L
Selenium	--	<1.0	mg/L	1.0 mg/L
Silver	--	<5.0	mg/L	5.0 mg/L
Tetrachloroethylene	--	<0.70	mg/L	0.7 mg/L
Trichloroethylene	--	<0.50	mg/L	0.5 mg/L
2,4,5-Trichlorophenol	--	<400	mg/L	400.0 mg/L
2,4,6-Trichlorophenol	--	<2.0	mg/L	2.0 mg/L
Vinyl chloride	--	<0.20	mg/L	0.2 mg/L
Reactive sulfide	--	<0.250 H	mg/L	
Reactive cyanide	--	1.46 H	mg/L	
Corrosivity by pH	--	12.4 H	s.u.	
Ignitability	--	DNF at 170	deg F	
Specific conductance	1,200	720	µmhos/cm	
Specific gravity	--	0.9956		
ORP	-91.0	42.5	mV	
Fluoride	--	<0.50	mg/L	
Calcium	--	29	mg/L	
Potassium	--	9.0	mg/L	
Magnesium	--	5.7	mg/L	
Bicarbonate (as CaCO3)	--	122.9	mg/L Ca	
Carbonate (as CaCO3)	--	<2.000	mg/L Ca	
Chloride	--	100	mg/L	
Sulfate	--	58	mg/L	
Total dissolved solids	980	475 D	mg/L	
pH	6.9	6.65 H		
Bromide	--	<0.50	mg/L	
Temperature	2.2	--	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
E - estimated value



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

January 25, 2022

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

RE: Agua Moss Sunco 1

OrderNo.: 2201050

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/4/2022 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.

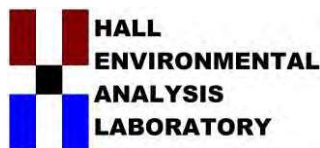
Please don't hesitate to contact HEAL for any additional information or clarifications.

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



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

Case Narrative

WO#: 2201050
Date: 1/25/2022

CLIENT: Souder, Miller and Associates

Project: Agua Moss Sunco 1

Analytical Notes Regarding EPA Method 8270 for Pyridine:

Pyridine is reported with an "E" flag. The "E" flag is used to represent an estimated value. Pyridine was not detected in the samples, but the calibration curve for this compound did not meet the method requirements.

Analytical Report

Lab Order 2201050

Date Reported: 1/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: S-20 (12/30/21)

Project: Agua Moss Sunco 1

Collection Date: 12/30/2021 10:20:00 AM

Lab ID: 2201050-001

Matrix: AQUEOUS

Received Date: 1/4/2022 7:28:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES TCLP							Analyst: LSB
Chlordane	ND	0.030		mg/L	1	1/11/2022 3:59:08 PM	64895
Surr: Decachlorobiphenyl	86.9	73-119		%Rec	1	1/11/2022 3:59:08 PM	64895
Surr: Tetrachloro-m-xylene	65.8	36.6-84.1		%Rec	1	1/11/2022 3:59:08 PM	64895
EPA METHOD 8270C TCLP							Analyst: DAM
2-Methylphenol	ND	200		mg/L	1	1/18/2022 2:59:43 PM	64880
3+4-Methylphenol	ND	200		mg/L	1	1/18/2022 2:59:43 PM	64880
2,4-Dinitrotoluene	ND	0.13		mg/L	1	1/18/2022 2:59:43 PM	64880
Hexachlorobenzene	ND	0.13		mg/L	1	1/18/2022 2:59:43 PM	64880
Hexachlorobutadiene	ND	0.50		mg/L	1	1/18/2022 2:59:43 PM	64880
Hexachloroethane	ND	3.0		mg/L	1	1/18/2022 2:59:43 PM	64880
Nitrobenzene	ND	2.0		mg/L	1	1/18/2022 2:59:43 PM	64880
Pentachlorophenol	ND	100		mg/L	1	1/18/2022 2:59:43 PM	64880
Pyridine	ND	5.0	E	mg/L	1	1/18/2022 2:59:43 PM	64880
2,4,5-Trichlorophenol	ND	400		mg/L	1	1/18/2022 2:59:43 PM	64880
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	1/18/2022 2:59:43 PM	64880
Cresols, Total	ND	200		mg/L	1	1/18/2022 2:59:43 PM	64880
Surr: 2-Fluorophenol	83.7	15-118		%Rec	1	1/18/2022 2:59:43 PM	64880
Surr: Phenol-d5	58.8	15-92.9		%Rec	1	1/18/2022 2:59:43 PM	64880
Surr: 2,4,6-Tribromophenol	108	15-150		%Rec	1	1/18/2022 2:59:43 PM	64880
Surr: Nitrobenzene-d5	105	15-136		%Rec	1	1/18/2022 2:59:43 PM	64880
Surr: 2-Fluorobiphenyl	85.8	15-134		%Rec	1	1/18/2022 2:59:43 PM	64880
Surr: 4-Terphenyl-d14	139	15-168		%Rec	1	1/18/2022 2:59:43 PM	64880
SPECIFIC GRAVITY							Analyst: JRR
Specific Gravity	0.9956	0			1	1/7/2022 12:54:00 PM	R85017
EPA METHOD 300.0: ANIONS							Analyst: JMT
Fluoride	ND	0.50		mg/L	5	1/4/2022 3:30:59 PM	R84963
Chloride	100	2.5		mg/L	5	1/4/2022 3:30:59 PM	R84963
Bromide	ND	0.50		mg/L	5	1/4/2022 3:30:59 PM	R84963
Phosphorus, Orthophosphate (As P)	ND	2.5	H	mg/L	5	1/4/2022 3:30:59 PM	R84963
Sulfate	58	2.5		mg/L	5	1/4/2022 3:30:59 PM	R84963
Nitrate+Nitrite as N	ND	1.0		mg/L	5	1/4/2022 6:31:05 PM	R84963
SM2510B: SPECIFIC CONDUCTANCE							Analyst: LRN
Conductivity	720	10		µmhos/c	1	1/12/2022 12:42:20 PM	R85122
SM2320B: ALKALINITY							Analyst: LRN
Bicarbonate (As CaCO3)	122.9	20.00		mg/L Ca	1	1/6/2022 11:49:37 AM	R85009
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	1/6/2022 11:49:37 AM	R85009
Total Alkalinity (as CaCO3)	122.9	20.00		mg/L Ca	1	1/6/2022 11:49:37 AM	R85009

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 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 range due to dilution or matrix interference	

Analytical Report

Lab Order 2201050

Date Reported: 1/25/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: S-20 (12/30/21)

Project: Agua Moss Sunco 1

Collection Date: 12/30/2021 10:20:00 AM

Lab ID: 2201050-001

Matrix: AQUEOUS

Received Date: 1/4/2022 7:28:00 AM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	475	100	D	mg/L	1	1/7/2022 11:14:00 AM	64857
SM4500-H+B / 9040C: PH							Analyst: LRN
pH	6.65		H	pH units	1	1/6/2022 11:49:37 AM	R85009
EPA METHOD 7470A: MERCURY							Analyst: VP
Mercury	ND	0.020		mg/L	1	1/20/2022 11:07:12 AM	65100
EPA METHOD 6010B: DISSOLVED METALS							Analyst: JLF
Calcium	29	1.0		mg/L	1	1/4/2022 5:16:03 PM	A84926
Magnesium	5.7	1.0		mg/L	1	1/4/2022 5:16:03 PM	A84926
Potassium	9.0	1.0		mg/L	1	1/4/2022 5:16:03 PM	A84926
Sodium	100	10		mg/L	10	1/4/2022 5:17:55 PM	A84926
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: ELS
Arsenic	ND	5.0		mg/L	1	1/18/2022 9:43:05 AM	64846
Barium	ND	100		mg/L	1	1/11/2022 7:15:50 PM	64846
Cadmium	ND	1.0		mg/L	1	1/11/2022 7:15:50 PM	64846
Chromium	ND	5.0		mg/L	1	1/11/2022 7:15:50 PM	64846
Lead	ND	5.0		mg/L	1	1/18/2022 7:48:29 AM	64846
Selenium	ND	1.0		mg/L	1	1/18/2022 9:43:05 AM	64846
Silver	ND	5.0		mg/L	1	1/11/2022 7:15:50 PM	64846
TCLP VOLATILES BY 8260B							Analyst: CCM
Benzene	ND	0.50		mg/L	200	1/5/2022 12:16:00 AM	T84927
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	200	1/5/2022 12:16:00 AM	T84927
2-Butanone	ND	200		mg/L	200	1/5/2022 12:16:00 AM	T84927
Carbon Tetrachloride	ND	0.50		mg/L	200	1/5/2022 12:16:00 AM	T84927
Chloroform	ND	6.0		mg/L	200	1/5/2022 12:16:00 AM	T84927
1,4-Dichlorobenzene	ND	7.5		mg/L	200	1/5/2022 12:16:00 AM	T84927
1,1-Dichloroethene	ND	0.70		mg/L	200	1/5/2022 12:16:00 AM	T84927
Tetrachloroethene (PCE)	ND	0.70		mg/L	200	1/5/2022 12:16:00 AM	T84927
Trichloroethene (TCE)	ND	0.50		mg/L	200	1/5/2022 12:16:00 AM	T84927
Vinyl chloride	ND	0.20		mg/L	200	1/5/2022 12:16:00 AM	T84927
Chlorobenzene	ND	100		mg/L	200	1/5/2022 12:16:00 AM	T84927
Surr: 1,2-Dichloroethane-d4	111	70-130		%Rec	200	1/5/2022 12:16:00 AM	T84927
Surr: 4-Bromofluorobenzene	103	70-130		%Rec	200	1/5/2022 12:16:00 AM	T84927
Surr: Dibromofluoromethane	112	70-130		%Rec	200	1/5/2022 12:16:00 AM	T84927
Surr: Toluene-d8	97.9	70-130		%Rec	200	1/5/2022 12:16:00 AM	T84927

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 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 range due to dilution or matrix interference	

Page 3 of 17



ANALYTICAL REPORT

January 20, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1447902
Samples Received: 01/05/2022
Project Number: 2201050
Description:
Site: 001
Report To: Andy Freeman
4901 Hawkins NE
Albuquerque, NM 87109

¹ Cp² Tc³ Ss⁴ Cn⁵ Sr⁶ Qc⁷ Gl⁸ Al⁹ Sc

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	<div><div>1</div>Cp</div>
Tc: Table of Contents	2	
Ss: Sample Summary	3	<div><div>2</div>Tc</div>
Cn: Case Narrative	4	
Sr: Sample Results	5	<div><div>3</div>Ss</div>
2201050-001F S-20(12/30/21) L1447902-01	5	
2201050-001G S-20(12/30/21) L1447902-02	6	<div><div>4</div>Cn</div>
2201050-001H S-20(12/30/21) L1447902-03	7	<div><div>5</div>Sr</div>
2201050-001I S-20(12/30/21) L1447902-04	8	
Qc: Quality Control Summary	9	<div><div>6</div>Qc</div>
Wet Chemistry by Method 2580	9	
Wet Chemistry by Method 4500 CN E-2016	10	<div><div>7</div>Gl</div>
Wet Chemistry by Method 4500 S2 D-2011	11	<div><div>8</div>Al</div>
Wet Chemistry by Method 9040C	12	
Wet Chemistry by Method D93/1010A	13	<div><div>9</div>Sc</div>
Gl: Glossary of Terms	15	
Al: Accreditations & Locations	16	
Sc: Sample Chain of Custody	17	

2201050-001F S-20(12/30/21) L1447902-01 GW

Collected by

Collected date/time

Received date/time

12/30/21 10:20

01/05/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 CN E-2016	WG1802893	10	01/15/22 23:03	01/17/22 18:09	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500 S2 D-2011	WG1802236	5	01/16/22 09:17	01/16/22 09:17	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1801697	1	01/14/22 12:00	01/14/22 12:00	GI	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1803616	1	01/19/22 00:07	01/19/22 00:07	WOS	Mt. Juliet, TN

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

2201050-001G S-20(12/30/21) L1447902-02 GW

Collected by

Collected date/time

Received date/time

12/30/21 10:20

01/05/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 CN E-2016	WG1802893	1	01/15/22 23:03	01/17/22 18:10	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500 S2 D-2011	WG1802236	5	01/16/22 09:17	01/16/22 09:17	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1801697	1	01/14/22 12:00	01/14/22 12:00	GI	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1803616	1	01/19/22 00:07	01/19/22 00:07	WOS	Mt. Juliet, TN

2201050-001H S-20(12/30/21) L1447902-03 GW

Collected by

Collected date/time

Received date/time

12/30/21 10:20

01/05/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 CN E-2016	WG1802893	1	01/15/22 23:03	01/17/22 18:12	JER	Mt. Juliet, TN
Wet Chemistry by Method 4500 S2 D-2011	WG1802236	5	01/16/22 09:18	01/16/22 09:18	BMD	Mt. Juliet, TN
Wet Chemistry by Method 9040C	WG1801697	1	01/14/22 12:00	01/14/22 12:00	GI	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1804312	1	01/20/22 03:48	01/20/22 03:48	WOS	Mt. Juliet, TN

2201050-001I S-20(12/30/21) L1447902-04 GW

Collected by

Collected date/time

Received date/time

12/30/21 10:20

01/05/22 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2580	WG1798773	1	01/10/22 07:35	01/10/22 07:35	ARD	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.

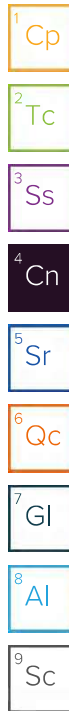


John Hawkins
Project Manager

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: 12/30/21 10:20

L1447902

Wet Chemistry by Method 4500 CN E-2016

Analyte	Result mg/l	<u>Qualifier</u>	RDL mg/l	Dilution	Analysis date / time	<u>Batch</u>
Reactive Cyanide	ND	Q	0.0500	10	01/17/2022 18:09	WG1802893

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Wet Chemistry by Method 4500 S2 D-2011

Analyte	Result mg/l	<u>Qualifier</u>	RDL mg/l	Dilution	Analysis date / time	<u>Batch</u>
Reactive Sulfide	ND	Q	0.250	5	01/16/2022 09:17	WG1802236

Wet Chemistry by Method 9040C

Analyte	Result su	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Corrosivity by pH	6.80	T8	1	01/14/2022 12:00	WG1801697

Sample Narrative:

L1447902-01 WG1801697: 6.8 at 19.4C

Wet Chemistry by Method D93/1010A

Analyte	Result deg F	<u>Qualifier</u>	Dilution	Analysis date / time	<u>Batch</u>
Flashpoint	148		1	01/19/2022 00:07	WG1803616

Collected date/time: 12/30/21 10:20

L1447902

Wet Chemistry by Method 4500 CN E-2016

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND	Q	0.00500	1	01/17/2022 18:10	WG1802893

Wet Chemistry by Method 4500 S2 D-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	0.520	Q	0.250	5	01/16/2022 09:17	WG1802236

Wet Chemistry by Method 9040C

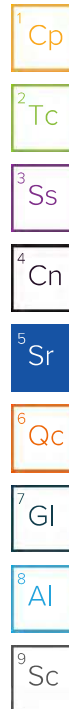
Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	12.2	T8	1	01/14/2022 12:00	WG1801697

Sample Narrative:

L1447902-02 WG1801697: 12.24 at 25C

Wet Chemistry by Method D93/1010A

Analyte	Result deg F	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170		1	01/19/2022 00:07	WG1803616



Collected date/time: 12/30/21 10:20

L1447902

Wet Chemistry by Method 4500 CN E-2016

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	ND	Q	0.00500	1	01/17/2022 18:12	WG1802893

Wet Chemistry by Method 4500 S2 D-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	1.46	Q	0.250	5	01/16/2022 09:18	WG1802236

Wet Chemistry by Method 9040C

Analyte	Result su	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	12.4	T8	1	01/14/2022 12:00	WG1801697

Sample Narrative:

L1447902-03 WG1801697: 12.37 at 25C

Wet Chemistry by Method D93/1010A

Analyte	Result deg F	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170		1	01/20/2022 03:48	WG1804312

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 12/30/21 10:20

Wet Chemistry by Method 2580

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
ORP	64.7	T8	1	01/10/2022 07:35	WG1798773

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1447902-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1447902-04 01/10/22 07:35 • (DUP) R3748325-3 01/10/22 07:35									
Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	<u>DUP Qualifier</u>	DUP Diff Limits mV			
ORP	64.7	61.7	1	3.00		20			

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

(LCS) R3748325-1 01/10/22 07:35 • (LCSD) R3748325-2 01/10/22 07:35									
Analyte	Spike Amount mV	LCS Result mV	LCSD Result mV	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	Diff Limits mV
ORP	108	111	114	103	105	86.0-105		2.70	20

Received by OCD: 9/1/2022 5:06:47 PM

1C

2T

3S

4C

5S

6Qc

7GI

8AI

9Sc

Method Blank (MB)

(MB) R3750712-1 01/17/22 18:05

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

L1447902-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1447902-02 01/17/22 18:10 • (DUP) R3750712-3 01/17/22 18:11

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

L1450181-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1450181-04 01/17/22 18:20 • (DUP) R3750712-6 01/17/22 18:21

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

Laboratory Control Sample (LCS)

(LCS) R3750712-2 01/17/22 18:06

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u> %
Reactive Cyanide	0.100	0.0956	95.6	87.1-120	

L1450181-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1450181-02 01/17/22 18:17 • (MS) R3750712-4 01/17/22 18:18 • (MSD) R3750712-5 01/17/22 18:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u> %	<u>MSD Qualifier</u> %	RPD %	RPD Limits %
Reactive Cyanide	0.100	ND	0.0962	0.0877	96.2	87.7	1	90.0-110		J6 9.24	20	

L1450312-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1450312-02 01/17/22 18:27 • (MS) R3750712-7 01/17/22 18:30 • (MSD) R3750712-8 01/17/22 18:31

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	<u>MS Qualifier</u> %	<u>MSD Qualifier</u> %	RPD %	RPD Limits %
Reactive Cyanide	0.100	ND	0.0972	0.0975	97.2	97.5	1	90.0-110		0.308	20	

Method Blank (MB)

(MB) R3750350-1 01/16/22 09:16

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

Laboratory Control Sample (LCS)

(LCS) R3750350-2 01/16/22 09:17

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Reactive Sulfide	0.500	0.521	104	85.0-115	

L1447902-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1447902-02 01/14/22 12:00 • (DUP) R3750029-2 01/14/22 12:00

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Corrosivity by pH	su 12.2	su 12.2	1	% 0.000		% 1

Sample Narrative:

OS: 12.24 at 25C

DUP: 12.24 at 25C

Laboratory Control Sample (LCS)

(LCS) R3750029-1 01/14/22 12:00

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Corrosivity by pH	su 10.0	su 10.1	% 101	% 99.0-101	

Sample Narrative:

LCS: 10.06 at 18.5C

L-1447902-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1447902-01 01/19/22 00:07 • (DUP) R3751088-3 01/19/22 00:07

Analyte	Original Result deg F	DUP Result deg F	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Flashpoint	148	150	1	1.35		10

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

(LCS) R3751088-1 01/19/22 00:07 • (LCSD) R3751088-2 01/19/22 00:07

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	128	130	101	103	96.0-104		1.55		10

L-1452498-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1452498-02 01/20/22 03:48 • (DUP) R3751612-3 01/20/22 03:48						
Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Flashpoint	deg F	deg F		%	%	%
	79.6	83.6	1	4.90		10

L-1452498-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1452498-03 01/20/22 03:48 • (DUP) R3751612-4 01/20/22 03:48						
Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Flashpoint	deg F	deg F		%	%	%
	146	152	1	4.04		10

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

(LCS) R3751612-1 01/20/22 03:48 • (LCSD) R3751612-2 01/20/22 03:48									
Analyte	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier	RPD Limits
Flashpoint	deg F	deg F	deg F	%	%	%			%
	126	122	122	96.5	96.5	96.0-104		0.000	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.

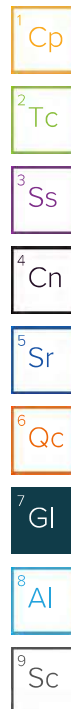
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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

J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.
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 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 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CHAIN OF CUSTODY RECORD

PAGE: 1 OF 1

H101

SUB CONTRACTOR		Pace TN		COMPANY		PACE TN	
ADDRESS		12065 Lebanon Rd		PHONE		(800) 767-5859	
CITY, STATE, ZIP		Mt. Juliet, TN 37122		FAX		(615) 758-5859	
				ACCOUNT #		EMAIL	
ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	ANALYTICAL COMMENTS	
1	2201050-001F	S-20 (12/30/21)	500HDPE	Aqueous	12/30/2021 10:20:00 AM	1 RCI	01
2	2201050-001G	S-20 (12/30/21)	500PLNAOH	Aqueous	12/30/2021 10:20:00 AM	1 RCI	02
3	2201050-001H	S-20 (12/30/21)	500PL-NAOH	Aqueous	12/30/2021 10:20:00 AM	1 RCI	03
4	2201050-001I	S-20 (12/30/21)	125HDP	Aqueous	12/30/2021 10:20:00 AM	1 ORP	04

Sample Receipt Checklist

COC Seal Present/Intact: ☒ Y ☐ N If Applicable
 CCC 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
 Rain Screen < 0.5 mb/hr.: ☒ Y ☐ N

2440-3.5.

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.

5528 5948 0080

Relinquished By: <u>SA</u>	Date: 1/4/2022	Time: 9:02 AM	Received By: <u>Robertson</u>	Date: 1/5/22	Time: 9:00
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
TAT: Standard <input checked="" type="checkbox"/> RUSH			Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/>		
REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARDCOPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE			FOR LAB USE ONLY		
Temp of samples _____ C Attempt to Cool? _____			Comments _____		

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

WO#: 2201050

25-Jan-22

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: MB	SampType: mbk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R84963	RunNo: 84963								
Prep Date:	Analysis Date: 1/4/2022	SeqNo: 2989346	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Bromide	ND	0.10								
Phosphorus, Orthophosphate (As P	ND	0.50								
Sulfate	ND	0.50								
Nitrate+Nitrite as N	ND	0.20								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R84963	RunNo: 84963								
Prep Date:	Analysis Date: 1/4/2022	SeqNo: 2989347	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	105	90	110			
Chloride	4.9	0.50	5.000	0	97.7	90	110			
Bromide	2.5	0.10	2.500	0	101	90	110			
Phosphorus, Orthophosphate (As P	4.6	0.50	5.000	0	91.3	90	110			
Sulfate	9.6	0.50	10.00	0	96.0	90	110			
Nitrate+Nitrite as N	3.6	0.20	3.500	0	103	90	110			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E 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 range due to dilution or matrix interference	

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

WO#: 2201050

25-Jan-22

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: MB-64895	SampType: MBLK	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: PBW	Batch ID: 64895	RunNo: 85069								
Prep Date: 1/6/2022	Analysis Date: 1/11/2022	SeqNo: 2993209	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Surr: Decachlorobiphenyl	0.0024		0.002500		95.8	73	119			
Surr: Tetrachloro-m-xylene	0.0013		0.002500		51.2	36.6	84.1			

Sample ID: MB-64895	SampType: MBLK	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: PBW	Batch ID: 64895	RunNo: 85069								
Prep Date: 1/6/2022	Analysis Date: 1/11/2022	SeqNo: 2993210	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Surr: Decachlorobiphenyl	0.0024		0.002500		97.0	73	119			
Surr: Tetrachloro-m-xylene	0.0013		0.002500		50.6	36.6	84.1			

Sample ID: LCS-64895	SampType: LCS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSW	Batch ID: 64895	RunNo: 85069								
Prep Date: 1/6/2022	Analysis Date: 1/11/2022	SeqNo: 2993313	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0024		0.002500		97.2	73	119			
Surr: Tetrachloro-m-xylene	0.00097		0.002500		38.7	36.6	84.1			

Sample ID: LCS-64895	SampType: LCS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSW	Batch ID: 64895	RunNo: 85069								
Prep Date: 1/6/2022	Analysis Date: 1/11/2022	SeqNo: 2993314	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0025		0.002500		98.9	73	119			
Surr: Tetrachloro-m-xylene	0.0010		0.002500		41.6	36.6	84.1			

Sample ID: 2201050-001BMS	SampType: MS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: S-20 (12/30/21)	Batch ID: 64895	RunNo: 85069								
Prep Date: 1/6/2022	Analysis Date: 1/11/2022	SeqNo: 2993573	Units: %Rec							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0022		0.002500		89.9	73	119			
Surr: Tetrachloro-m-xylene	0.0017		0.002500		67.7	36.6	84.1			

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 interference

B Analyte detected in the associated Method Blank
E 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#: 2201050
25-Jan-22

Client: Souder, Miller and Associates
Project: Agua Moss Sunco 1

Sample ID: 2201050-001BMSD		SampType: MSD		TestCode: EPA Method 8081: Pesticides TCLP						
Client ID: S-20 (12/30/21)		Batch ID: 64895		RunNo: 85069						
Prep Date: 1/6/2022		Analysis Date: 1/11/2022		SeqNo: 2993574		Units: %Rec				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0026		0.002500		104	73	119	0	0	
Surr: Tetrachloro-m-xylene	0.0020		0.002500		78.5	36.6	84.1	0	0	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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 range due to dilution or matrix interference		

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

WO#: 2201050

25-Jan-22

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: MB	SampType: MBLK	TestCode: TCLP Volatiles by 8260B								
Client ID: PBW	Batch ID: T84927	RunNo: 84927								
Prep Date:	Analysis Date: 1/4/2022	SeqNo: 2988720	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	0.011		0.01000		112	70	130			
Surr: 4-Bromofluorobenzene	0.010		0.01000		101	70	130			
Surr: Dibromofluoromethane	0.011		0.01000		109	70	130			
Surr: Toluene-d8	0.0096		0.01000		95.9	70	130			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	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 range due to dilution or matrix interference		

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

WO#: 2201050

25-Jan-22

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: mb-64880	SampType: MBLK	TestCode: EPA Method 8270C TCLP								
Client ID: PBW	Batch ID: 64880	RunNo: 85243								
Prep Date: 1/6/2022	Analysis Date: 1/18/2022	SeqNo: 2998783	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								E
2,4,5-Trichlorophenol	ND	400								
2,4,6-Trichlorophenol	ND	2.0								
Cresols, Total	ND	200								
Surr: 2-Fluorophenol	0.12		0.2000		60.6	15	118			
Surr: Phenol-d5	0.083		0.2000		41.7	15	92.9			
Surr: 2,4,6-Tribromophenol	0.16		0.2000		79.4	15	150			
Surr: Nitrobenzene-d5	0.087		0.1000		86.5	15	136			
Surr: 2-Fluorobiphenyl	0.066		0.1000		65.5	15	134			
Surr: 4-Terphenyl-d14	0.11		0.1000		114	15	168			

Sample ID: lcs-64880	SampType: LCS	TestCode: EPA Method 8270C TCLP								
Client ID: LCSW	Batch ID: 64880	RunNo: 85243								
Prep Date: 1/6/2022	Analysis Date: 1/18/2022	SeqNo: 2998784	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.081	0.00010	0.1000	0	81.3	19	106			
3+4-Methylphenol	0.17	0.00010	0.2000	0	86.5	16.3	112			
2,4-Dinitrotoluene	0.068	0.00010	0.1000	0	68.4	15	99.6			
Hexachlorobenzene	0.093	0.00010	0.1000	0	93.0	41.8	111			
Hexachlorobutadiene	0.064	0.00010	0.1000	0	64.3	15	91.5			
Hexachloroethane	0.076	0.00010	0.1000	0	76.5	15	87.5			
Nitrobenzene	0.090	0.00010	0.1000	0	90.0	19.3	114			
Pentachlorophenol	0.083	0.00010	0.1000	0	82.8	29	103			
Pyridine	0.061	0.00010	0.1000	0	61.3	15	92.6			E
2,4,5-Trichlorophenol	0.087	0.00010	0.1000	0	87.1	25.2	114			
2,4,6-Trichlorophenol	0.079	0.00010	0.1000	0	78.7	25.7	112			
Cresols, Total	0.25	0.00010	0.3000	0	84.7	15	145			
Surr: 2-Fluorophenol	0.14		0.2000		70.5	15	118			
Surr: Phenol-d5	0.10		0.2000		50.8	15	92.9			
Surr: 2,4,6-Tribromophenol	0.18		0.2000		91.9	15	150			

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 interference

B Analyte detected in the associated Method Blank
E 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#: 2201050
25-Jan-22

Client: Souder, Miller and Associates
Project: Agua Moss Sunco 1

Sample ID: lcs-64880		SampType: LCS		TestCode: EPA Method 8270C TCLP						
Client ID: LCSW		Batch ID: 64880		RunNo: 85243						
Prep Date: 1/6/2022		Analysis Date: 1/18/2022		SeqNo: 2998784		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	0.098		0.1000		97.7	15	136			
Surr: 2-Fluorobiphenyl	0.083		0.1000		82.5	15	134			
Surr: 4-Terphenyl-d14	0.13		0.1000		130	15	168			

Qualifiers:	
* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E 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 range due to dilution or matrix interference	

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2201050
25-Jan-22

Client: Souder, Miller and Associates
Project: Agua Moss Sunco 1

Sample ID: Ics-1 99.3uS eC		SampType: Ics		TestCode: SM2510B: Specific Conductance						
Client ID: LCSW		Batch ID: R85122		RunNo: 85122						
Prep Date:		Analysis Date: 1/12/2022		SeqNo: 2994979		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.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E 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 range due to dilution or matrix interference	

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

WO#: 2201050

25-Jan-22

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: MB-65100	SampType: MBLK	TestCode: EPA Method 7470A: Mercury								
Client ID: PBW	Batch ID: 65100	RunNo: 85261								
Prep Date: 1/19/2022	Analysis Date: 1/19/2022	SeqNo: 2999753	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: LCSLL-65100	SampType: LCSLL	TestCode: EPA Method 7470A: Mercury								
Client ID: BatchQC	Batch ID: 65100	RunNo: 85261								
Prep Date: 1/19/2022	Analysis Date: 1/19/2022	SeqNo: 2999754	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020	0.0001501	0	75.6	50	150			

Sample ID: LCS-65100	SampType: LCS	TestCode: EPA Method 7470A: Mercury								
Client ID: LCSW	Batch ID: 65100	RunNo: 85261								
Prep Date: 1/19/2022	Analysis Date: 1/19/2022	SeqNo: 2999756	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	97.6	85	115			

Qualifiers:

* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E 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 range due to dilution or matrix interference	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2201050
25-Jan-22

Client: Souder, Miller and Associates
Project: Agua Moss Sunco 1

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: PBW	Batch ID: A84926	RunNo: 84926								
Prep Date:	Analysis Date: 1/4/2022	SeqNo: 2988961 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: LCSW	Batch ID: A84926	RunNo: 84926								
Prep Date:	Analysis Date: 1/4/2022	SeqNo: 2988962 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	50	1.0	50.00	0	100	80	120			
Magnesium	50	1.0	50.00	0	100	80	120			
Potassium	52	1.0	50.00	0	104	80	120			
Sodium	49	1.0	50.00	0	98.1	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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E 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#: 2201050

25-Jan-22

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco 1

Sample ID: MB-64846	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals								
Client ID: PBW	Batch ID: 64846	RunNo: 85082								
Prep Date: 1/4/2022	Analysis Date: 1/11/2022	SeqNo: 2993706	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								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID: LCS-64846	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals								
Client ID: LCSW	Batch ID: 64846	RunNo: 85082								
Prep Date: 1/4/2022	Analysis Date: 1/11/2022	SeqNo: 2993708	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	0.47	0.0020	0.5000	0	94.7	80	120			
Cadmium	0.45	0.0020	0.5000	0	90.5	80	120			
Chromium	0.46	0.0060	0.5000	0	92.3	80	120			
Selenium	0.47	0.050	0.5000	0	93.3	80	120			
Silver	0.099	0.0050	0.1000	0	98.8	80	120			

Sample ID: MB-64846	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals								
Client ID: PBW	Batch ID: 64846	RunNo: 85207								
Prep Date: 1/4/2022	Analysis Date: 1/12/2022	SeqNo: 2997514	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.020								

Sample ID: LCS-64846	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals								
Client ID: LCSW	Batch ID: 64846	RunNo: 85207								
Prep Date: 1/4/2022	Analysis Date: 1/12/2022	SeqNo: 2997516	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.33	0.020	0.5000	0	67.0	80	120			S

Sample ID: LCS-64846	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals								
Client ID: LCSW	Batch ID: 64846	RunNo: 85207								
Prep Date: 1/4/2022	Analysis Date: 1/12/2022	SeqNo: 2997520	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.41	0.020	0.5000	0	82.3	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 range due to dilution or matrix interference

B Analyte detected in the associated Method Blank
E 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#: 2201050
25-Jan-22

Client: Souder, Miller and Associates
Project: Agua Moss Sunco 1

Sample ID: MB-64846		SampType: MBLK		TestCode: EPA 6010B: Total Recoverable Metals						
Client ID: PBW		Batch ID: 64846		RunNo: 85212						
Prep Date: 1/4/2022		Analysis Date: 1/18/2022		SeqNo: 2998122		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.030								
Selenium	ND	0.050								

Sample ID: LCS-64846		SampType: LCS		TestCode: EPA 6010B: Total Recoverable Metals						
Client ID: LCSW		Batch ID: 64846		RunNo: 85212						
Prep Date: 1/4/2022		Analysis Date: 1/18/2022		SeqNo: 2998123		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.030	0.5000	0	97.2	80	120			
Selenium	0.49	0.050	0.5000	0	97.2	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 range due to dilution or matrix interference
- B

Analyte detected in the associated Method Blank

E

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#: 2201050
25-Jan-22

Client: Souder, Miller and Associates
Project: Agua Moss Sunco 1

Sample ID: 2201050-001C dup		SampType: dup		TestCode: SM4500-H+B / 9040C: pH						
Client ID: S-20 (12/30/21)		Batch ID: R85009		RunNo: 85009						
Prep Date:		Analysis Date: 1/6/2022		SeqNo: 2990765		Units: pH units				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	6.66									H

Qualifiers:	
* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
D Sample Diluted Due to Matrix	E 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 range due to dilution or matrix interference	

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2201050
25-Jan-22

Client: Souder, Miller and Associates
Project: Agua Moss Sunco 1

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R85009	RunNo: 85009								
Prep Date:	Analysis Date: 1/6/2022	SeqNo: 2990786	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: R85009	RunNo: 85009								
Prep Date:	Analysis Date: 1/6/2022	SeqNo: 2990787	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	75.84	20.00	80.00	0	94.8	90	110			

Sample ID: 2201050-001C dup	SampType: dup	TestCode: SM2320B: Alkalinity								
Client ID: S-20 (12/30/21)	Batch ID: R85009	RunNo: 85009								
Prep Date:	Analysis Date: 1/6/2022	SeqNo: 2990789	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	123.2	20.00								

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 interference

B Analyte detected in the associated Method Blank

E 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#: 2201050
25-Jan-22

Client: Souder, Miller and Associates
Project: Agua Moss Sunco 1

Sample ID: MB-64857	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 64857	RunNo: 85013								
Prep Date: 1/5/2022	Analysis Date: 1/7/2022	SeqNo: 2991008		Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-64857	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 64857	RunNo: 85013								
Prep Date: 1/5/2022	Analysis Date: 1/7/2022	SeqNo: 2991009		Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	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 Quantitative Limit

S % Recovery outside of range due to dilution or matrix interference

B Analyte detected in the associated Method Blank

E 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: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Souder, Miller and Associates

Work Order Number: 2201050

RcptNo: 1

Received By: Isaiah Ortiz

1/4/2022 7:28:00 AM

I-Ox

Completed By: Sean Livingston

1/4/2022 8:31:39 AM

San Lopez

Reviewed By: *am*

1/4/22

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 $>0^{\circ}\text{C}$ 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 ☐
9. Received at least 1 vial with headspace $<1/4$ " for AQ VOA? Yes ☒ No ☐ NA ☐
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: *32*

(*2* or *12* unless noted)

Adjusted? *N/A*

Checked by: *ju 1/4/22*

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: *POURED OFF 125ml FROM SAMPLE 001B 5 of 5 onto 125ml plastic bottle for ORP analysis. ju 1/4/22.*

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.8	Good				

Source 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	6.0
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	Hexachloroethane	8121	3.0
D008	Lead	1311	5.0
D009	Mercury	7470A 7471B	0.2
D035	Methyl ethyl ketone	8015H 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 mg/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.

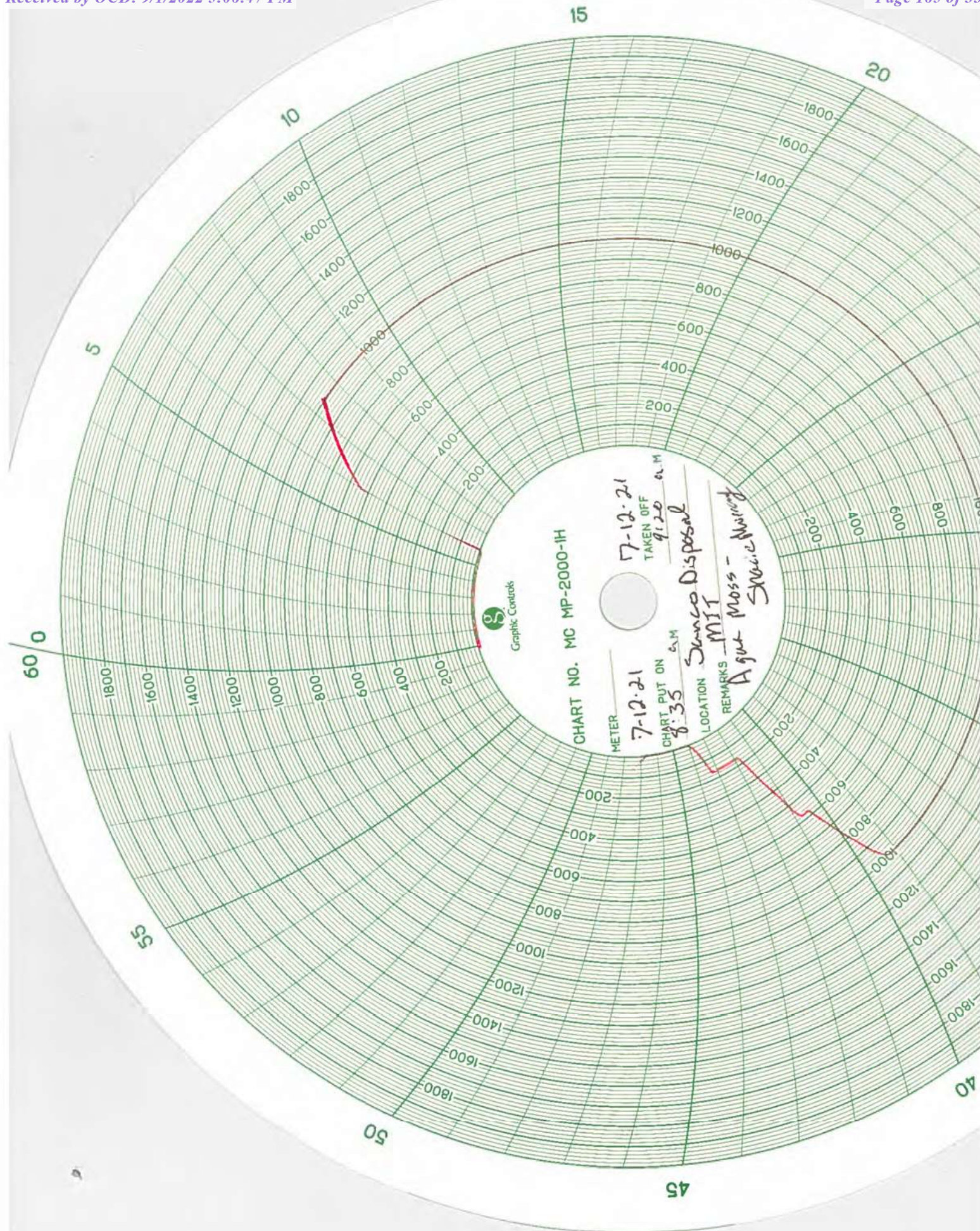
2021

Quarterly
Injection Report

	Average Pressure (psig)	Maximum Pressure (psig)	Minimum Pressure (psig)	Average Flow (gpm)	Maximum Flow (gpm)	Minimum Flow (gpm)	Average Annular Pressure (psig)	Maximum Annular Pressure (psig)	Minimum Annular Pressure (psig)	Average Volume (bpd)	Maximum Volume (bpd)	Minimum Volume (bpd)	Previous year Volume (barrels)	Total Cumulative Volume (barrels)
Jan-2021	1620	1850	1250	33.35208333	62.7375	11.8708333	0	0	0	1143.5	2151	407	16009	15198765
Feb-2021	1896.429	2350	1750	40.61728395	68.6	7.58333333	0	0	0	1392.592593	2352	260	37600	15236365
Mar-2021	1917.742	2150	1850	34.69277778	70.9625	8.8375	0	0	0	1189.466667	2433	303	35684	15272049
Apr-2021	0	0	0	26.20710784	48.70833333	7.6125	0	0	0	898.5294118	1670	261	15275	15287324
May-2021	1873.684	2150	1750	0	0	0	0	0	0	0	0	0	0	15287324
Jun-2021	1495	1520	1450	0.466666667	0.466666667	0.466666667	0	0	0	16	16	16	16	15287340
Jul-21	1423.333	1720	1275	15.925	15.925	15.925	0	0	0	546	546	546	546	15287886
Aug-21	1396.667	1740	1200	12.49791667	14.64166667	10.3541667	0	0	0	428.5	502	355	857	15288743
Sep-21	1210	1250	1200	22.05972222	41.125	11.375	0	0	0	756.3333333	1410	390	2269	15291012
Oct-2021	1250	1250	1250	27.50416667	27.50416667	27.5041667	0	0	0	943	943	943	943	15291955
Nov-2021	1267.857	1450	1150	25.21944444	41.3875	13.4458333	0	0	0	864.6666667	1419	461	5188	15297143
Dec-2021	1584.375	1700	1300	33.48333333	51.47916667	5.62916667	0	0	0	1148	1765	193	8036	15305179
Total for year													122423	15427602
Life Of well injected														

[illegible]

[illegible]





NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
[http://emnr.state.nm.us/oed/District III/3distrct.htm](http://emnr.state.nm.us/oed/District%20III/3distrct.htm)

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

Date of Test 7-12-21 Operator Aguero Moss LLC API #30-0 45-28653
Property Name Unico Disposal Well No. 1 Location: Unit E Section 2 Township 29N Range 12W
Well Status (Shut-In or Producing) Initial PSI: Tubing 1450 Intermediate X Casing 650 Bradenhead 0

OPEN BRADENHEAD AND INTERMEDIATE TO ATMOSPHERE INDIVIDUALLY FOR 15 MINUTES EACH

PRESSURE

Testing	Bradenhead			INTERM	
	BH	Int	Csg	Int	Csg
TIME					
5 min	0		650		
10 min	0		650		
15 min	0		650		
20 min					
25 min					
30 min					

FLOW CHARACTERISTICS

BRADENHEAD INTERMEDIATE

Steady Flow

Surges

Down to Nothing X

Nothing

Gas

Gas & Water

Water

If bradenhead flowed water, check all of the descriptions that apply below:

CLEAR _____ FRESH _____ SALTY _____ SULFUR _____ BLACK _____

5 MINUTE SHUT-IN PRESSURE BRADENHEAD 0 INTERMEDIATE _____

REMARKS: light puff through 1/4"

By Shawn Murray
Engineer
(Position)

Witness Jonathan D. Kelly

E-mail address _____

Sunco SWD #1
30-045-28653
Class I Disposal: UICI-5-0
2021 Reservoir Pressure Evaluation

Agua Moss, LLC

P.O Box 600

Farmington, NM 87499

ORGID 247130

Report Components:

1. Facility Operator Information
 - a. Agua Moss, LLC
 - b. PO Box 600 Farmington, NM 87499
 - c. OGRID 247130
2. Well Information:
 - a. UIC Permit # UICI-5-0
 - b. Class I
 - c. Sunco Disposal #1
 - d. 30-045-28653
 - e. UL E, Sec 2, T29N, R12W 1595 FNL & 1005 FWL San Juan County
3. Current Wellbore Diagram: **Attached** (page 4)
4. Copy of Electronic Log: **Previously submitted 1992** (page 5)
5. Copy of Porosity Log: **Previously submitted 1992** (page 6-7)
6. See attached Reservoir Pressure Evaluation analysis
 - a. Reservoir Pressure Evaluation Procedure (Page 8)
 - b. Analysis (Page 16)
 - c. Results (Page 17)
 - d. Summary (Page 16)
7. Results Comparison attached (page 17)
8. The raw test data will be kept on file for a period of 3-years and will be made available to the NMOCD upon written request. (page 17)
9. Conclusions (page 18)
10. Any pressure or temperature anomaly: As seen in Figure 2 there is a slight drop in the surface pressure. The difference between the beginning and ending pressure is 12 psi. Since the drop is small it did not affect the test.
11. Plots attached
 - a. Calculated BH Pressure vs Time (page 19)
 - b. Injection Volumes and Surface Pressure (page 18)
12. NO PVT data necessary, wellbore fluid is fresh-to-slightly saline water. No significant hydrocarbons present that would alter the density, compressibility and/or viscosity of the fluid.
 - a. See attached report of the Second Quarter WQ Report (page 20-57)
13. The Agua Moss, LLC internal Daily Injection Reports were used to determine the appropriate injection history to use for the analysis. A summary of those reports (January 2021 through July 2021) are attached. (page 58-60)
14. The Sunco Disposal #1 has injected approximately 16,508,187 bbls into the point lookout formation from 1994 through June 2021. The offset well McGrath SWD #4 API 30-045-25923 was plugged 7/25/2013. Cumulative injection 1994-7/2013 27,746,479 bbls.
15. 2 Mile AOR:
 - a. AOR 2 mile (page 61)
 - b. AOR 2 mile well data (page 62)
 - c. The McGrath #4 was the only offset well that was injecting into the Point Lookout formation within 1 mile. This well was plugged 7/25/2013.
16. Geological information was provided in the 2012 Permit renewal and approved in 2012.

17. Offset Wells: One offset well that was completed in the same injection interval was the McGrath #4. This well was plugged 7/2013 and therefore was not impacted.
18. Chronological listing of the daily, testing activities (Operations Log) attached (page 67)
 - a. Date of Test: **July 12th, 2021 through July 16th, 2021**
 - b. Type of injection fluid: **Produced water (no injection for test)**
 - c. Total shut-in time: **98 hours**
 - d. Final BH static pressure at the end of the RPE: **3188.7 psi**
19. Location of the shut-in valve: **A wing valve located on the well's Christmas Tree was closed to begin the RPE Test.**
20. Pressure Gauges: (68-77)
 - a. HOBO UX120-006M data logger with a Foxboro IGP10S industrial pressure transducer
 - b. Pressure range: **0-6000 psig**
 - c. Last Calibration: **6/12/2017 (manufacturer calibration good for 5 years)**

Wellbore Schematic:

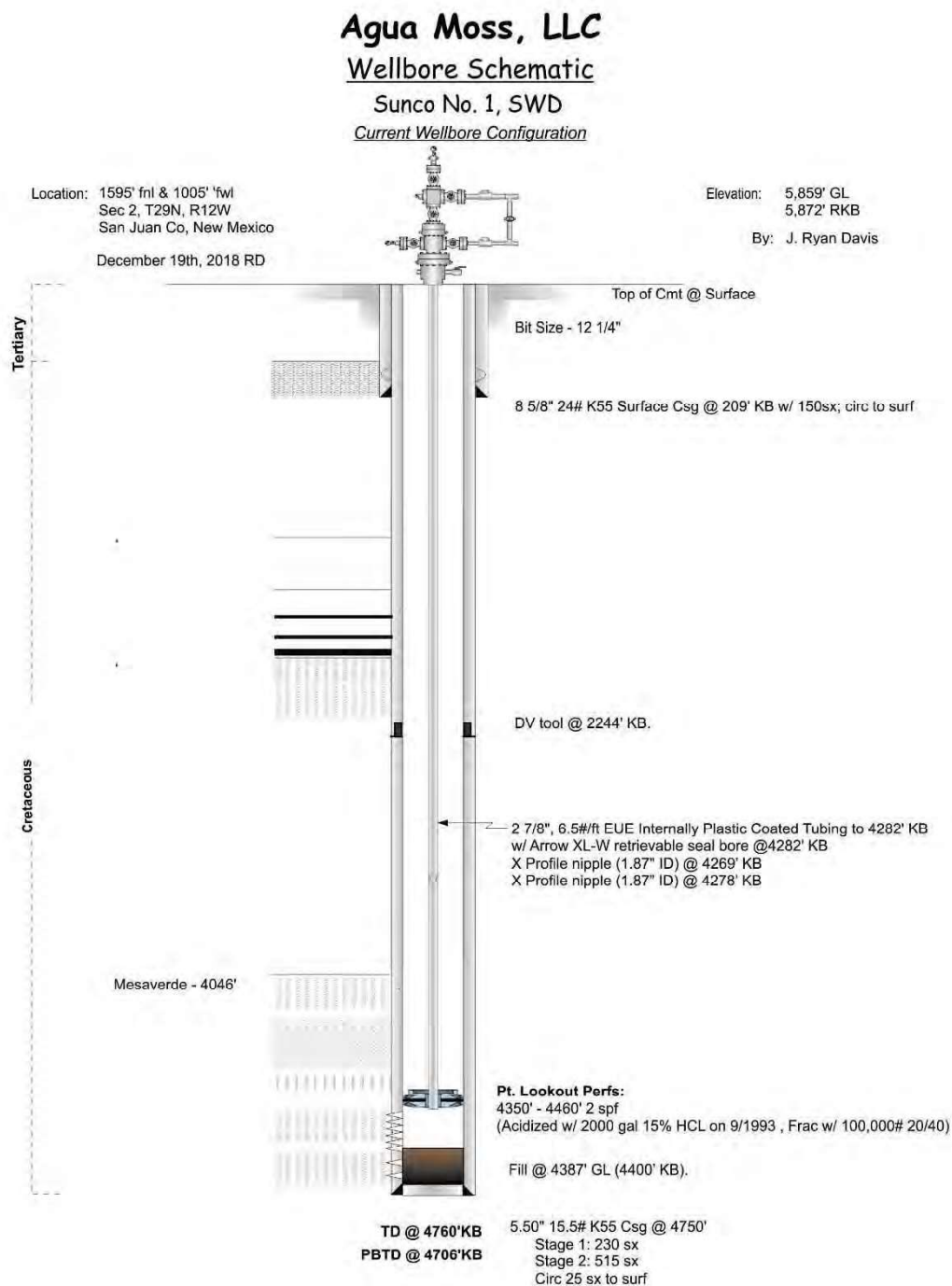
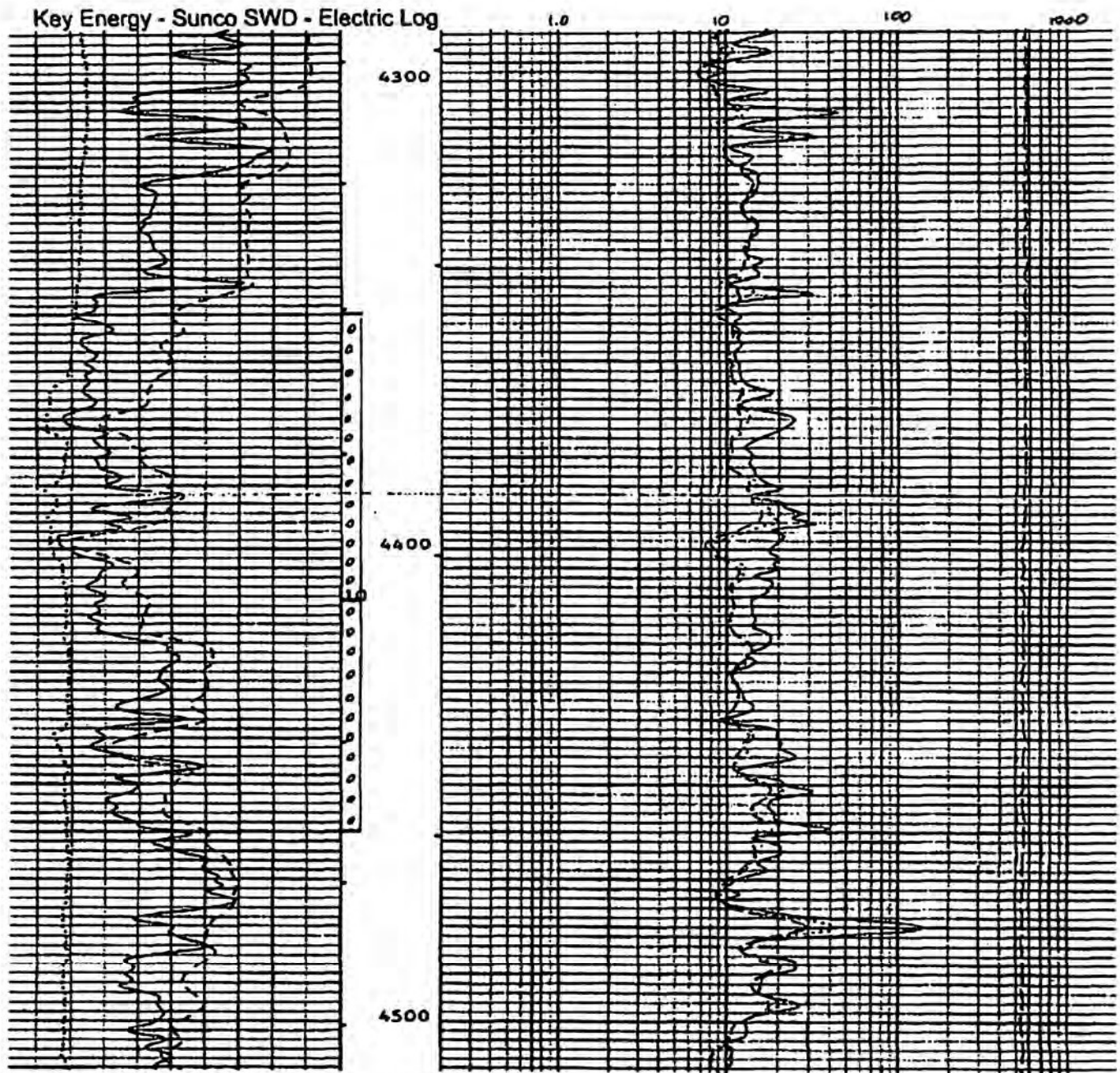
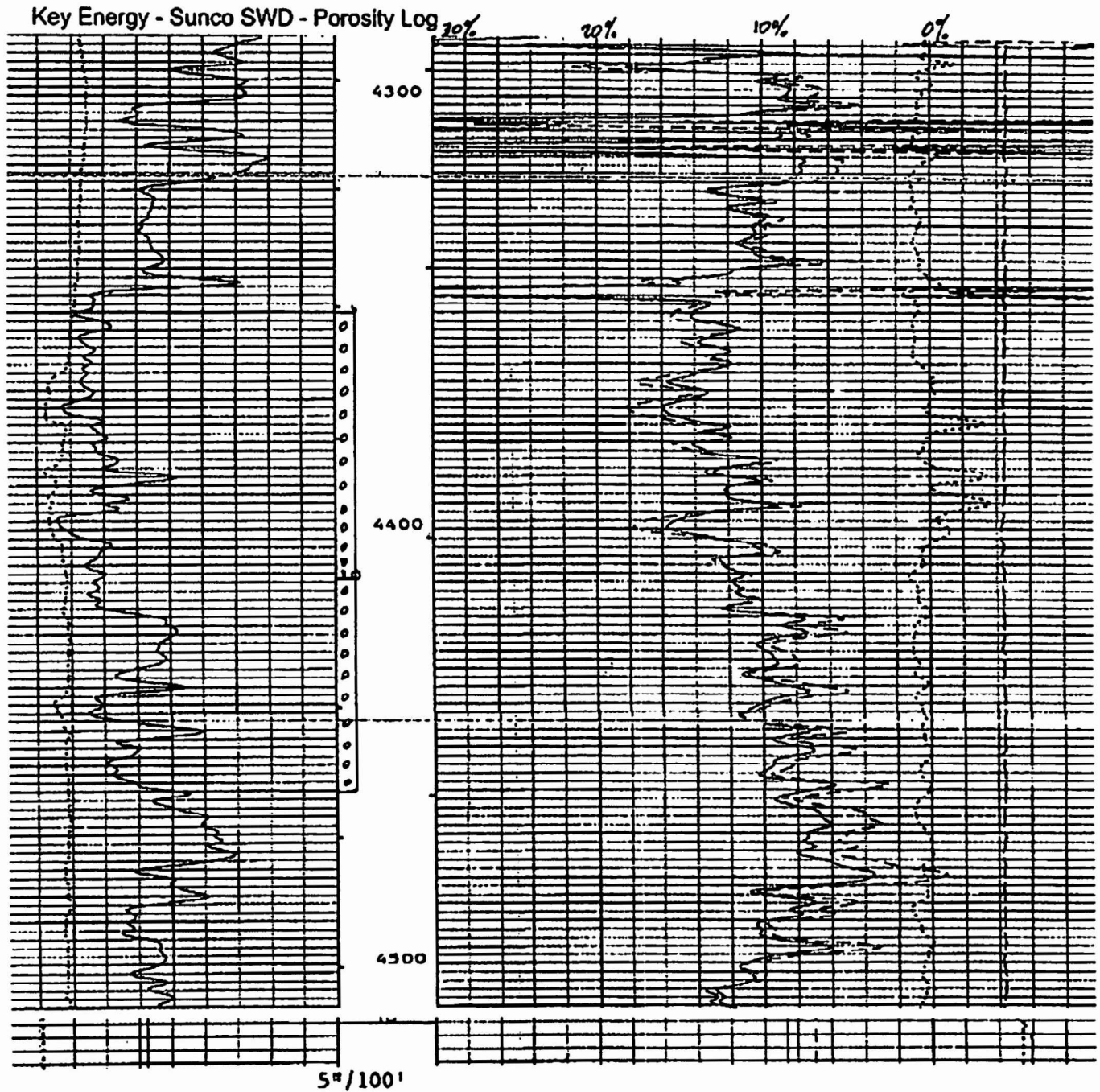


Figure 1: Wellbore Schematic



		TENS(LBF)	
		10000	0.0
CAL(IN.)		SFLU(OHMM)	
10000	16.000	20000	2000.0
GR(GAP)		ILD(OHMM)	
1.0	200.00	20000	2000.0
SP(MV)		ILM(OHMM)	
80.00	20.000	20000	2000.0



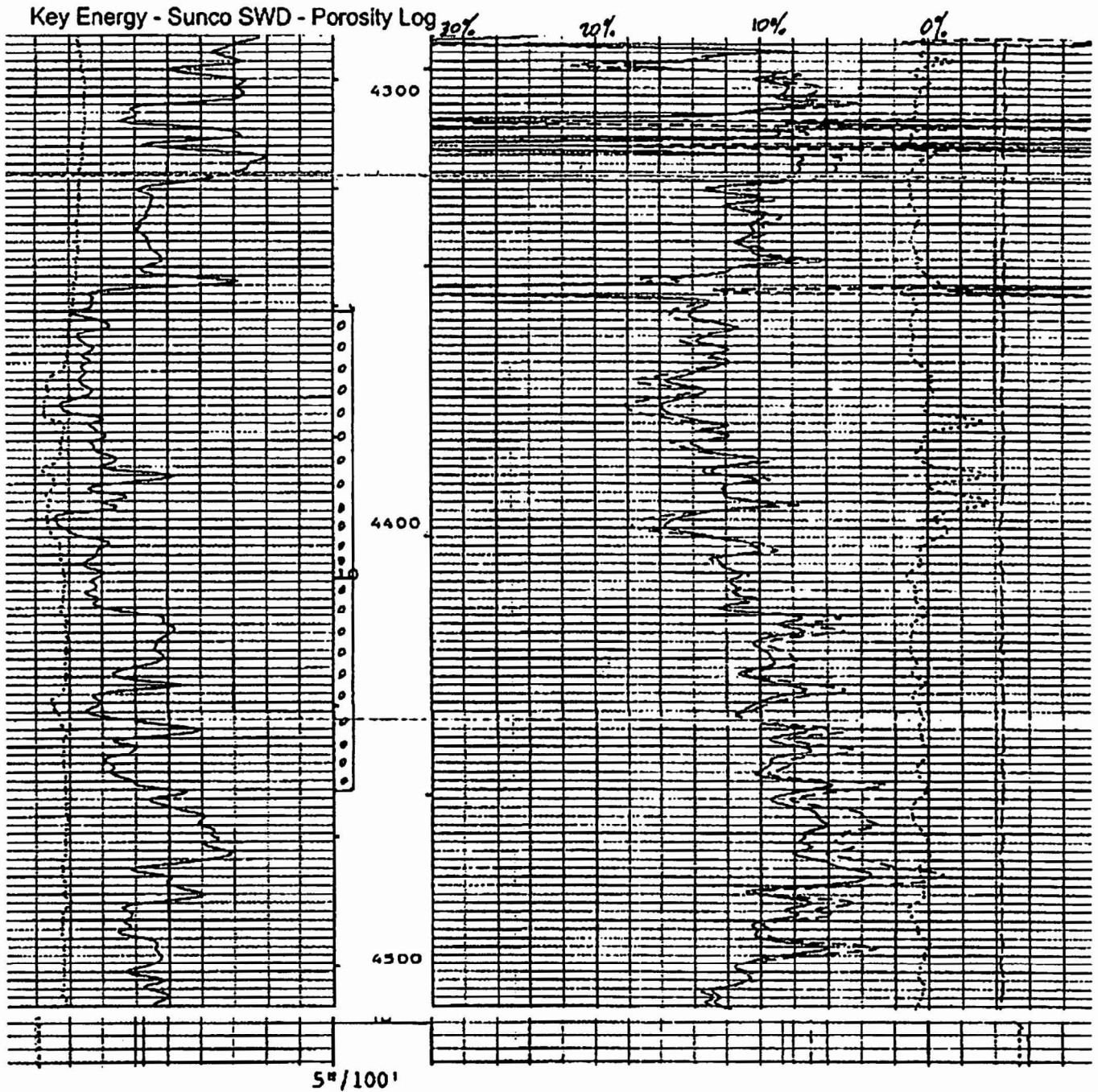
CP 32.6

FILE 6

01-FEB-1992 20:21

(UP)

CALI (IN)		D.FHO (G/C)	
8.0000	16.000	2500	25000
GR (GAP)		TENS (LBF)	
0.0	200.00	10000	0.0
		RHOB (G/C)	
		2.0000	3.0000
		DPHI (V/V)	
		30000	1.000



CP 32.6

FILE 6

01-FEB-1992 20:21

(UP)

		CPHQ(G/C3)	
		2300	25000
		TENS(LBF)	
		10000	0.0
CAL(IN.)		RHO(B/G/C3)	
8.0000	18.000	2.0000	3.0000
GR(GAP)		DPH(V/V)	
0.0	200.00	30000	-1000

Shacie Murray <shacie@merrion.bz>

Fwd: The Oil Conservation Division (OCD) has approved the application, Application ID: 31142

2 messages

Philana Thompson <pthompson@merrion.bz>

Fri, Jun 11, 2021 at 3:38 PM

To: Ryan Davis <RDavis@merrion.bz>, Ryan Merrion <ryan@merrion.bz>, Shacie Murray <shacie@merrion.bz>

----- Forwarded message -----

From: <OCDOnline@state.nm.us>

Date: Fri, Jun 11, 2021 at 3:13 PM

Subject: The Oil Conservation Division (OCD) has approved the application, Application ID: 31142

To: <pthompson@merrion.bz>

To whom it may concern (c/o Philana Thompson for AGUA MOSS, LLC),

The OCD has approved the submitted *Discharge Permits* (DISCHARGE PERMIT), for facility ID (#) fCJC2115960695, with the following conditions:

- **Conditions of Approval:** 1) Alternate Approval of Procedure based on low volume of injected fluids and well economics; and 2) Annual Approvals by OCD subject to determination that a sufficient volume of fluids are injected to warrant a Fall-Off Test.

The signed DISCHARGE PERMIT can be found in the OCD Online: Imaging under the facility ID (f#).

If you have any questions regarding this application, please contact me.

Thank you,
Carl Chavez
Environmental Engineer
505-660-7923
CarlJ.Chavez@state.nm.us

New Mexico Energy, Minerals and Natural Resources Department
1220 South St. Francis Drive
Santa Fe, NM 87505

--
Philana Thompson
HSE & Regulatory Compliance
Merrion Oil & Gas Corp
cell 505-486-1171

Shacie Murray <shacie@merrion.bz>

Thu, Jul 1, 2021 at 5:03 PM

To: Ryan Merrion <ryan@merrion.bz>

Shacie Murray

Merrion Oil & Gas
Production Engineer
(505) 330-7605
shacie@merrion.bz

[Quoted text hidden]

Office
 District I – (575) 393-6161
 1625 N. French Dr., Hobbs, NM 88240
 District II – (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III – (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV – (505) 476-3460
 1220 S. St. Francis Dr., Santa Fe, NM
 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Revised July 18, 2013

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

WELL API NO. 30-045-28653
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Sunco Disposal
8. Well Number 1
9. OGRID Number 247130
10. Pool name or Wildcat SWD-MV
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5859'

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)	
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other SWD Class I	
2. Name of Operator Agua Moss, LLC	
3. Address of Operator PO Box 600 Farmington, NM 87499	
4. Well Location Unit Letter <u>E</u> : <u>1595</u> feet from the <u>North</u> line and <u>1005</u> feet from the <u>West</u> line Section <u>2</u> Township <u>29N</u> Range <u>12W</u> NMPM County <u>San Juan</u>	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5859'	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: Alternative FOT <input checked="" type="checkbox"/>		OTHER: FOT <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Agua Moss, LLC proposes to perform the following reservoir pressure evaluation test in place of the FOT. Please see the attached procedure.

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Philana Thompson TITLE Regulatory Compliance Spec DATE 6/11/2021

Type or print name Philana Thompson E-mail address: pthompson@merrion.bz PHONE: 505-486-1171

For State Use Only

APPROVED BY: TITLE DATE

Conditions of Approval (if any):

June 4th, 2021**SUBJECT: REQUEST TO MODIFY THE SUNCO #1 2020 ANNUAL FALL OFF TEST**

Dear Carl Chavez:

Agua Moss, LLC requests the OCD's approval to substitute a reservoir pressure evaluation test (RPE) to fulfill the Sunco #1's annual fall-off test requirement for the 2021 reporting period.

After evaluating the 2021 injection volumes and economic viability for the Sunco #1, Agua Moss, LLC feels that performing a fall of test this year would only affirm existing data. Over the past few years, the fall-off tests have yielded similar results and have not indicated reasons for concern. Please see the table below.

Fall Off Test Results	2020	2019	2018	2017	2016	2015	2010	2009	2008	2007
Rate (bbl/day)			3292	3150	3132	3340	4500			
P* (psi)	2968 ¹	2939 ¹	3479	3273	3114	3283	3231	3242	3176	3258
K (md)			10.8	10.4	11.5	15.8	13.6	10.2	20.7	
S			-6.0	-6.0	-5.93	-5.97	-7.18	-7.23	-6.79	
Radius of Inv (ft)			1690	1790	1430	1580	1450	1250	1750	1620
Frac ½ Length (ft)			598	517	594	467	893	926	596	688
Boundary			none	none	none	none	648, 1520	755	987	none

¹ Pressure collected from Reservoir Pressure Evaluation test, all other data from Fall-Off Test

From December 2020 to April 2021 all of Agua Moss's produced water was routed to Sunco due to issues with the Pretty Lady SWD. The resulting injection at Sunco went from an average of 651 bbls per month to 23,244 bbls per month. Once the Pretty Lady was repaired in April all the water went back to normal routes and in May the Sunco injected 0 bbls. Due to the irregular operating conditions, Sunco's injection volumes are inflated for the first four months of 2021. There is no indication that higher than normal injection rates will continue at Sunco and the rest of the year will return to the average 651 bbls per month.

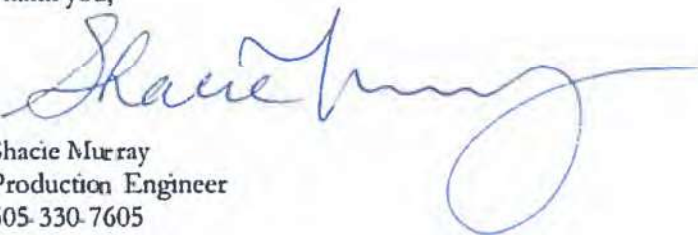
A fall-off test requires ~6,500 bbls to be performed, which requires Sunco to outsource a significant volume of water. Currently, Farmington is at Stage 1 drought conditions and has released a water shortage advisory with a request to reduce consumption by 10%. We are concerned that drought conditions will persist and sourcing water will be an issue both logistically and economically.

Additionally, the well has not indicated any abnormal mechanical issues or pressures. The highest injection pressure recorded this year was 2204 psig, which is significantly below the facility's max allowable pressure of 2400 psig. Based on pressures during the irregular high-volume injection recently and normal operating conditions, there is no indication of additional stress to the injection zone that would warrant concern or require fall-off test analytics. We are also requesting to forgo the slickline work. Operating surface pressures have not indicated restrictions downhole and there will not be fluid injection during the RPE. If an indication does occur it will be addressed at that time.

Economics is another reason for not performing the fall-off test. When evaluating the viability of continuing operations, the cost to perform and analyze the fall-off test plays a significant role in economics. This cost especially impacts the economics when volumes are marginal. Agua Moss understands the importance of this well to the State, so the avoidance of any additional expenditure aids in the continuance of our operations.

Please let us know your decision as soon as possible. If we aren't able to perform the RPE, we would need to plan accordingly to make the September report submission deadline.

Thank you,



Shacie Murray
Production Engineer
505-330-7605

AGUA MOSS, LLC

PLAN FOR RESERVOIR PRESSURE TEST

Well Information			
Well:	Sunco Disposal 1	Field:	Mesaverde SWD
Location:	1595' fnl & 1005' fw/ S2, T29N, R12W San Juan Co. New Mexico	Elevations:	5859' GL 5872' RKB
		Depths:	4706' KB PBTD 4760' KB TD
		Engineer:	Shacie Murray(505.330.7605)
API:	30-045-28653	Date:	June 4, 2021
Surface Casing:	8- 5/8" @ 209' KB w/ 150sx; Circ to surface	Production Casing:	5-1/2" @ 4750' KB w/ 230 sx stage 1, 515 sx stage 2, circ 25 sx to surf, DV tool @ 2244' KB
Tubulars:	2- 7/8" 6.5# EUE (Epoxy Coated) @ 4282' KB	Packer:	Arrow XL-W retrievable seal bore @ 4282' KB.
Perforations (MV)		4350-4460' KB 2 spf (2000 gals 15% HCL, Frac w/ 100,000# 20/40)	
Additional Perforations			
Perforations (MV)		None	

Version 1: Static Reservoir Pressure Evaluation Procedure subject to change based on changing well conditions.

Proposed Test Schedule:

Date	Event	Remarks
Monday, July 12 th , 2021	Check conditions, check pressures and perform MIT	Check conditions, check tubing pressure 9 am
Friday, July 16 th , 2021	96 hrs	Conclude test at 9am

Test Considerations:

- V.1 The pressure acquisition will be performed with pressure gauges at the surface.
- V.2 There will be adequate storage capacity for waste water for the duration of the test.
- V.3 There is one offset well completed in the Point Lookout disposal formation. The McGrath #4 is a class II disposal operated by ConocoPhillips approx 1.25 miles to the north west of the Sunco #1. The well has been P&A'd, so there will not be any injection activity from offset wells during the test.
- V.4 A shut-in valve is located on the injection riser approx 3-feet from the wellhead. This valve can be shut to isolated the tubing at the wellhead.
- V.5 Bottomhole pressure will not be collected directly but calculated from the surface pressure collected using the appropriate gradient. The use of surface pressure for the test is justified by the fact that the well will maintain a positive pressure at the surface during the entire test.
- V.6 A test log will be kept during the test and submitted with the FOT results. The log will include key events with date and times.
- Well isolation
 - Pressure recordings

AGUA MOSS, LLC**PLAN FOR RESERVOIR PRESSURE TEST**

V.7 Surface pressures will be recorded continuously using a data logger and transducer during the FOT. If any abnormal surface pressure change occurs the test validity will be questioned and the test will be aborted if deemed invalid.

V.8 The continuous data recording consists of a HOBO UX120-006M data logger with a Foxboro IGP10S industrial pressure transducer. The data logger features 4MB memory capable of keeping 1.9 million measurements, 1 year batter life (at 1 minute logging and 15 second sampling interval), and an accuracy of +/- 0.2%. Data will be recorded every 15 seconds. The pressure transducer has an accuracy of +/-0.05% and operating pressure range of 0-6,000 psi.

V.9 In addition, a chart recorder will monitor the tubing and casing pressure during the test as a backup for the data logger

Reservoir Pressure Test Procedure:

Prepare Well for Fall Off Test

1. Perform MIT
2. Setup pressure recording chart and digital gauge

Conduct Pressure Monitoring

1. Ensure surface gauges are configured properly
2. Record surface tubing pressure data for 96 hrs, Pressure readings will be taken every minute.
 - a. Bottomhole pressures will be calculated and compiled for the test
3. Put well back into service for normal operation.

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 31627

COMMENTS

Operator: AGUA MOSS, LLC P.O. Box 600 Farmington, NM 87499	OGRID:
	247130
	Action Number:
	31627
Action Type: [C-103] NOI General Sundry (C-103X)	

COMMENTS

Created By	Comment	Comment Date
ochavez	SUNCO WDW-1: Alternate Fall-Off Test Procedure- Reservoir Pressure Evaluation Test due to low injection volume and well economics.	6/11/2021

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

CONDITIONS

Action 31627

CONDITIONS

Operator: AGUA MOSS, LLC P.O. Box 600 Farmington, NM 87499	OGRID:	247130
	Action Number:	31627
	Action Type:	[C-103] NOI General Sundry (C-103X)

CONDITIONS

Created By	Condition	Condition Date
cchavez	None	6/11/2021



A Reservoir Pressure Evaluation Test (RPE) was performed on the Sunco SWD #1 Class I injection well (UICI-5-0) on **07/12/2021**. The RPE was approved by Carl Chaves on 06/11/2021 to fulfill the permit required annual Falloff Test. Below is a summary of the findings from the RPE Test.

Procedure:

Two Foxboro IGP10S industrial pressure transducers were installed in parallel with a one-pin pressure recording chart meter. Injection pumps were shut down and the well was isolated at the wellhead. Pressures were recorded for 98 hours. Bottom hole pressure (BHP) was calculated based on the June 28, 2021, specific gravity measurement and the 2019 wireline fill depth of 4362' with reference to ground level. The initial calculated BHP was 3201 psi at a depth of 4362'. The pressure from the transducers was recorded every 10 seconds and the pressure was charted continually over 5 days. The final calculated bottom hole pressure was 3188.7 psi on 07/16/2021 at 12:56 pm.

Analysis:

The surface pressure data was compiled in excel and analyzed. The BHP was calculated using a 0.439 psi/ft. The data is nearly constant with only a slight, 12 psi, pressure drop between the beginning and ending volumes.

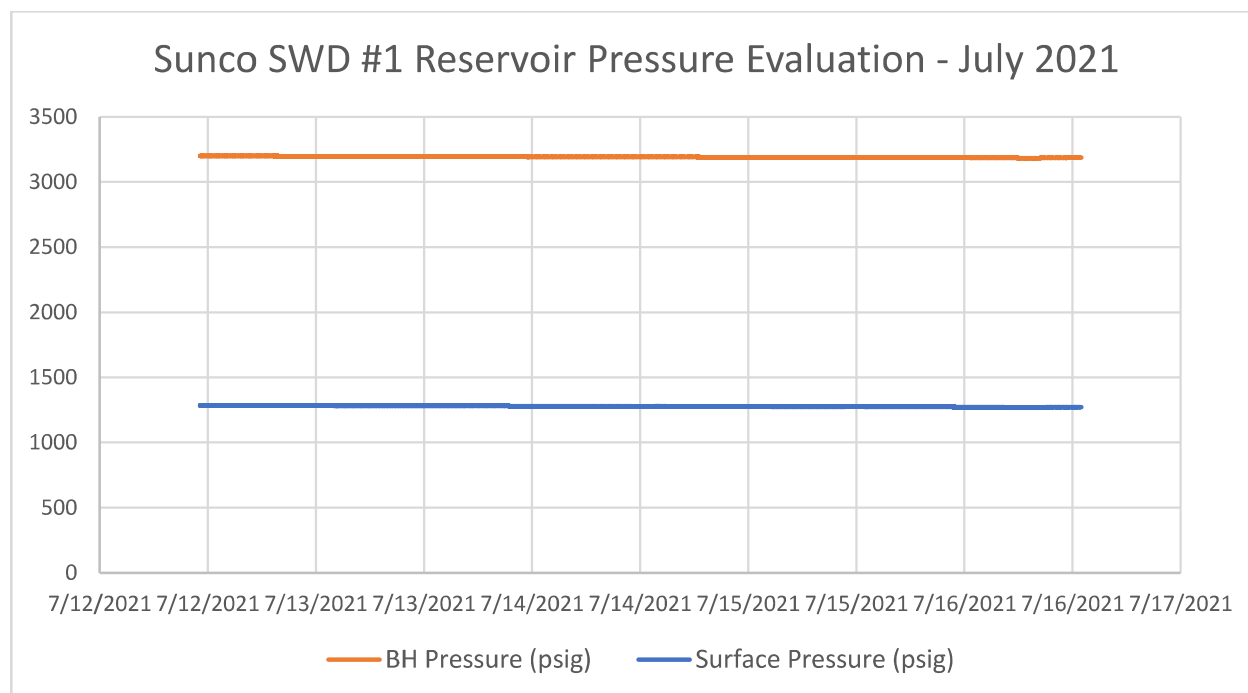


Figure 2 Calculated BH Pressure vs. Time

Results:

The well maintained a positive pressure during the entire RPE Test allowing a BHP to be calculated from the surface pressure readings collected. The average calculated BHP was 3193.8 psi. The steady reservoir pressure observed during the RPE indicates that the reservoir was in a near static state. This is due to the small amount of injection that has occurred this year and an ample shut-in period prior to the RPE Test. The RPE test was conducted with fill over a portion of the perforations

Comparison with past Falloff Tests:

The results from the 2021 RPE were compiled with previous RPE and FOT results from the facility and are shown below in Table 1.

Table 1: Results Comparison

	<u>2021</u>	<u>2020</u>	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	<u>2007</u>
Rate (bbl/day)				3292	3150	3132	3340	4500			
P* (psi)	3194*	2968*	2939*	3479	3273	3114	3283	3231	3242	3176	3258
K (md)				10.8	10.4	11.5	15.8	13.6	10.2	20.7	
S				-6.0	-6.0	-5.93	-5.97	-7.18	-7.23	-6.79	
Radius of Inv (ft)				1690	1790	1430	1580	1450	1250	1750	1620
Frac ½ Length (ft)				598	517	594	467	893	926	596	688
Boundary				None	none	none	none	648, 1520	755	987	none

Agua Moss did not conduct tests prior to 2015 and is relying on the 2010 report submitted by Key Energy, the past operator, for those results. The following observations were derived from a comparison of the results:

1. The surface pressures collected were relatively consistent indicating that the reservoir has equalized and the calculated BHP is representative of a static reservoir pressure.
2. The calculated BHP was within an expected range based on the extrapolated reservoir pressures from the previous FOTs.
3. The increase in BHP from the previous two RPE's is most likely due the greater than usual volume injected from 12/2020 to 04/2021.

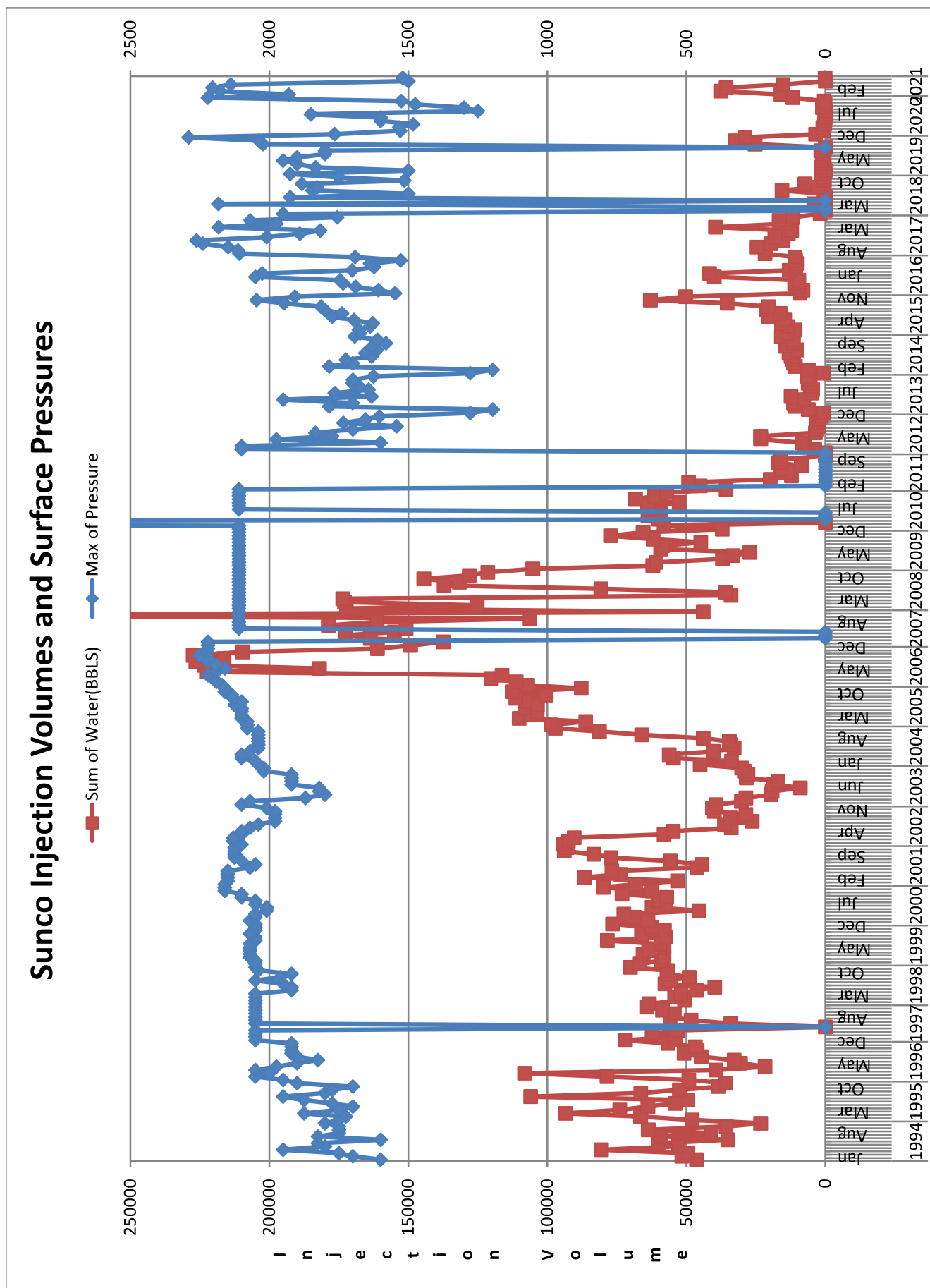
The raw test data obtain during the 2021 RPE test will be kept on file for a period of three (3) years and will be available upon request.

* The pressure shown for 2021 through 2019 is a bottom hole pressure calculated based on surface pressure and a fluid gradient. This pressure is being compared to the extrapolated reservoir pressures from previously completed Falloff Test. The comparison is being used to gauge the current condition of the injection interval to ensure the interval is suitable for continued injection operations.

Conclusions:

Based on the above analysis and results comparison, Agua Moss believes the Sunco SWD #1 2021 RPE was successfully completed. The results do not show indications of concern in continuing the current waste injection operations. The calculated BHP from the test was more than previous two RPE's but within the range of previous FOT extrapolated reservoir pressures. This higher pressure is due to the increased volume injected from 12/2020 to 04/2021. The injection rates during that time were similar to the rates in 2016 and 2017. The similar BHP in 2016, 2017, and 2021 indicates that the reservoir is still very suitable for continued injection.

Figure 2 Injection and Pressure Plot





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

July 23, 2021

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

RE: Aqua Moss Sunco # 1

OrderNo.: 2106F12

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/29/2021 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 2106F12

Date Reported: 7/23/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: S-18 (6/28/21)

Project: Aqua Moss Sunco # 1

Collection Date: 6/28/2021 11:00:00 AM

Lab ID: 2106F12-001

Matrix: AQUEOUS

Received Date: 6/29/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8081: PESTICIDES TCLP							Analyst: JME
Chlordane	ND	0.030		mg/L	1	7/2/2021 9:43:16 AM	61046
Surr: Decachlorobiphenyl	104	41.7-129		%Rec	1	7/2/2021 9:43:16 AM	61046
Surr: Tetrachloro-m-xylene	93.1	31.8-88.5	S	%Rec	1	7/2/2021 9:43:16 AM	61046
EPA METHOD 8270C TCLP							Analyst: JME
2-Methylphenol	ND	200		mg/L	1	7/9/2021 4:25:33 AM	61067
3+4-Methylphenol	ND	200		mg/L	1	7/9/2021 4:25:33 AM	61067
2,4-Dinitrotoluene	ND	0.13		mg/L	1	7/9/2021 4:25:33 AM	61067
Hexachlorobenzene	ND	0.13		mg/L	1	7/9/2021 4:25:33 AM	61067
Hexachlorobutadiene	ND	0.50		mg/L	1	7/9/2021 4:25:33 AM	61067
Hexachloroethane	ND	3.0		mg/L	1	7/9/2021 4:25:33 AM	61067
Nitrobenzene	ND	2.0		mg/L	1	7/9/2021 4:25:33 AM	61067
Pentachlorophenol	ND	100		mg/L	1	7/9/2021 4:25:33 AM	61067
Pyridine	ND	5.0		mg/L	1	7/9/2021 4:25:33 AM	61067
2,4,5-Trichlorophenol	ND	400		mg/L	1	7/9/2021 4:25:33 AM	61067
2,4,6-Trichlorophenol	ND	2.0		mg/L	1	7/9/2021 4:25:33 AM	61067
Cresols, Total	ND	200		mg/L	1	7/9/2021 4:25:33 AM	61067
Surr: 2-Fluorophenol	46.9	15-91.8		%Rec	1	7/9/2021 4:25:33 AM	61067
Surr: Phenol-d5	34.5	15-69.6		%Rec	1	7/9/2021 4:25:33 AM	61067
Surr: 2,4,6-Tribromophenol	67.2	15-115		%Rec	1	7/9/2021 4:25:33 AM	61067
Surr: Nitrobenzene-d5	54.7	15-109		%Rec	1	7/9/2021 4:25:33 AM	61067
Surr: 2-Fluorobiphenyl	52.8	15-96		%Rec	1	7/9/2021 4:25:33 AM	61067
Surr: 4-Terphenyl-d14	81.9	15-133		%Rec	1	7/9/2021 4:25:33 AM	61067
SPECIFIC GRAVITY							Analyst: JRR
Specific Gravity	1.014	0			1	7/14/2021 11:06:00 AM	R79788
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	1.0		mg/L	10	6/29/2021 7:40:47 PM	R79465
Chloride	16000	500	*	mg/L	1E+	7/9/2021 5:25:39 PM	R79711
Bromide	23	1.0		mg/L	10	6/29/2021 7:40:47 PM	R79465
Phosphorus, Orthophosphate (As P)	ND	5.0		mg/L	10	6/29/2021 7:40:47 PM	R79465
Sulfate	ND	5.0		mg/L	10	6/29/2021 7:40:47 PM	R79465
Nitrate+Nitrite as N	ND	10		mg/L	50	7/14/2021 2:59:54 AM	A79773
SM2510B: SPECIFIC CONDUCTANCE							Analyst: CAS
Conductivity	51000	100		µmhos/c	10	7/2/2021 2:26:35 PM	R79556
SM2320B: ALKALINITY							Analyst: JRR
Bicarbonate (As CaCO3)	886.3	50.00	H	mg/L Ca	2.5	7/15/2021 10:37:37 PM	R79813
Carbonate (As CaCO3)	ND	5.000	H	mg/L Ca	2.5	7/15/2021 10:37:37 PM	R79813
Total Alkalinity (as CaCO3)	886.3	50.00	H	mg/L Ca	2.5	7/15/2021 10:37:37 PM	R79813

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

Page 1 of 17

Analytical Report

Lab Order 2106F12

Date Reported: 7/23/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: S-18 (6/28/21)

Project: Aqua Moss Sunco # 1

Collection Date: 6/28/2021 11:00:00 AM

Lab ID: 2106F12-001

Matrix: AQUEOUS

Received Date: 6/29/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: JMT
Total Dissolved Solids	29300	200	*D	mg/L	1	7/6/2021 11:27:00 AM	61072
SM4500-H+B / 9040C: PH							Analyst: CAS
pH	5.83		H	pH units	1	6/30/2021 4:47:19 PM	R79516
EPA METHOD 7470: MERCURY							Analyst: ags
Mercury	ND	0.020		mg/L	1	7/9/2021 11:04:54 AM	61188
EPA METHOD 6010B: DISSOLVED METALS							Analyst: ags
Calcium	470	10		mg/L	10	6/30/2021 5:23:52 PM	A79508
Magnesium	80	10		mg/L	10	6/30/2021 5:23:52 PM	A79508
Potassium	39	10		mg/L	10	6/30/2021 5:23:52 PM	A79508
Sodium	8500	100		mg/L	100	6/30/2021 5:52:29 PM	A79508
EPA 6010B: TOTAL RECOVERABLE METALS							Analyst: ags
Arsenic	ND	5.0		mg/L	1	6/30/2021 4:58:00 PM	61023
Barium	110	100		mg/L	500	7/13/2021 1:12:40 PM	61023
Cadmium	ND	1.0		mg/L	1	6/30/2021 4:58:00 PM	61023
Chromium	ND	5.0		mg/L	1	6/30/2021 4:58:00 PM	61023
Lead	ND	5.0		mg/L	1	7/16/2021 3:32:09 PM	61023
Selenium	ND	1.0		mg/L	1	6/30/2021 4:58:00 PM	61023
Silver	ND	5.0		mg/L	1	6/30/2021 4:58:00 PM	61023
TCLP VOLATILES BY 8260B							Analyst: RAA
Benzene	11	0.50		mg/L	200	7/1/2021 6:03:56 AM	T79505
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	200	7/1/2021 6:03:56 AM	T79505
2-Butanone	ND	200		mg/L	200	7/1/2021 6:03:56 AM	T79505
Carbon Tetrachloride	ND	0.50		mg/L	200	7/1/2021 6:03:56 AM	T79505
Chloroform	ND	6.0		mg/L	200	7/1/2021 6:03:56 AM	T79505
1,4-Dichlorobenzene	ND	7.5		mg/L	200	7/1/2021 6:03:56 AM	T79505
1,1-Dichloroethene	ND	0.70		mg/L	200	7/1/2021 6:03:56 AM	T79505
Tetrachloroethene (PCE)	ND	0.70		mg/L	200	7/1/2021 6:03:56 AM	T79505
Trichloroethene (TCE)	ND	0.50		mg/L	200	7/1/2021 6:03:56 AM	T79505
Vinyl chloride	ND	0.20		mg/L	200	7/1/2021 6:03:56 AM	T79505
Chlorobenzene	ND	100		mg/L	200	7/1/2021 6:03:56 AM	T79505
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec	200	7/1/2021 6:03:56 AM	T79505
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	200	7/1/2021 6:03:56 AM	T79505
Surr: Dibromofluoromethane	101	70-130		%Rec	200	7/1/2021 6:03:56 AM	T79505
Surr: Toluene-d8	94.3	70-130		%Rec	200	7/1/2021 6:03:56 AM	T79505

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

Page 2 of 17

Analytical Report

Lab Order 2106F12

Date Reported: 7/23/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: Trip Blank

Project: Aqua Moss Sunco # 1

Collection Date:

Lab ID: 2106F12-002

Matrix: TRIP BLANK

Received Date: 6/29/2021 8:00:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
TCLP VOLATILES BY 8260B							Analyst: RAA
Benzene	ND	0.50		mg/L	1	7/1/2021 6:31:12 AM	T79505
1,2-Dichloroethane (EDC)	ND	0.50		mg/L	1	7/1/2021 6:31:12 AM	T79505
2-Butanone	ND	200		mg/L	1	7/1/2021 6:31:12 AM	T79505
Carbon Tetrachloride	ND	0.50		mg/L	1	7/1/2021 6:31:12 AM	T79505
Chloroform	ND	6.0		mg/L	1	7/1/2021 6:31:12 AM	T79505
1,4-Dichlorobenzene	ND	7.5		mg/L	1	7/1/2021 6:31:12 AM	T79505
1,1-Dichloroethene	ND	0.70		mg/L	1	7/1/2021 6:31:12 AM	T79505
Tetrachloroethene (PCE)	ND	0.70		mg/L	1	7/1/2021 6:31:12 AM	T79505
Trichloroethene (TCE)	ND	0.50		mg/L	1	7/1/2021 6:31:12 AM	T79505
Vinyl chloride	ND	0.20		mg/L	1	7/1/2021 6:31:12 AM	T79505
Chlorobenzene	ND	100		mg/L	1	7/1/2021 6:31:12 AM	T79505
Surr: 1,2-Dichloroethane-d4	106	70-130		%Rec	1	7/1/2021 6:31:12 AM	T79505
Surr: 4-Bromofluorobenzene	102	70-130		%Rec	1	7/1/2021 6:31:12 AM	T79505
Surr: Dibromofluoromethane	102	70-130		%Rec	1	7/1/2021 6:31:12 AM	T79505
Surr: Toluene-d8	98.9	70-130		%Rec	1	7/1/2021 6:31:12 AM	T79505

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

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ANALYTICAL REPORT

July 23, 2021

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1372907

Samples Received: 06/30/2021

Project Number:

Description:

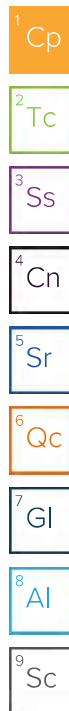
Report To: Jackie Bolte
4901 Hawkins NE
Albuquerque, NM 87109

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

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Ss: Sample Summary	3	<div><div>2</div>Tc</div>
Cn: Case Narrative	4	
Sr: Sample Results	5	<div><div>3</div>Ss</div>
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Wet Chemistry by Method 4500H+ B-2011	12	
Wet Chemistry by Method D93/1010A	13	<div><div>9</div>Sc</div>
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Al: Accreditations & Locations	15	
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2106F12-001F S-18 (6/28/21) L1372907-01 WW

Collected by
Collected date/time
Received date/time

06/28/21 11:00
06/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500H+ B-2011	WG1700812	1	07/07/21 14:00	07/07/21 14:00	GJA	Mt. Juliet, TN
Wet Chemistry by Method D93/1010A	WG1703776	1	07/13/21 02:04	07/13/21 02:04	CAT	Mt. Juliet, TN

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

2106F12-001G S-18 (6/28/21) L1372907-02 WW

Collected by
Collected date/time
Received date/time

06/28/21 11:00
06/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 S2 D-2011	WG1700481	1	07/05/21 22:03	07/05/21 22:03	JIC	Mt. Juliet, TN

2106F12-001H S-18 (6/28/21) L1372907-03 WW

Collected by
Collected date/time
Received date/time

06/28/21 11:00
06/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500 CN E-2011	WG1708500	1	07/20/21 20:52	07/21/21 12:44	KEG	Mt. Juliet, TN

2106F12-001I S-18 (6/28/21) L1372907-04 GW

Collected by
Collected date/time
Received date/time

06/28/21 11:00
06/30/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 2580	WG1700745	1	07/06/21 15:52	07/06/21 15:52	AMH	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.



John Hawkins
Project Manager

Project Narrative

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

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

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Collected date/time: 06/28/21 11:00

Wet Chemistry by Method 4500H+ B-2011

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Corrosivity by pH	5.90	T8	1	07/07/2021 14:00	WG1700812

Sample Narrative:
L1372907-01 WG1700812: 5.9 at 21.3C

Wet Chemistry by Method D93/1010A

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Flashpoint	DNF at 170		1	07/13/2021 02:04	WG1703776

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 06/28/21 11:00

Wet Chemistry by Method 4500 S2 D-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Sulfide	0.330		0.0500	1	07/05/2021 22:03	WG1700481

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 06/28/21 11:00

Wet Chemistry by Method 4500 CN E-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Reactive Cyanide	0.0162	J4	0.00500	1	07/21/2021 12:44	WG1708500

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

Collected date/time: 06/28/21 11:00

Wet Chemistry by Method 2580

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
ORP	42.5	T8	1	07/06/2021 15:52	WG1700745

1Cp

2Tc

3Ss

4Cn

5Sr

6Qc

7Gl

8Al

9Sc

L1372907-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1372907-04 07/06/21 15:52 • (DUP) R3676180-3 07/06/21 15:52

Analyte	Original Result mV	DUP Result mV	Dilution	DUP Diff mV	<u>DUP Qualifier</u>	DUP Diff Limits mV
ORP	42.5	44.0	1	1.50		20

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

(LCS) R3676180-1 07/06/21 15:52 • (LCSD) R3676180-2 07/06/21 15:52

Analyte	Spike Amount mV	LCS Result mV	LCSD Result mV	LCS Rec. %	LCSD Rec. %	Rec. Limits %	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	Diff mV	Diff Limits mV
ORP	106	106	106	100	100	86.0-105			0.000	20

Received by OCD: 9/1/2022 5:06:47 PM

1C

2T

3S

4C

5S

6Qc

7GI

8AI

9Sc

Method Blank (MB)

(MB) R3682171-1 07/21/21 12:36

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

L1373848-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1373848-03 07/21/21 12:46 • (DUP) R3682171-4 07/21/21 12:49

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

L1377992-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1377992-01 07/21/21 13:09 • (DUP) R3682171-7 07/21/21 13:10

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) R3682171-3 07/21/21 12:37

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Reactive Cyanide	0.100	0.0820	82.0	87.1-120	J4

L1377792-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1377792-01 07/21/21 13:06 • (MS) R3682171-5 07/21/21 13:07 • (MSD) R3682171-6 07/21/21 13:08

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	0.110	0.103	1	90.0-110		6.57	20

Method Blank (MB)

(MB) R3675772-1 07/05/21 21:20

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

Laboratory Control Sample (LCS)

(LCS) R3675772-2 07/05/21 21:29

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	<u>LCS Qualifier</u>
Reactive Sulfide	0.500	0.536	107	85.0-115	

Laboratory Control Sample (LCS)

(LCS) R3676727-1 07/07/21 14:00

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

Sample Narrative:

LCS: 10.04 at 21.2C

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

(LCS) R3678532-1 07/13/21 02:04 • (LCSD) R3678532-2 07/13/21 02:04

Spike Amount		LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	<u>LCS Qualifier</u>	<u>LCSD Qualifier</u>	RPD	RPD Limits
deg F	deg F	deg F	deg F	%	%	%			%	%
126	131	131	131	104	104	96.0-104			0.000	10

Analyte

Flashpoint

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.

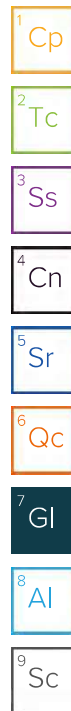
Results Disclaimer - Information that may be provided by the customer, and contained within this report, include Permit Limits, Project Name, Sample ID, Sample Matrix, Sample Preservation, Field Blanks, Field Spikes, Field Duplicates, On-Site Data, Sampling Collection Dates/Times, and Sampling Location.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



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 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

**HALL
ENVIRONMENTAL
ANALYSIS
LABORATORY**

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

E183

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

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS
1	2106F12-001F	S-18 (6/28/21)	500HDPE	Aqueous	6/28/2021 11:00:00 AM	1 RCI	U372907 -c1
2	2106F12-001G	S-18 (6/28/21)	500PLNAOH ZnAc	Aqueous	6/28/2021 11:00:00 AM	1 RCI	-c2
3	2106F12-001H	S-18 (6/28/21)	500PL-NaOH	Aqueous	6/28/2021 11:00:00 AM	1 RCI	-c3
4	2106F12-001I	S-18 (6/28/21)	125HDP	Aqueous	6/28/2021 11:00:00 AM	1 ORP	-c4

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

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>SC</u>	Date: 6/29/2021	Time: 10:47 AM	Received By:	Date:	Time:	REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARD COPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE		
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	FOR LAB USE ONLY		
Relinquished By:	Date:	Time:	Received By: <u>[Signature]</u>	Date: <u>6/29/21</u>	Time: <u>11:00</u>	Temp of samples: <u>4.6+2-4.8</u>	Attempt to Cool? <u>ARP</u>	Comments:
TAT: <input checked="" type="checkbox"/> Standard <input type="checkbox"/> RUSH	Next BD: <input type="checkbox"/>	2nd BD: <input type="checkbox"/>	3rd BD: <input type="checkbox"/>					

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

WO#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R79465	RunNo: 79465								
Prep Date:	Analysis Date: 6/29/2021	SeqNo: 2793674 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: R79465	RunNo: 79465								
Prep Date:	Analysis Date: 6/29/2021	SeqNo: 2793675 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.53	0.10	0.5000	0	106	90	110			
Bromide	2.5	0.10	2.500	0	100	90	110			
Phosphorus, Orthophosphate (As P	4.7	0.50	5.000	0	93.3	90	110			
Sulfate	9.8	0.50	10.00	0	98.4	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R79711	RunNo: 79711								
Prep Date:	Analysis Date: 7/9/2021	SeqNo: 2803588 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: R79711	RunNo: 79711								
Prep Date:	Analysis Date: 7/9/2021	SeqNo: 2803594 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	4.8	0.50	5.000	0	96.0	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: A79773	RunNo: 79773								
Prep Date:	Analysis Date: 7/13/2021	SeqNo: 2806400 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	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#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: LCS		SampType: lcs		TestCode: EPA Method 300.0: Anions						
Client ID: LCSW		Batch ID: A79773		RunNo: 79773						
Prep Date:		Analysis Date: 7/14/2021		SeqNo: 2806401		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.9	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 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

Page 5 of 17

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

WO#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: MB-61046	SampType: MBLK	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: PBW	Batch ID: 61046	RunNo: 79529								
Prep Date: 6/30/2021	Analysis Date: 7/1/2021	SeqNo: 2796336 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Surr: Decachlorobiphenyl	0.0031		0.002500		124	41.7	129			
Surr: Tetrachloro-m-xylene	0.0015		0.002500		62.0	31.8	88.5			

Sample ID: MB-61046	SampType: MBLK	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: PBW	Batch ID: 61046	RunNo: 79529								
Prep Date: 6/30/2021	Analysis Date: 7/1/2021	SeqNo: 2796337 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND	0.030								
Surr: Decachlorobiphenyl	0.0033		0.002500		133	41.7	129			S
Surr: Tetrachloro-m-xylene	0.0017		0.002500		68.7	31.8	88.5			

Sample ID: LCS-61046	SampType: LCS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: LCSW	Batch ID: 61046	RunNo: 79529								
Prep Date: 6/30/2021	Analysis Date: 7/1/2021	SeqNo: 2796338 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0031		0.002500		124	41.7	129			
Surr: Tetrachloro-m-xylene	0.0018		0.002500		70.4	31.8	88.5			

Sample ID: 2106F12-001BMS	SampType: MS	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: S-18 (6/28/21)	Batch ID: 61046	RunNo: 79547								
Prep Date: 6/30/2021	Analysis Date: 7/2/2021	SeqNo: 2797400 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0041		0.002500		164	41.7	129			S
Surr: Tetrachloro-m-xylene	0.0031		0.002500		122	31.8	88.5			S

Sample ID: 2106F12-001BMSD	SampType: MSD	TestCode: EPA Method 8081: Pesticides TCLP								
Client ID: S-18 (6/28/21)	Batch ID: 61046	RunNo: 79547								
Prep Date: 6/30/2021	Analysis Date: 7/2/2021	SeqNo: 2797402 Units: %Rec								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0026		0.002500		102	41.7	129	0	0	
Surr: Tetrachloro-m-xylene	0.0024		0.002500		94.7	31.8	88.5	0	0	S

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#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: LCS-61046		SampType: LCS		TestCode: EPA Method 8081: Pesticides TCLP						
Client ID: LCSW	Batch ID: 61046			RunNo: 79529						
Prep Date: 6/30/2021	Analysis Date: 7/1/2021			SeqNo: 2797408			Units: %Rec			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlorobiphenyl	0.0030		0.002500		119	41.7	129			
Surr: Tetrachloro-m-xylene	0.0018		0.002500		71.2	31.8	88.5			

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#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: 100ng lcs2	SampType: LCS			TestCode: TCLP Volatiles by 8260B						
Client ID: LCSW	Batch ID: T79505			RunNo: 79505						
Prep Date:	Analysis Date: 7/1/2021			SeqNo: 2795327		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.022	0.00023	0.02000	0	110	70	130			
1,1-Dichloroethene	0.020	0.00013	0.02000	0	102	70	130			
Trichloroethene (TCE)	0.020	0.00020	0.02000	0	101	70	130			
Chlorobenzene	0.020	0.00014	0.02000	0	99.7	70	130			
Surr: 1,2-Dichloroethane-d4	0.011		0.01000		107	70	130			
Surr: 4-Bromofluorobenzene	0.010		0.01000		105	70	130			
Surr: Dibromofluoromethane	0.010		0.01000		102	70	130			
Surr: Toluene-d8	0.010		0.01000		102	70	130			

Sample ID: mb2	SampType: MBLK			TestCode: TCLP Volatiles by 8260B						
Client ID: PBW	Batch ID: T79505			RunNo: 79505						
Prep Date:	Analysis Date: 7/1/2021			SeqNo: 2795330		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	0.010		0.01000		104	70	130			
Surr: 4-Bromofluorobenzene	0.011		0.01000		106	70	130			
Surr: Dibromofluoromethane	0.010		0.01000		101	70	130			
Surr: Toluene-d8	0.0098		0.01000		98.2	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

Page 8 of 17

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

WO#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: MB-61067	SampType: MBLK	TestCode: EPA Method 8270C TCLP								
Client ID: PBW	Batch ID: 61067	RunNo: 79674								
Prep Date: 7/1/2021	Analysis Date: 7/8/2021	SeqNo: 2802563	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	0.074		0.2000		37.1	15	91.8			
Surr: Phenol-d5	0.061		0.2000		30.5	15	69.6			
Surr: 2,4,6-Tribromophenol	0.11		0.2000		54.5	15	115			
Surr: Nitrobenzene-d5	0.047		0.1000		46.6	15	109			
Surr: 2-Fluorobiphenyl	0.046		0.1000		46.0	15	96			
Surr: 4-Terphenyl-d14	0.071		0.1000		71.4	15	133			

Sample ID: LCS-61067	SampType: LCS	TestCode: EPA Method 8270C TCLP								
Client ID: LCSW	Batch ID: 61067	RunNo: 79674								
Prep Date: 7/1/2021	Analysis Date: 7/8/2021	SeqNo: 2802564	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol	0.053	0.00010	0.1000	0	53.2	33.8	121			
3+4-Methylphenol	0.11	0.00010	0.2000	0	55.3	33.6	109			
2,4-Dinitrotoluene	0.045	0.00010	0.1000	0	45.1	50.4	124			S
Hexachlorobenzene	0.060	0.00010	0.1000	0	60.5	50.1	120			
Hexachlorobutadiene	0.050	0.00010	0.1000	0	50.2	16.1	103			
Hexachloroethane	0.047	0.00010	0.1000	0	47.0	15	94.2			
Nitrobenzene	0.056	0.00010	0.1000	0	56.4	32.4	125			
Pentachlorophenol	0.055	0.00010	0.1000	0	54.8	44.6	114			
Pyridine	0.039	0.00010	0.1000	0	39.2	15	67			
2,4,5-Trichlorophenol	0.064	0.00010	0.1000	0	63.9	49.4	118			
2,4,6-Trichlorophenol	0.062	0.00010	0.1000	0	61.5	50.3	116			
Cresols, Total	0.16	0.00010	0.3000	0	54.6	33.8	109			
Surr: 2-Fluorophenol	0.093		0.2000		46.6	15	91.8			
Surr: Phenol-d5	0.075		0.2000		37.3	15	69.6			
Surr: 2,4,6-Tribromophenol	0.13		0.2000		66.6	15	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 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#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: LCS-61067		SampType: LCS			TestCode: EPA Method 8270C TCLP					
Client ID: LCSW		Batch ID: 61067			RunNo: 79674					
Prep Date: 7/1/2021		Analysis Date: 7/8/2021			SeqNo: 2802564		Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Nitrobenzene-d5	0.056		0.1000		56.4	15	109			
Surr: 2-Fluorobiphenyl	0.060		0.1000		59.7	15	96			
Surr: 4-Terphenyl-d14	0.083		0.1000		82.6	15	133			

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#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: Ics-1 98.7uS eC		SampType: Ics		TestCode: SM2510B: Specific Conductance						
Client ID: LCSW		Batch ID: R79556		RunNo: 79556						
Prep Date:		Analysis Date: 7/2/2021		SeqNo: 2798408		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	97	10	98.70	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 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#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: MB-61188		SampType: MBLK		TestCode: EPA Method 7470: Mercury						
Client ID: PBW		Batch ID: 61188		RunNo: 79686						
Prep Date: 7/8/2021		Analysis Date: 7/9/2021		SeqNo: 2802512		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: LL LCS-61188		SampType: LCSLL		TestCode: EPA Method 7470: Mercury						
Client ID: BatchQC		Batch ID: 61188		RunNo: 79686						
Prep Date: 7/8/2021		Analysis Date: 7/9/2021		SeqNo: 2802513		Units: mg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020	0.0001500	0	79.5	50	150			

Sample ID: LCS-61188		SampType: LCS		TestCode: EPA Method 7470: Mercury						
Client ID: LCSW		Batch ID: 61188		RunNo: 79686						
Prep Date: 7/8/2021		Analysis Date: 7/9/2021		SeqNo: 2802514		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 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#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: PBW	Batch ID: A79508	RunNo: 79508								
Prep Date:	Analysis Date: 6/30/2021	SeqNo: 2795572 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								
Sodium	ND	1.0								

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 6010B: Dissolved Metals								
Client ID: LCSW	Batch ID: A79508	RunNo: 79508								
Prep Date:	Analysis Date: 6/30/2021	SeqNo: 2795576 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Magnesium	48	1.0	50.00	0	97.0	80	120			
Potassium	48	1.0	50.00	0	95.9	80	120			
Sodium	49	1.0	50.00	0	97.5	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 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#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: MB-61023	SampType: MBLK	TestCode: EPA 6010B: Total Recoverable Metals								
Client ID: PBW	Batch ID: 61023	RunNo: 79508								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2795520	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.030								
Barium	ND	0.0020								
Cadmium	ND	0.0020								
Chromium	ND	0.0060								
Lead	ND	0.020								
Selenium	ND	0.050								
Silver	ND	0.0050								

Sample ID: LCS-61023	SampType: LCS	TestCode: EPA 6010B: Total Recoverable Metals								
Client ID: LCSW	Batch ID: 61023	RunNo: 79508								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2795522	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.49	0.030	0.5000	0	97.5	80	120			
Barium	0.48	0.0020	0.5000	0	96.3	80	120			
Cadmium	0.49	0.0020	0.5000	0	97.3	80	120			
Chromium	0.48	0.0060	0.5000	0	96.5	80	120			
Lead	0.50	0.020	0.5000	0	99.3	80	120			
Selenium	0.50	0.050	0.5000	0	99.2	80	120			
Silver	0.098	0.0050	0.1000	0	98.4	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 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#: 2106F12

23-Jul-21

Client: Souder, Miller and Associates**Project:** Aqua Moss Sunco # 1

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R79813	RunNo: 79813								
Prep Date:	Analysis Date: 7/15/2021	SeqNo: 2809111 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: R79813	RunNo: 79813								
Prep Date:	Analysis Date: 7/15/2021	SeqNo: 2809112 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.92	20.00	80.00	0	98.6	90	110			

Sample ID: mb-2 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R79813	RunNo: 79813								
Prep Date:	Analysis Date: 7/15/2021	SeqNo: 2809134 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: R79813	RunNo: 79813								
Prep Date:	Analysis Date: 7/15/2021	SeqNo: 2809135 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.88	20.00	80.00	0	98.6	90	110			

Sample ID: mb-3 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R79813	RunNo: 79813								
Prep Date:	Analysis Date: 7/15/2021	SeqNo: 2809158 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-3 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R79813	RunNo: 79813								
Prep Date:	Analysis Date: 7/15/2021	SeqNo: 2809159 Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.24	20.00	80.00	0	99.0	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 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#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: 2106F12-001C DUP		SampType: DUP		TestCode: Specific Gravity						
Client ID: S-18 (6/28/21)		Batch ID: R79788		RunNo: 79788						
Prep Date:		Analysis Date: 7/14/2021		SeqNo: 2806734		Units:				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Specific Gravity	1.014	0						0.0592	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#: 2106F12
23-Jul-21

Client: Souder, Miller and Associates
Project: Aqua Moss Sunco # 1

Sample ID: MB-61072	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 61072	RunNo: 79588								
Prep Date: 7/1/2021	Analysis Date: 7/6/2021	SeqNo: 2798905 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

Sample ID: LCS-61072	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 61072	RunNo: 79588								
Prep Date: 7/1/2021	Analysis Date: 7/6/2021	SeqNo: 2798906 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1020	20.0	1000	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 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



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

Sample Log-In Check List

Client Name: **Souder, Miller and Associates**

Work Order Number: **2106F12**

RcptNo: **1**

Received By: **Juan Rojas**

6/29/2021 8:00:00 AM

Completed By: **Sean Livingston**

6/29/2021 10:40:57 AM

Reviewed By: *[Signature]*

6/29/21

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 $>0^{\circ}\text{C}$ 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 ☒ *See 6/29/21* NA ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
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: 3 or 3 (unless noted)
Adjusted? yes
Checked by: See 6/29/21

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 - 4.0mL HNO₃ to sample 001E, added - 0.4mL HNO₃ to sample 001D checked for preferred pH 7.2 poured off 100mL for ORP analysis

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.6	Good				
2	1.5	Good				

See 6/29/21

Sanco 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	Hexachloroethane	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	100.0
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 mg/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:

RCl, 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.

1/31/21		12/30		3/31/21		5/31/21		7/31/21	
AVG	1600	1896,429	0	AVG	1917,742	0	1873,684	0	1495
MIN	1620	0	0	MIN	1850	0	1750	0	1450
MAX	1250	0	0	MAX	2150	0	2150	0	1750
AVG	1800	2350	0	AVG	2150	0	2150	0	1520
MIN	1250	0	0	MIN	1850	0	1750	0	1450
MAX	1850	0	0	MAX	2150	0	2150	0	1770

Total Injected	Avg Vol	Avg Flow	2/1/21	2/2/21	2/3/21	3/1/21	Avg Vol	Avg Flow	4/1/21	Avg Vol	Avg Flow	5/1/21	Avg Vol	Avg Flow	6/1/21	Avg Vol	Avg Flow	7/1/21	Avg Vol	Avg Flow
1/1/21	1146	33.425	3/1/21	1074	31.325	4/1/21	1465	42.72916667	5/1/21			6/1/21			7/1/21			7/1/2021		
1/2/21	2156	62.88333333	3/2/21	864	25.2	4/2/21	1670	48.70833333	5/2/21			6/2/21			7/2/21			7/2/2021		
1/3/21	1402	40.89166667	3/3/21	2001	58.3625	4/3/21	913	26.62916667	5/3/21			6/3/21			7/3/21			7/3/2021		
1/4/21	2235	65.1875	3/4/21	1640	47.83333333	4/4/21	699	20.3875	5/4/21			6/4/21			7/4/21			7/4/2021		
1/5/21	2011	58.65416667	3/5/21	1558	45.44166667	4/5/21	1144	33.36666667	5/5/21			6/5/21			7/5/21			7/5/2021		
1/6/21	1178	34.35833333	3/6/21			4/6/21	1242	36.225	5/6/21			6/6/21			7/6/21			7/6/2021		
1/7/21	931	27.15416667	3/7/21	885	25.8125	4/7/21	662	19.30833333	5/7/21			6/7/21			7/7/21			7/7/2021		
1/8/21	1494	43.575	3/8/21	1155	33.6875	4/8/21	587	17.12083333	5/8/21			6/8/21			7/8/21			7/8/2021		
1/9/21	1316	38.38333333	3/9/21	903	26.3375	4/9/21	670	19.54166667	5/9/21			6/9/21			7/9/21			7/9/2021		
1/10/21	1512	44.1	3/10/21	1980	57.75	4/10/21	1167	34.0375	5/10/21			6/10/21			7/10/21			7/10/2021		
1/11/21	2104	61.36666667	3/11/21	1524	44.45	4/11/21	261	7.6125	5/11/21			6/11/21			7/11/21			7/11/2021		
1/12/21	2352	68.6	3/12/21	1801	52.52916667	4/12/21			5/12/21			6/12/21			7/12/21			7/12/2021		
1/13/21	559	16.30416667	3/13/21	1157	33.74583333	4/13/21			5/13/21			6/13/21			7/13/21			7/13/2021		
1/14/21	260	7.583333333	3/14/21	357	10.4125	4/14/21			5/14/21			6/14/21			7/14/21			7/14/2021		
1/15/21	1210	35.29166667	3/15/21	1557	45.4125	4/15/21	1001	29.19583333	5/15/21			6/15/21			7/15/21			7/15/2021		
1/16/21	659	19.22083333	3/16/21	1297	37.82916667	4/16/21	701	20.44583333	5/16/21			6/16/21			7/16/21			7/16/2021		
1/17/21	1605	46.8125	3/17/21	841	24.52916667	4/17/21	793	23.12916667	5/17/21			6/17/21			7/17/21			7/17/2021		
1/18/21	1461	42.6125	3/18/21	2433	70.9625	4/18/21	1020	29.75	5/18/21			6/18/21			7/18/21			7/18/2021		
1/19/21	1287	37.5375	3/19/21	1652	48.18333333	4/19/21	685	19.97916667	5/19/21			6/19/21			7/19/21			7/19/2021		
1/20/21	987	28.7875	3/20/21	374	10.90833333	4/20/21	595	17.35416667	5/20/21			6/20/21			7/20/21			7/20/2021		
1/21/21	1648	48.06666667	3/21/21	303	8.8375	4/21/21			5/21/21			6/21/21			7/21/21			7/21/2021		
1/22/21	2151	62.7375	3/22/21	801	23.3625	4/22/21			5/22/21			6/22/21			7/22/21			7/22/2021		
1/23/21	828	24.15	3/23/21	1755	51.1875	4/23/21			5/23/21			6/23/21			7/23/21			7/23/2021		
1/24/21	501	14.6125	3/24/21	918	26.775	4/24/21			5/24/21			6/24/21			7/24/21			7/24/2021		
1/25/21	763	22.25416667	3/25/21	1524	44.45	4/25/21			5/25/21	0	0	6/25/21			7/25/21			7/25/2021		
1/26/21	1223	35.67083333	3/26/21	802	23.39166667	4/26/21			5/26/21			6/26/21			7/26/21			7/26/2021		
1/27/21	1231	35.90416667	3/27/21	538	15.69166667	4/27/21			5/27/21			6/27/21			7/27/21			7/27/2021		
1/28/21	2143	62.50416667	3/28/21	466	13.59166667	4/28/21			5/28/21			6/28/21			7/28/21			7/28/2021		
1/29/21	1244	36.28333333	3/29/21	928	27.06666667	4/29/21			5/29/21			6/29/21			7/29/21			7/29/2021		
1/30/21	1184	34.53333333	3/30/21	1142	33.30833333	4/30/21			5/30/21			6/30/21	16	0.466666667	7/30/21			7/30/2021		
1/31/21	536	15.63333333	3/31/21	1454	42.40833333				5/31/21						7/31/21			7/31/2021		
AVG	1143.5	33.35208333		1189.466667	34.69277778		898.5294118	26.20710784		0	0					16	0.456666667		546	15.925
MAX	2151	62.7375		2433	70.9625		1670	48.70833333		0	0					16	0.466666667		546	15.925
MIN	407	11.87083333		303	8.8375000		261	7.6125000		0	0.0000000					16	0.4666667		546	15.9250000
Total for month	16009			35684			15275			0						16				

2021

Quarterly
Injection ReportJICI-5-0
Agua Moss, LLC
Sunco Disposal #1 30-045-28653

	Average Pressure (psig)	Maximum Pressure (psig)	Minimum Pressure (psig)	Average Flow (gpm)	Maximum Flow (gpm)	Minimum Flow (gpm)	Average Annular Pressure (psig)	Maximum Annular Pressure (psig)	Minimum Annular Pressure (psig)	Average Volume (bpd)	Maximum Volume (bpd)	Minimum Volume (bpd)	Previous year Volume (barrels)	Total Cumulative Volume (barrels)
Jan-2020	1620	1850	1250	33.35208333	62.7375	11.87083333	0	0	0	1143.5	2151	407	16009	15198765
Feb-2020	1896.429	2350	1750	40.61728395	68.6	7.58333333	0	0	0	1392.592593	2352	260	37600	15236365
Mar-2020	1917.742	2150	1850	34.69277778	70.9625	8.8375	0	0	0	1189.466667	2433	303	35684	15272049
Apr-2020	0	0	0	26.20710784	48.70833333	7.6125	0	0	0	898.5294118	1670	261	15275	15287324
May-2020	1873.684	2150	1750	0	0	0	0	0	0	0	0	0	0	15287324
Jun-2020	1495	1520	1450	0.466666667	0.466666667	0.466666667	0	0	0	16	16	16	16	15287340
Jul-20	1423.333	1720	1275	15.925	15.925	15.925	0	0	0	546	546	546	546	15287886
Aug-20	0	0	0	0	0	0	0	0	0	0	0	0	0	15287886
Sep-20	0	0	0	0	0	0	0	0	0	0	0	0	0	15287886
Oct-2020	0	0	0	0	0	0	0	0	0	0	0	0	0	15287886
Nov-2020	0	0	0	0	0	0	0	0	0	0	0	0	0	15287886
Dec-2020	0	0	0	0	0	0	0	0	0	#DIV/0!	0	0	0	15287886
Total for year 105130														15393016
Life Of well injected														15393016

**2020 AREA OF REVIEW
UNIT LETTERS ENCOMPASSED BY THE 2-MILE AOR**

Sec	TWN	RNG	UL	
1	29N	12W	ALL	
2	29N	12W	ALL	
3	29N	12W	ALL	
4	29N	12W	ACFJKNP	
9	29N	12W	ABH	
10	29N	12W	ABCDIJN	
11	29N	12W	ACDGHILOP	
12	29N	12W	AEFKM	
25	30N	12W	EMN	
26	30N	12W	FGLNOP	
27	30N	12W	LMP	
28	30N	12W	O	
33	30N	12W	GHIJK	
34	30N	12W	ALL	
35	30N	12W	ALL	
36	30N	12W	AEIMN	

Radius expanded to 2 miles for permit renewal requirements.

API	Well Name	Well #	Current Operator	Type	Lease	Status	Sec	TWN	RNG	UL	Spud Date	TD	Surface Casing			INT Casing			Production Casing			Packer		
													size	depth	Sacks TOC	size	depth	Sacks TOC	size	depth	Sacks TOC			
30-045-28653	SUNCO DISPOSAL	#001	Agua Moss	Salt Water Disposal	Private	Active	2	29N	12W	E	1/28/1992	4760	8,625	209	150 surf				5.5	4760	1010 surf	4350-4460	4282 10/15/07	PLUGGED
30-045-08851	ALLEN A	#001	BP America	Gas	Private	Plugged	1	29N	12W	D	3/12/1961	6785	8,265	264	200 surf				4.5	6785	300 surf	6518-6718		3/27/2018
30-045-26214	ALLEN A	#001E	SIMCOE LLC	Gas	Federal	Active	1	29N	12W	L	3/22/1985	5825	8,625	318	225 surf				5.5	6622	820 surf	6425-6602		
30-045-08661	Dudley Cornell A	#001	SIMCOE LLC	Gas	Federal	Active	1	29N	12W	O	11/15/1960	6730	9,625	263	200 surf				4.5	6707	300 surf	6434-6587		
30-045-24129	Dudley Cornell A	#001E	SIMCOE LLC	Gas	Federal	Active	1	29N	12W	G	4/28/1980	6722	9,625	348	250 surf				4.5	6710	180 surf	6496-6629		
30-045-34348	Allen Corn	#100	Burlington	Gas	Federal	Plugged	1	29N	12W	B	10/22/2007	138											1/22/2009	
30-045-08782	Cornell	5	Burlington	Gas	Federal	Plugged	1	29N	12W	G	9/30/1955	99999											4/28/1994	
30-045-29167	Hike	1	Dugan Production	Gas	Federal	Active	1	29N	12W	G	7/10/1994	3840	8,625	260	175 surf				4.5	3820	595 surf	3710-3718	3710	
30-045-08656	Cornell	2	Energien Resources	Gas	Federal	Plugged	1	29N	12W	M	10/2/1955	1996											9/15/2005	
30-045-29539	Cornell	3R	Epic Energy	Gas	Federal	Plugged	1	29N	12W	I	10/7/1955	0	7	131	45-53				3.5	2193	434-741	1991-2041		7/13/2018
30-045-29538	Cornell	5R	HilCorp	Gas	Federal	Active	1	29N	12W	A	4/14/1998	2225	7	131	45-53				3.5	2215	434-741	2029-2059		
30-045-08783	PRE-ONGARD WELL	#001	Pre Ongard	Gas	Private	Plugged	1	29N	12W	F	7/9/2003	2090												12/31/1901
30-045-08641	PRE-ONGARD WELL	#003	Pre Ongard	Gas	Federal	Plugged	1	29N	12W	O	4/11/1998	2203												11/16/1981
30-045-08793	Pre-Ongard		Southern union	Gas	Private	Plugged	1	29N	12W	E	3/16/1948	2125												3/16/1948
30-045-32346	CORNELL	#002R	Southland Royalty	Gas	Federal	Active	1	29N	12W	M	7/22/2004	2152	7	137	90 surf				4.5	2151	310 surf	1702-1926		
30-045-31612	Cornell	2S	Southland Royalty	Gas	Federal	Active	1	29N	12W	O	7/27/1957	0	7	136	56 surf				4.5	2058	225 surf	1725-1921		
30-045-33573	CORNELL COM	#500S	Burlington	Gas	Private	Plugged	2	29N	12W	P	3/18/2006	2210	7	132	34 surf				4.5	2198	279 surf	1754-1939 1743-1924		1/23/2013
30-045-08844	KATTLER	#001	Burlington	Gas	Private	Plugged	2	29N	12W	C	1/26/1945	2069	10	846	surf				3.5	2050	205 surf	1961-2007		5/26/2012
30-045-08713	McGrath SRC	#001	Burlington	Gas	Private	Plugged	2	29n	12w	j	7/7/1973	2136												1998
30-045-30486	MCGRATH SRC	#001R	Burlington	Gas	Private	Plugged	2	29N	12W	J	3/23/2001	2235												6/25/2010
30-045-32241	BECK	#001R	HilCorp	Gas	Private	Active	2	29N	12W	G	12/1/2004	2225	7	135	34 surf				4.5	2221	262 surf	1774-2077		
30-045-33811	BECK	#001S	HilCorp	Gas	Private	Active	2	29N	12W	D	8/17/2006	2200	7	162	85 surf				4.5	2195	255 surf	1730-1951		
30-045-31580	CORNELL COM	#500	HilCorp	Gas	Federal	Active	2	29N	12W	N	7/14/2003	2136	7	139	44 surf				4.5	2126	258 surf	1658-1878		
30-045-08714	CORNELL SRC	#007	HilCorp	Gas	Federal	Active	2	29N	12W	L	7/29/1944	2107	16	42	10 surf				3.5	2106	250 surf	1976-2010		

30-045-08704	MCGRATH B	#001	HiICorp		Gas	Private	Active	2	29N	12W	J	11/19/1961	6720	8,625	318	225 surf				4.5	1865	1065 surf	6489-6596		
30-045-08839	YOUNG	#001	HiICorp		Gas	Private	Active	2	29N	12W	D	8/1/1961	6740	8,625	307	275 surf				4.5	6739	700 surf	6446-6644		
30-045-08797	Pre-Ongard		Southland		Gas	Private	Plugged	2	29n	12w	g	4/14/1948	2125											2/23/1984	
30-045-27635	PRE-ONGARD WELL	#500			Gas	Federal	Plugged	2	29N	12W	M													12/31/1901	
30-045-08709	MCGRATH	#003	Burlington		Gas	Private	Plugged	3	29N	12W	J	3/4/1945	2040											3/1/2013	
30-045-60274	WALKER 2	#002	Burlington		Gas	Private	Plugged	3	29N	12W	D	1/8/1945	1974											7/24/1998	
30-045-08823	Walker SRC	1	Burlington		Gas	Private	Plugged	3	29N	12W	G	2/25/1943	2050											10/12/2009	
30-045-35350	MCGRATH	#003S	HiICorp		Gas	Private	Active	3	29N	12W	B	7/13/2007	2132	7	218	150 surf			4.5	2112	289 surf	1692-1904			
30-045-08712	MCGRATH A	#001	HiICorp		Gas	Private	Active	3	29N	12W	I	3/14/1964	6689	8,625	307	250 surf			4.5	6688	500 surf	6432-6524			
30-045-32931	WALKER	#100S	HiICorp		Gas	Private	Active	3	29N	12W	F	8/14/2005	2120	7	144	61 surf			4.5	2117	238 surf	1621-1885			
30-045-08801	WALKER 1	#001	HiICorp		Gas	Private	Active	3	29N	12W	E	4/12/1960	6620	8,625	232	150 surf			4.5	6620	300 surf	6546-6556			
30-045-30244	WALKER 100	#100	HiICorp		Gas	Private	TA'd	3	29N	12W	L	3/30/2001	1948	7	126	140-168			4.5	1940	219-399	1597 CIBP@1609	Tad		
30-045-08711	Pre-Ongard		Union Texas		Gas	Private	Plugged	3	29N	12W	K	6/25/1955	1940											11/10/1964	
30-045-29117	RIGGS	#001	Enduring Resources		Gas	Private	Active	4	29N	12W	A	6/24/1994	1900												
30-045-29118	RIGGS	#002	Enduring Resources		Gas	Private	Plugged	4	29N	12W	N	6/28/1994	1890											5/8/2017	
30-045-32239	RIGGS	#003	Enduring Resources		Gas	Private	Active	4	29N	12W	C	2/21/2005	1906												
30-045-32312	RIGGS	#004	Enduring Resources		Gas	Private	Active	4	29N	12W	P	3/20/2005	2002												
30-045-08718	STANDARD	#001	HiICorp		Gas	Federal	Active	4	29N	12W	J	11/3/1960	6600	8,625	236	175 surf			4.5	6600	250 surf	6356-6510			
30-045-08720	DEVONIAN FEDERAL	#001	Holcomb Oil & Gas		Gas	Federal	Active	4	29N	12W	K	6/23/1959	6538												
30-045-24552	PRE-ONGARD WELL	#001	Pre Ongard		Gas	Federal	Plugged	4	29N	12W	A	5/29/1981	0											12/7/1995	
30-045-08804	FEDERAL	#001	Riggs Oil & Gas		Gas	Federal	Plugged	4	29N	12W	F	5/29/1959	1856											2/9/2017	
30-045-08586	FLORANCE GAS COM B	#001	SIMCOE LLC		Gas	Federal	Active	9	29N	12W	H	1/20/1964	6470												
30-045-28824	ROPCE FEE FC 9	#002	HiICorp		Gas	Private	Active	9	29N	12W	A	11/25/1992	1975												
30-045-26855	PRE-ONGARD WELL	#001	Pre Ongard		Gas	Private	Plugged	9	29N	12W	B	3/18/1988	0											3/9/1989	
30-045-08601	CORNELL A	#001	SIMCOE LLC		Gas	Federal	Active	10	29N	12W	D	12/28/1960	6510												
30-045-24132	CORNELL A	#001E	BP America		Gas	Federal	Plugged	10	29N	12W	N	4/4/1980	6350											1/24/2018	

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Sunco RPE Daily Operations Log		
Date	Time	Comments
7/12/2021	8:15 AM	BH test, Jonathon Kelly onsite
7/12/2021	8:35 AM	Start MIT
7/12/2021	9:20 AM	Finish MIT, approved by Jonathon Kelly onsite
7/12/2021	11:07 AM	Install transducers and start acquiring data for RPE
7/16/2021	12:53 PM	Finish acquiring data, remove transducers. Total time 168 hours

HOB0® 4-Channel Analog Data Logger (UX120-006M) Manual



The HOB0 4-Channel Analog data logger has 16-bit resolution and can record up to 1.9 million measurements or events. The four external channels accept a variety of sensors, including temperature and split-core AC current sensors as well as 4-20 mA and voltage input cables (sold separately). Using HOB0ware®, you can easily configure an alarm to trip when the sensor reading rises above or falls below a measurement that you specify. Or, you can set up burst logging in which the logger records data at a different interval during certain conditions. The logger can also calculate minimum, maximum, average, and standard deviation statistics. This easy-to-use data logger has a built-in LCD screen to check current readings and to monitor logging status, battery use, and memory consumption in between readouts.

Specifications

Logger with Cable Type	CABLE-4-20mA	CABLE-2.5-STEREO	CABLE-ADAP5	CABLE-ADAP10	CABLE-ADAP24
Measurement Range	0 to 20.1 mA	0 to 2.5 V	0 to 5.0 V	0 to 10 V	0 to 24 V
Accuracy	±0.001 mA ±0.2% of reading	±0.1 mV ±0.1% of reading	±0.2 mV ±0.3% of reading	±0.4 mV ±0.3% of reading	±1.0 mV ±0.3% of reading
Resolution	0.3 µA	40 µV	80 µV	160 µV	384 µV

HOB0 4-Channel Analog Data Logger

UX120-006M

Included Items:

- Command™ strip
- Double-sided tape
- Hook & loop strap
- Two AAA 1.5 V alkaline batteries

Required Items:

- HOB0ware 3.6 or later
- USB cable (included with software)

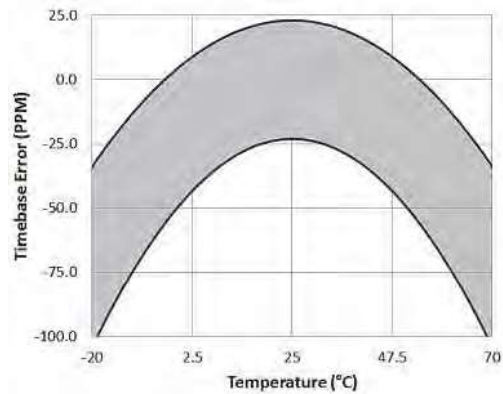
Sensors and cables available at www.onsetcomp.com.

Logger

Operating Range	Logging: -20° to 70°C (-4° to 158°F); 0 to 95% RH (non-condensing); Launch/Readout: 0° to 50°C (32° to 122°F) per USB specification
Logging Rate	1 second to 18 hours, 12 minutes, 15 seconds
Logging Modes	Fixed interval (normal), burst, or statistics
Memory Modes	Wrap when full or stop when full
Start Modes	Immediate, push button, date & time, or next interval
Stop Modes	When memory full, push button, or date & time
Restart Mode	Push button
Time Accuracy	±1 minute per month at 25°C (77°F), see Plot A
Power Source	Two AAA 1.5 V alkaline batteries, user replaceable, and USB cable
Battery Life	1 year, typical with logging rate of 1 minute and sampling interval of 15 seconds or greater
Memory	4 MB (1.9 million measurements, maximum)
Download Type	USB 2.0 interface
Full Memory Download Time	Approximately 1.5 minutes
LCD	LCD is visible from 0° to 50°C (32° to 122°F); the LCD may react slowly or go blank in temperatures outside this range
Size	10.8 x 5.41 x 2.54 cm (4.25 x 2.13 x 1 in.)
Weight	107.5 g (3.79 oz)
Environmental Rating	IP50
CE	The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).

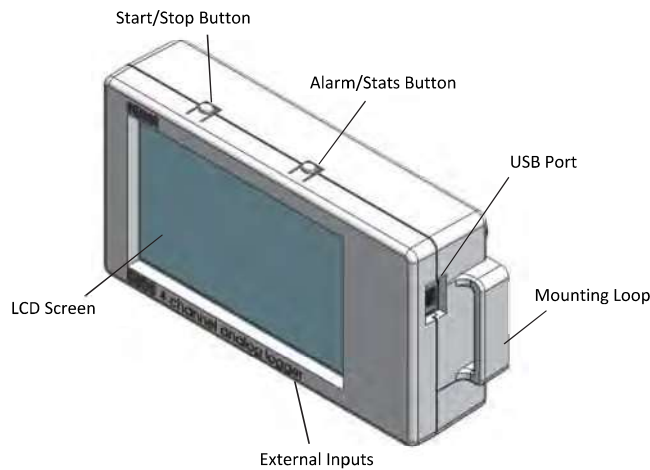
Note: The HOB0 U-Shuttle (U-DT-1) is not compatible with this logger.

Specifications (continued)



Plot A: Time Accuracy

Logger Components and Operation



Start/Stop Button: Press this button for 3 seconds to start or stop logging data, or to resume logging on the next even logging interval. This requires configuring the logger in HOBOWare with a push button start or stop, and with “Resume logging on next button push” selected (see *Setting up the Logger*). You can also press this button for 1 second to record an internal event (see *Recording Internal Logger Events*) or to turn the LCD screen on if the option to turn off the LCD has been enabled (see *Setting up the Logger*).

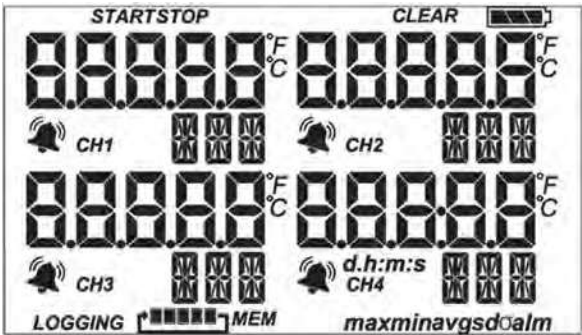
Alarm/Stats Button: Use this button to clear a tripped alarm (see *Setting up Alarms*) or to switch between statistics, alarm readings, and the current sensor reading.

Mounting Loops: Use the two mounting loops (only one visible in the diagram) to mount the logger with the hook-and-loop strap (see *Mounting the Logger*).



External Inputs: Use these 2.5 mm jacks (not visible in the diagram) to connect up to 4 sensors (see *Connecting External Sensors*).

USB Port: Use this port to connect the logger to the computer via USB cable (see *Setting up the Logger* and *Reading Out the Logger*).

LCD Screen: This logger is equipped with an LCD screen that displays details about the current status. This example shows all symbols illuminated on the LCD screen followed by definitions of each symbol in the table.



LCD Symbol	Description
START	The logger is waiting to be launched. Press and hold the Start/Stop button for 3 seconds to launch the logger.
STOP	The logger has been launched with push button stop enabled; press and hold the Start/Stop button for 3 seconds to stop the logger. Note: If you also launched the logger with a push button start, this symbol will not appear on the display for 30 seconds.
CLEAR	An alarm is ready to be cleared. This will only appear if “Cleared with button press” was selected in the HOBOWare alarm settings. Press the Alarm/Stats button for 3 seconds to clear the alarm.
	The battery indicator shows the approximate battery power remaining.
86.2°F	This is an example of a temperature reading from a temperature sensor. Temperature units are determined by the settings in HOBOWare. To switch between Celsius and Fahrenheit, change the Display Preferences in HOBOWare before launching the logger.
	A sensor reading is above or below the high or low alarm that you configured. Press and release the Alarm/Stats button until the “alm” symbol (described later in this chart) is displayed on the screen. This symbol at left will clear depending on how alarms were configured in HOBOWare. If the alarm was configured to clear when the logger is relaunched, this symbol will remain on the LCD. Otherwise, it will clear when the sensor reading is back within the alarm limits or by pressing the Alarm/Stats button for 3 seconds.
CH1	This is the channel number associated with the sensor reading (channel 1 for this example). Up to four channels are visible at one time.
AMP	This is an example of the units entered for the sensor, which appears to the right of the channel number. The unit type is determined by what was entered in the LCD Units field for that sensor in HOBOWare. See <i>Setting up the Logger</i> for more details. Note that units for temperature sensors are displayed as °F or °C only.
05:38 m:s	The logger has been configured to start logging on a particular date/time. The display will count down in days, hours, minutes, and seconds until logging begins. In this example, 5 minutes and 38 seconds remain until logging will begin.

LCD Symbol	Description
LOGGING	The logger is currently logging.
 MEM	The logger has been configured to stop logging when memory fills. The memory bar indicates the approximate space remaining in the logger to record data. When first launched, all five segments in the bar will be empty. In this example, the logger memory is almost full (only one segment in the memory bar is empty).
 MEM	The logger has been configured to never stop logging (wrapping). The logger will continue recording data indefinitely, with newest data overwriting the oldest data. When first launched, all five segments in the memory bar will be empty. In this example, the memory is full (all five segments are filled in) and new data is now overwriting the oldest data. This will continue until the logger is stopped or the battery runs out.
max min avg sd	These symbols show the maximum, minimum, average, and standard deviation values most recently calculated by the logger (if the logging mode has been set to Statistics in HOBOWare). Press the Alarm/Stats button for 1 second to cycle through each of the available statistics, any alarm readings, and back to the current sensor reading.
alm	This is the sensor reading that tripped the alarm. Press the Alarm/Stats button to view this reading. Press the Alarm/Stats button again to cycle through any statistics and return to the current readings.
LoAd	The launch settings are being loaded onto the logger from HOBOWare. Do not disconnect the USB cable during this process.
Err	An error occurred while loading the launch configurations onto the logger from HOBOWare. Make sure the USB cable is connected to both the logger and the computer and try launching again.
StoP	The logger has been stopped with HOBOWare or because the memory is full.

Notes:

- You can disable the LCD screen when logging. Select "Turn LCD off" when setting up the logger as described in the next section. When this option is enabled, you can still temporarily view the LCD screen by pushing the Start/Stop button for 1 second. The LCD will then remain on for 10 minutes.
- The LCD screen refreshes every 15 seconds while logging regardless of the logging interval selected in HOBOWare. If you choose a logging interval less than 15 seconds, the data will be recorded at the faster interval, but the sensor readings will only be updated on the screen every 15 seconds.
- If a sensor is disconnected during logging, erroneous values will display for that sensor on the LCD and return to normal readings once reconnected. See *Connecting External Sensors* for more details.
- When the logger has stopped logging, the LCD screen will remain on until the logger is offloaded to a computer or (unless launched with the "Turn LCD off" option). Once the logger has been offloaded and disconnected from the computer, the LCD will turn off automatically after 2 hours. The LCD will turn back on the next time the logger is connected to the computer.

Setting up the Logger

Use HOBOWare to set up the logger, including setting alarms, selecting the options to start and stop logging, and choosing a logging mode.

- 1. Install the batteries.** See *Battery Information* for details.
- 2. Connect the logger and open the Launch Logger window.** To connect the logger to a computer, use the USB cable provided. Click the Launch icon on the HOBOWare toolbar or select Launch from the Device menu.

Important: USB 2.0 specifications do not guarantee operation outside the range of 0°C (32°F) to 50°C (122°F).

- 3. Configure a sensor.** Under Configure Sensors to Log, click the checkbox for sensor 1. Select the type of sensor or cable that will be connected to channel 1 on the logger. Type a label for the sensor if desired. Be sure to connect the sensor before logging begins.
- 4. Set up scaling (optional).** You can configure some sensors to scale logged data into different values and units than the default. If the sensor supports scaling, click the Scaling button and type in the appropriate values and units (consult the sensor user manual for recommended scaling factors). Click Save and return to the Launch Logger window.
- 5. Set the LCD units (optional).** Each sensor has its own default units that will appear on the logger LCD. Type in up to 3 characters if you want a different unit name to appear on the LCD than the default. (Units for temperature sensors are F or C and cannot be changed.) Note that if you have configured Scaling for the sensor, then the scaled units name will appear in the Launch Logger window for the sensor instead of its default unit. You can still override this by entering a new name in the LCD units field.



- 6. Set up alarms (optional).** Click the Alarms button if you want to configure an alarm to trip when the sensor reading is above or below a value you specify. See *Setting up Alarms* for details.
- 7. Configure filters (optional).** Click the Filters button to create additional filtered data series. Any filtered series will be available automatically upon reading out the logger.

8. **Configure additional sensors.** Repeat steps 3 through 7 to configure up to three more sensors.
9. **Select the Logging Interval.** Select a logging interval from 1 second to a maximum of 18 hours, 12 minutes, and 15 seconds.

10. Select the Logging Mode:

- **Fixed Interval.** In Fixed Interval mode, data will always be recorded at the regular logging interval set in the previous step. This is the default setting.
- **Burst.** In Burst mode, logging will occur at a different interval when a specified condition is met. See *Burst Logging* for more information.
- **Statistics.** In Statistics mode, maximum, minimum, average, and standard deviation statistics are calculated for the temperature during logging, sampling at an interval you specify. See *Statistics* for more information.

11. Choose when to start logging:

- **Now.** Logging begins immediately.
- **At Interval.** Logging will begin at the next even interval as determined by the selected logging interval.
- **On Date/Time.** Logging will begin at a date and time you specify.
- **Push Button.** Logging will begin once you press the Start/Stop logging button for 3 seconds.

12. Choose when to stop logging:

- **When Memory Fills.** Logging will end once the logger memory is full.
- **Never (Wrap When Full).** The logger will continue recording data indefinitely, with newest data overwriting the oldest.
- **Push Button.** Logging will end once you press the Start/Stop logging button for 3 seconds. Note that if you also choose Push Button to start logging, then you will not be able to stop logging until 30 seconds after logging begins.

If you select the Push Button setting, then you also have the option to select "Allow button restart." This allows you to stop and then restart logging during the deployment by pushing the Start/Stop button on the logger for 3 seconds.

Important: When "Allow button restart" is selected and you use the Start/Stop button to stop and restart logging, logging will restart on the next even logging interval, not at the time the button was pushed. For example, a logger started logging at 7:00 AM with a logging interval set to 1 hour. If you press the Start/Stop button to stop the logger at 8:45 AM and then press the button again at 10:15 AM, logging will not begin immediately at 10:15. Instead, logging will begin again at 11:00 AM, which is the next even interval time based on your 1-hour logging interval. Therefore, depending on the logging interval, the gap between the time you press the button to resume logging and the time actual logging begins could be significant. The faster the logging interval, the less time will elapse before logging resumes.

- **Specific Stop Time.** Logging will end at a date and time you specify. Note that if you also configure the logger for a Push Button stop and to "Allow button restart," then the logger will stop logging at the date you select regardless of how many times you stop and restart the logger with the Start/Stop button.

13. **Choose whether to keep the LCD on or off.** By default, the LCD will always remain on while logging. If you select the "Turn LCD off" checkbox, the LCD will not show the current readings, status, or other information while the logger is logging. You will, however, be able to temporarily turn the LCD screen on by pressing the Start/Stop button for 1 second if you select this option.

14. **Click the Start button to launch the logger.** Note that the Start button text changes based on the Start Logging selection. Disconnect the logger from the computer and deploy it using the mounting materials (see *Mounting the Logger*). After logging begins, you can read out the logger at any time (see *Reading Out the Logger* for details).

Connecting External Sensors

The logger can accept up to four external sensors (refer to onsetcomp.com for a current list of supported sensors). Plug each sensor into one of the four input jacks, making sure each sensor is firmly seated in the appropriate numbered jack based on how you configured that corresponding channel in the Launch Logger window. For example, if you selected "TMCx-HD" for sensor 1 in the Launch Logger window, then you must plug the TMCx-HD temperature sensor into the port labeled "1" on the logger otherwise the logger will not record the correct data. Connect each sensor before logging begins. Refer to the sensor or cable manual for more information on connecting the sensor and wiring, if applicable.

If you disconnect a sensor or if it is not fully inserted into the jack while the logger is logging, an erroneous sensor reading can appear on the LCD for that channel. In addition, erroneous readings will be logged and saved in the data file depending on the logging interval (e.g. if a sensor is disconnected for 5 minutes and the logging interval is set to 1 minute, then there will be 5 erroneous data points while the sensor was disconnected). If you reconnect the sensor, the correct values will display on the LCD again and will be logged and saved in the data file.



Some sensors, such as temperature sensors, can be connected directly to the external input jacks, but others require additional cables as described in the following sections.

4-20mA Input Cable

The 4-20mA input cable (CABLE-4-20mA) measures current from 0 to 20.1 mA. Do not expose to current above 20 mA or to

negative current. Do not cut off the end of the gray cable where it connects to the blue and yellow wires as it contains the precision resistor required for current measurement.

Voltage Input Cable

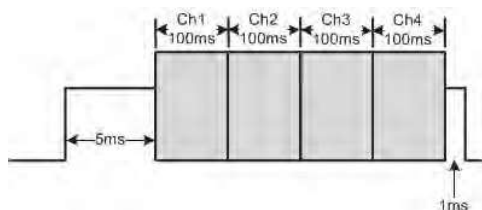
The logger's external inputs can accept the voltage input cable (CABLE-2.5-STEREO), which allows a voltage to be recorded. The input line must not be exposed to signals below 0 V or above 2.5 V. The voltage input cable connections are as follows:

Wire	Connection
Red	Switched 2.5 V output
White	Voltage input
Black	Ground

Switched 2.5 V Output

The external input channels have a switched 2.5 V output. This signal can be used to power a sensor directly or to trigger an external circuit. External sensors should draw no more than 4 mA total when powered.

The switched 2.5 V output turns on about 5 ms before the external channels are measured as shown in the following diagram. The shaded area shows the 100 ms period for each enabled channel during which the logger samples the input signals.



When using multiple voltage and/or current inputs, the (-) from the current source(s) and the 0 V line from the voltage source(s) are tied together at the logger. If these lines are at different voltage potentials, this may cause inaccurate readings or even damage your logger. Keep in mind that these lines may also be tied to earth ground through the USB cable when the logger is connected to the computer. Special precautions may be necessary if any of the voltage or current source common lines are not tied to earth ground. Input isolators may be needed in industrial environments to prevent errors caused by ground loops.

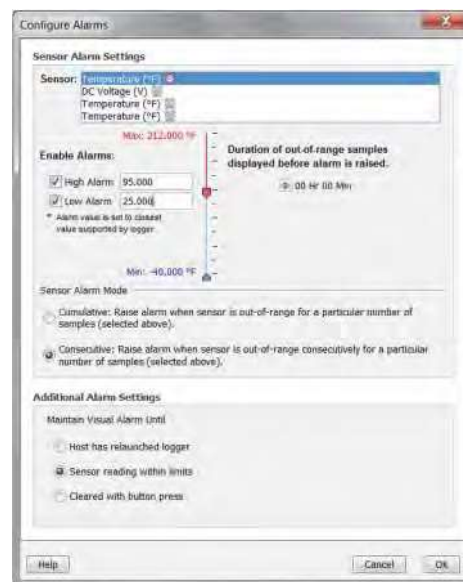
WARNING: Analog channel input cannot exceed 2.5 V DC. For sensor outputs up to 24 V DC, use the appropriate voltage adapter cable (CABLE-ADAPX).

Setting up Alarms

You can set an alarm to trip when a sensor reading rises above or falls below a specified value on any of the four sensor channels. To set an alarm:

1. Click the Alarms button from the Launch Logger window. If the Alarms button is disabled, make sure the Logging Mode is not set to Burst. (Alarms can only be configured if the logger is in Normal or Statistics mode.)
2. In the Configure Alarms window, select a sensor from the list. In the example in this section, a temperature sensor was selected.

3. Select the High Alarm checkbox if you want an alarm to trip when the sensor reading rises above the high alarm value. Type the reading next to the High Alarm checkbox or drag the red upper slider in the Configure Alarms window.
4. Select the Low Alarm checkbox if you want an alarm to trip when the sensor reading falls below the low alarm value. Type the reading next to the Low Alarm checkbox or drag the blue lower slider.
5. Set the duration before an alarm is tripped.
6. Select either Cumulative or Consecutive. If you select Cumulative, then the alarm will trip when the time the sensor is out of range over the course of the deployment is equal to the selected duration. If you select Consecutive, then the alarm will trip when the time the sensor is continuously out of range is equal to the selected duration. For example, the high alarm for temperature is set to 85°F and the duration is set to 30 minutes. If Cumulative is selected, then an alarm will trip once a sensor reading has been at or above 85°F for a total of 30 minutes since the logger was configured; specifically, this could be 15 minutes above 85°F in the morning and then 15 minutes above 85°F again in the afternoon. If Consecutive is selected, then an alarm will trip only if all sensor readings are 85°F or above for a continuous 30-minute period.



7. Repeat steps 2 through 6 for any additional sensors.
8. Choose how long the logger should maintain the sensor alarm once it has tripped. Select "Host has relaunched logger" if you want the alarm to remain visible on the LCD until the next time you relaunch the logger. Select "Sensor reading within limits" if you want the alarm to clear once the sensor reading returns to the normal range between the high and low alarm limits. Select "Cleared with button press" if you want the alarm to remain on until you press the Alarm/Stats button on the logger.
9. Click OK to save alarm settings.

Notes:

- Once the logger is launched, alarms will trip as determined by these settings. Logger alarms will display on the LCD screen. Note that the alarm limits are only

checked when the logger's LCD screen refreshes every 15 seconds.

- The actual values for the high and low alarm limits are set to the closest values supported by the logger based on the sensor type. This means the value that triggers the alarm may differ slightly than the value entered.
- When you read out the logger, high and low alarm levels will be displayed on the plot along with "Chan <#> Alarm Tripped" and "Chan <#> Alarm Cleared" events showing when the alarm tripped and cleared. The "Chan <#> Alarm Cleared" event contains the value that was furthest out of range for the sensor before the alarm cleared (see the Points table for the actual value).

Burst Logging

Burst logging is a logging mode that allows you to set up more frequent logging when a specified condition is met. For example, let's say the logger has a temperature sensor connected to channel 1 and is recording data at a 5-minute logging interval. Burst logging is configured on channel 1 to log every 10 seconds when the temperature goes above 85°F (the high limit) or falls below 32°F (the low limit). This means the logger will record data every 5 minutes as long as the temperature remains between 85°F and 32°F. Once the temperature reaches 90°F, for example, the logger will switch to the faster logging rate and record data every 10 seconds until the temperature falls back below the high limit (or 85°F in this case). At that time, logging then resumes every 5 minutes at the normal logging interval. Similarly, if the temperature falls to 30°F, for example, then the logger would switch to burst logging mode again and record data every 10 seconds. Once the temperature rises back to 32°F, the logger will then return to normal mode, logging every 5 minutes. To set up burst logging:

1. Select Burst for Logging Mode in the Launch Logger window. If Burst has already been configured for this logger, click the Edit button in the Launch Logger window.
2. In the Burst Logging window, select a sensor from the list. In the following example, a temperature sensor was selected.



3. Select the High Limit checkbox if you want to set up a condition in which burst logging will occur when the sensor reading rises above the high limit value. Type in the value or drag the red upper slider.

4. Select the Low Limit checkbox if you want to set up a condition in which burst logging will occur when the sensor reading falls below the low limit value. Type in the value or drag the blue lower slider.
5. Repeat steps 2 through 4 for any additional sensors.
6. Set the burst logging interval, which must be less than the logging interval. Select either a preset burst logging interval or select Custom and enter your own interval. Keep in mind that the more frequent the burst logging rate, the greater the impact on battery life and the shorter the logging duration.
7. Click OK when done. This will return you to the Launch Logger window. Click the Edit button next to Logging Mode in the Launch Logger window to make additional changes.

Notes:

- Once the logger is launched, the high and low burst logging limits are only checked when the logger's LCD screen refreshes once every 15 seconds. Therefore, if you set the logging interval to less than 15 seconds and the sensor reading falls outside the limits, the burst logging will not begin until the next 15-second refresh cycle.
- If high and/or low limits have been configured for more than one sensor, then burst logging will begin when any high or low condition goes out of range. Burst logging will not end until all conditions on all sensors are back within normal range.
- The actual values for burst logging limits are set to the closest values supported by the logger based on the sensor type.
- Once the high or low condition clears, the logging interval time will be calculated using the last recorded data point in burst logging mode, not the last data point recorded in "normal mode." For example, let's assume the logger has a 10-minute logging interval and logged a data point at 9:05. Then, the high limit was surpassed and burst logging began at 9:06. Burst logging then continued until 9:12 when the sensor reading fell back below the high limit. Now back in normal mode, the next logging interval will be 10 minutes from the last burst logging point, or 9:22 in this case. If burst logging had not occurred, the next data point would have been at 9:15.
- A New Interval event will appear on the plot (if you select events for plotting in the Plot Setup window) each time the logger enters or exits burst logging mode.

Statistics

Statistics is a logging mode in which the logger calculates maximum, minimum, average, and standard deviation statistics during logging, recording the results at each logging interval based on samples taken at a rate you specify. This will result in up to four additional series per sensor that record the following information at each logging interval:

- The maximum, or highest, sampled value,
- The minimum, or lowest, sampled value,
- An average of all sampled values, and
- The standard deviation from the average for all sampled values.

For example, let's say the logging interval is set to 5 minutes and the sampling interval is set to 30 seconds (with maximum, minimum, average, and standard deviation all enabled). Once logging begins, the logger will measure and record the actual sensor values every 5 minutes. In addition, the logger will take a sample every 30 seconds and temporarily store it in memory. The logger will then calculate the maximum, minimum, average, and standard deviation using the samples gathered over the previous 5-minute period and log the resulting value(s). When reading out the logger, this would result in 5 data series for each channel: one sensor series (with data logged every 5 minutes) plus four maximum, minimum, average, and standard deviation series (with values calculated and logged every 5 minutes based on the 30-second sampling).

To set up statistics:

1. Select Statistics for Logging Mode in the Launch Logger window. If Statistics has already been configured for this logger, click the Edit button in the Launch Logger window.
2. Click the Maximum, Minimum, Average, and Standard Deviation checkboxes for each of the statistics you want to calculate during logging. Note that Average is automatically enabled when selecting Standard Deviation. In addition, the more statistics you record, the shorter the logger duration and the more memory is required.



3. Set the sampling interval, which must be less than and a factor of the logging interval. Choose either a preset sampling interval or select Custom and enter your own sampling interval. Keep in mind that the more frequent the sampling rate, the greater the impact on battery life.
4. Click OK when done. This will return you to the Launch Logger window. Click the Edit button next to Logging Mode in the Launch Logger window to make additional changes.

Once logging begins, click the Alarm/Stats button on the logger to cycle through the current maximum, minimum, average, and standard deviation data on the LCD screen. You can plot the statistics series once you read out the logger.

Reading Out the Logger

To read out the logger, connect it to the computer with a USB cable. In HOBOWare, select Readout from the Device menu. You can then save the data, plot it, and export it for further analysis. Refer to the HOBOWare Help for details.

Recording Internal Logger Events

The logger records the following internal events to track logger operation and status. You can plot these events in HOBOWare after reading out the logger and opening the data file.

Internal Event Name	Definition
Host Connected	The logger was connected to the computer.
Started	The Start/Stop button was pressed to begin logging.
Stopped	The logger received a command to stop recording data (from HOBOWare or by pushing the Start/Stop button).
Button Up/Button Down	The Start/Stop button was pressed for 1 second.
Chan <#> Alarm Tripped	An alarm has tripped on that channel.
Chan <#> Alarm Cleared	An alarm has cleared on that channel. This event also contains the value that was furthest out of range for the sensor before the alarm cleared.
New Interval	The logger has entered or exited burst logging mode.
Safe Shutdown	The battery level dropped below 1.85 V; the logger performs a safe shutdown.

Mounting the Logger

There are several ways to mount the logger using the materials included:

- Use the four built-in magnets on the back of the logger to mount it to a magnetic surface.
- Attach the Command strip to the back of the logger to mount it a wall or other flat surface.
- Use the double-sided tape to affix the logger to a surface.
- Insert the hook-and-loop strap through the mounting loops on both sides of the logger to mount it to a curved surface, such as a pipe or tubing.

Protecting the Logger

The logger is designed for indoor use and can be permanently damaged by corrosion if it gets wet. Protect it from condensation. If the message FAIL CLK appears on the LCD screen, there was a failure with the internal logger clock possibly due to condensation. Remove the batteries immediately and dry the circuit board.

Note: Static electricity may cause the logger to stop logging.

The logger has been tested to 8 KV, but avoid electrostatic discharge by grounding yourself to protect the logger. For more information, search for "static discharge" at www.onsetcomp.com.

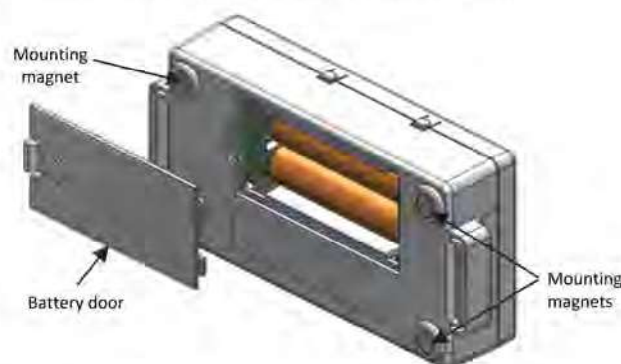
Battery Information

The logger requires two user-replaceable AAA 1.5 V alkaline or optional lithium batteries for operation at the extreme ends of the logger operating range. Expected battery life varies based on the ambient temperature where the logger is deployed, the logging or sampling interval, frequency of offloading to the computer, number of channels that are active, if burst or statistics logging modes are active, and battery performance. New batteries typically last 1 year with logging intervals greater than 1 minute. Deployments in extremely cold or hot temperatures, a logging interval faster than 1 minute, or a sampling interval faster than 15 seconds can impact battery life. Estimates are not guaranteed due to uncertainties in initial battery conditions and operating environment.

The logger can also be powered by the USB cable when the remaining battery voltage is too low for it to continue logging. Connect the logger to the computer, click the Readout button on the toolbar, and save the data as prompted. Replace the battery before launching the logger again.

To install or replace the batteries:

1. Open the battery door on the back of the logger.
2. Remove any old batteries.
3. Insert two new batteries observing polarity.
4. Reinsert the battery door and snap it back into place.



WARNING: If using optional lithium batteries, do not cut open, incinerate, heat above 85°C (185°F), or recharge the lithium batteries. The batteries may explode if the logger is exposed to extreme heat or conditions that could damage or destroy the batteries case. Do not dispose of the logger or batteries in fire. Do not expose the contents of the batteries to water. Dispose of the batteries according to local regulations for lithium batteries.

HOBOWare provides the option of recording the current battery voltage at each logging interval, which is disabled by default. Recording battery life at each logging interval takes up memory and therefore reduces logging duration. It is recommended you only record battery voltage for diagnostic purposes.

FOXBORO BY SCHNEIDER-ELECTRIC

FOXBORO, MASS., U. S. A.

C A L I B R A T I O N

D A T A S H E E T

Customer	DWIGHT W PROUTY CO., INC.	Date	12 Jun 2017
		Time	14:12:19
Customer P.O.	207497-43759	Cal. by	AM
		Dept.	1329
Customer Tag	504038		1445257 / 0010
Foxboro Order	1797672	Inst. type	IGP10S-F
Serial #	17230543		HART

Range	0.0000 to 6000.0000	Psi
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Actual input in Psi	Actual output in Psi	Digital error in % of Rdg*
0.000	-0.020	-0.001
1498.763	1498.872	0.007
3003.237	3003.441	0.007
4500.872	4501.429	0.012
5999.908	6001.271	0.023

Max. Digital ERROR **0.023** % at 100 % of Span

S5G3

Gauge(s): 210577E Dmm: 209856-40 Tmp: 210331-8

* The error of the first test point is in % of 25% of the range.

All measurement standards are calibrated at scheduled intervals against certified standards which are traceable to the National Institute of Standards and Technology.

Form 2759A(1/93)

FOXBORO BY SCHNEIDER-ELECTRIC

FOXBORO, MASS., U. S. A.

C A L I B R A T I O N
D A T A S H E E T

Customer	DWIGHT W PROUTY CO., INC.	Date 2 Nov 2016
		Time 10:23:29
Customer P.O.	203802-42335	Cal. by AM
		Dept. 1329
Customer Tag	504022	1394802 / 0010
Foxboro Order	1711768	Inst. type IGP10S-F
Serial #	16410398	HART

Range 0.0000 to 6000.0000 Psi

Actual input in Psi	Actual output in Psi	Digital error in % of Rdg*
0.000	0.002	0.000
1502.209	1502.470	0.017
3001.576	3001.550	-0.001
4500.371	4500.247	-0.003
6000.220	5999.934	-0.005

Max. Digital ERROR **0.017** % at 25 % of Span

S5G3

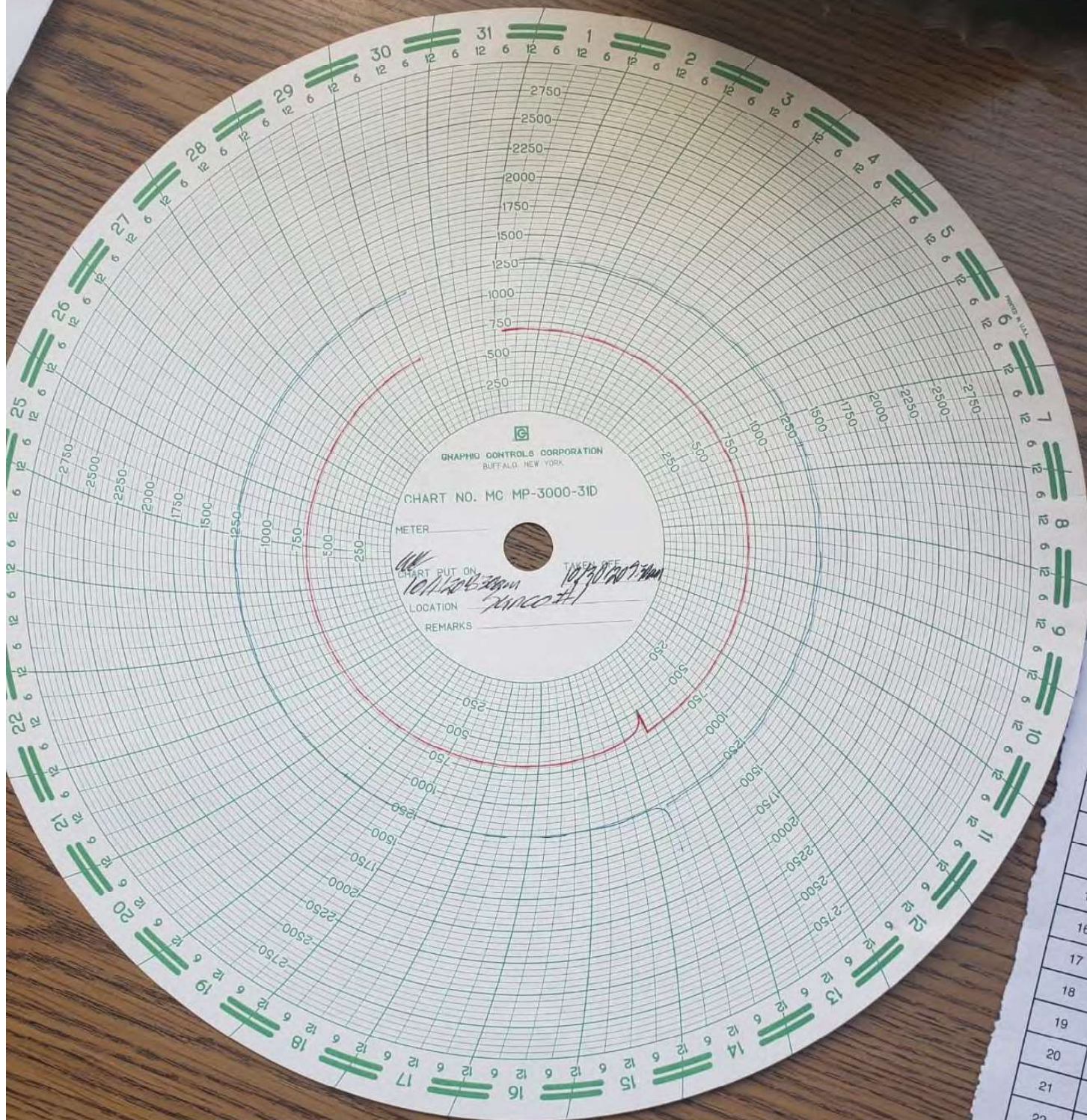
Gauge(s): 210577E Dmm: 209856-40 Tmp: 210331-8

* The error of the first test point is in % of 25% of the range.

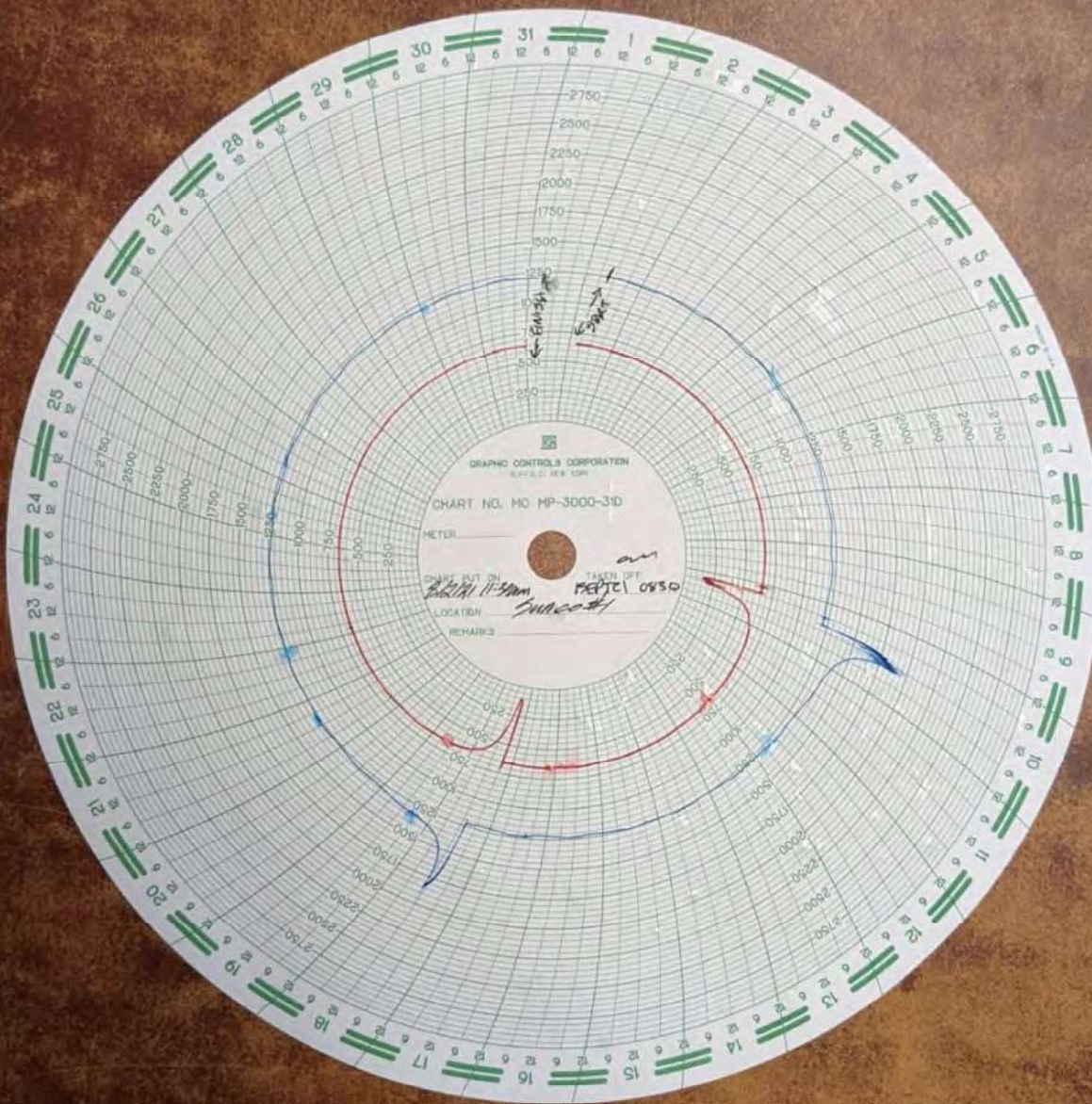
All measurement standards are calibrated at scheduled intervals against certified standards which are traceable to the National Institute of Standards and Technology.

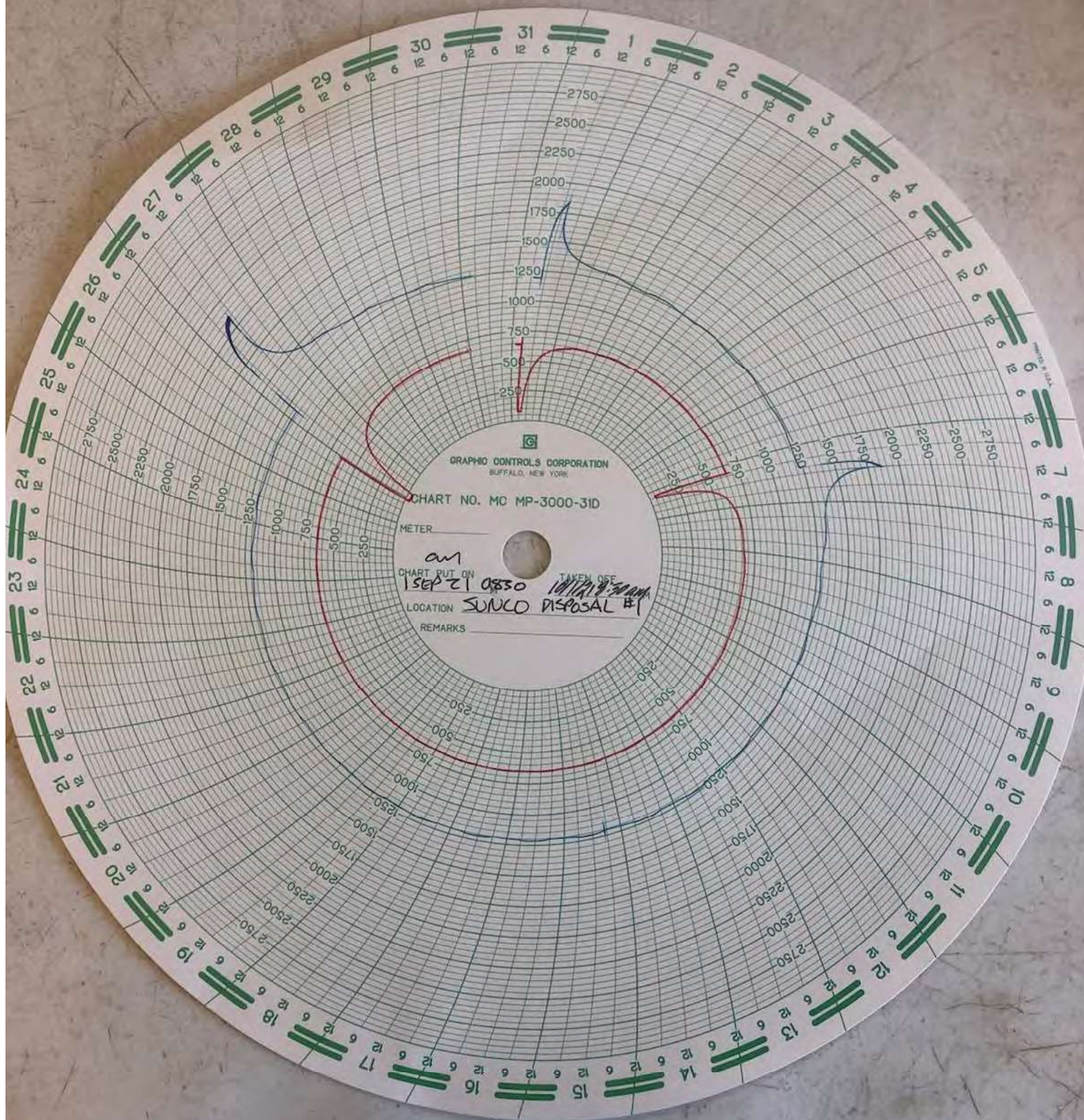
Form 2759A(1/93)

Page 1 of 1
Marketing
Tulsa, OK.

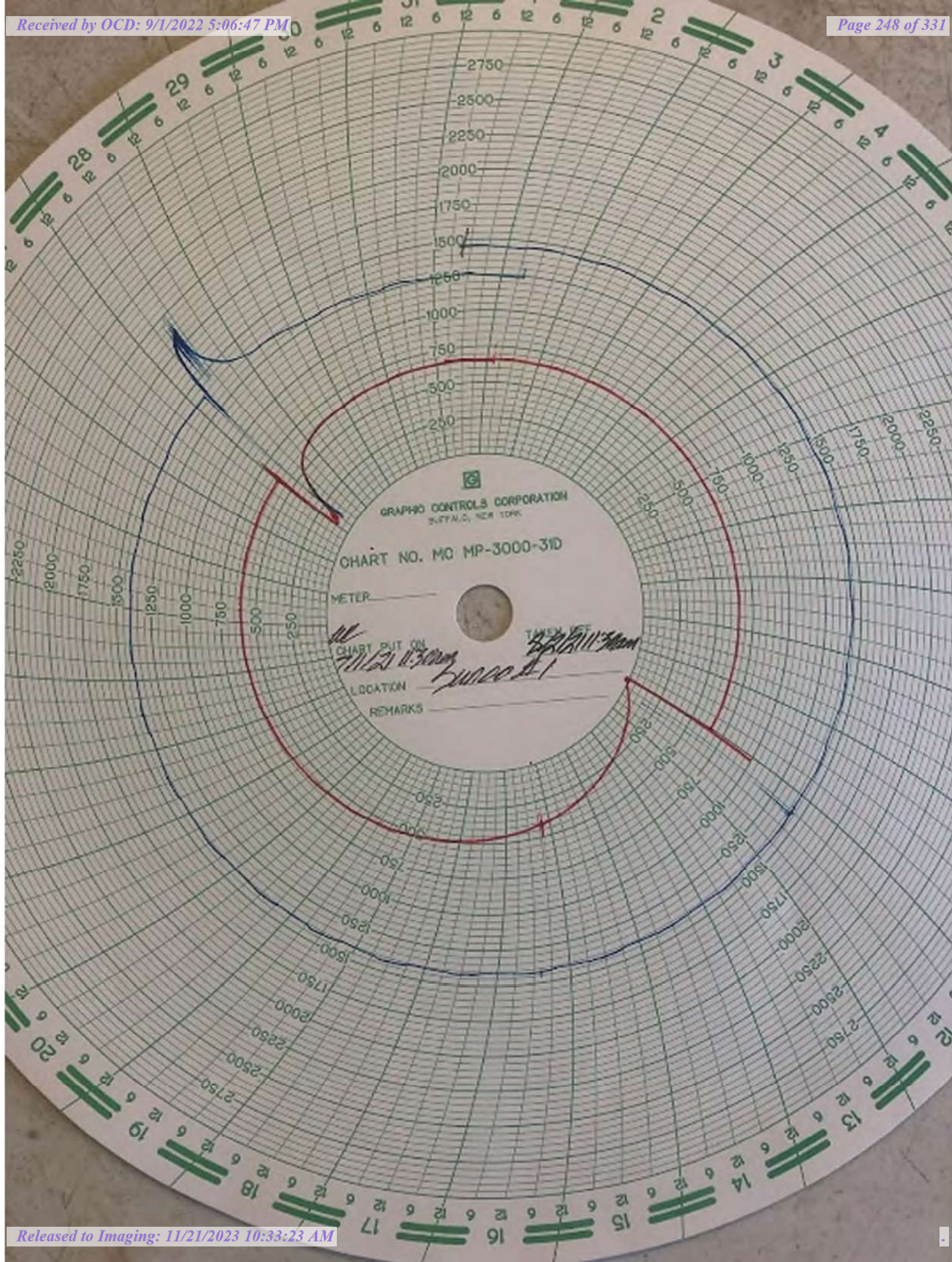


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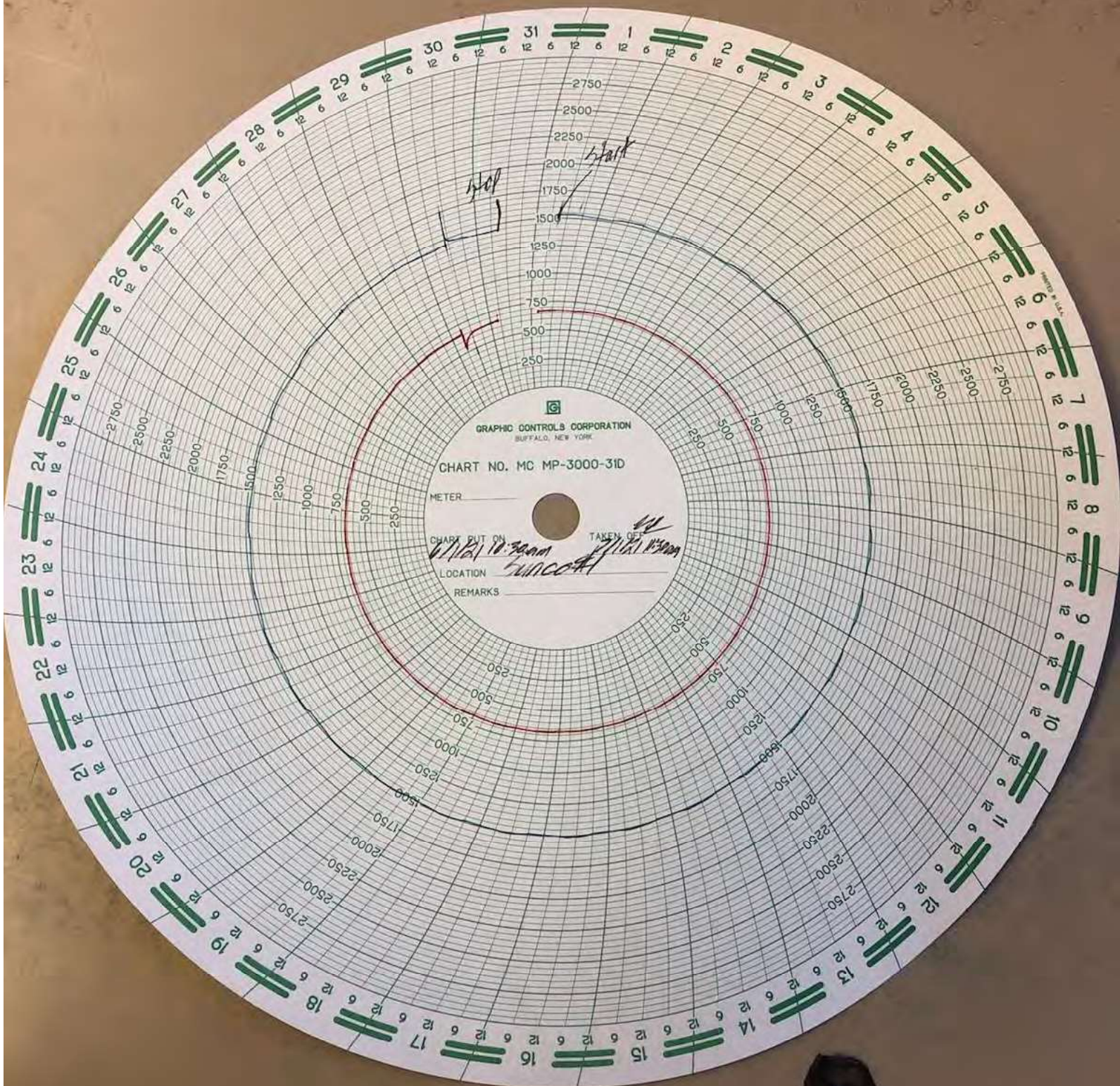




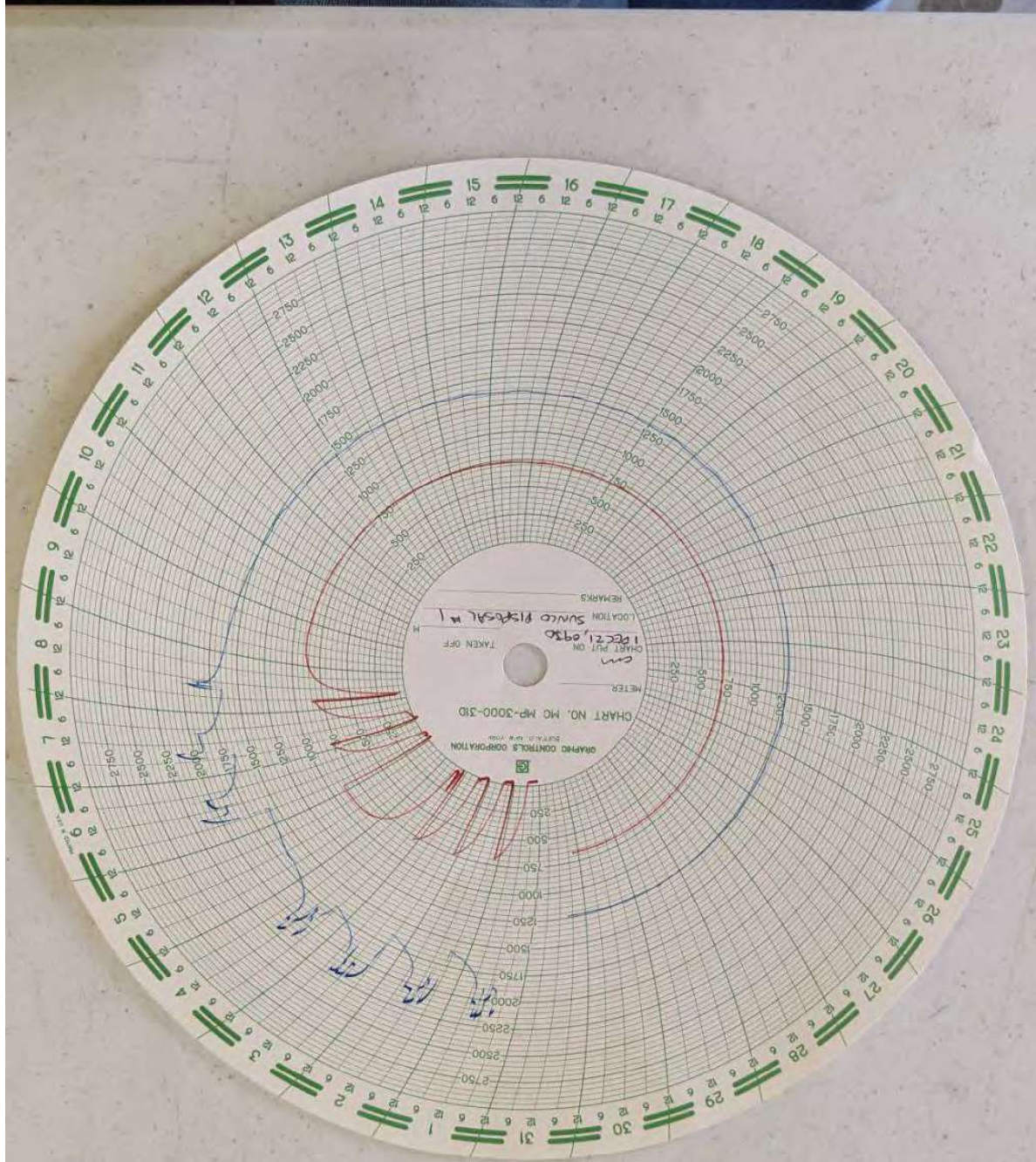




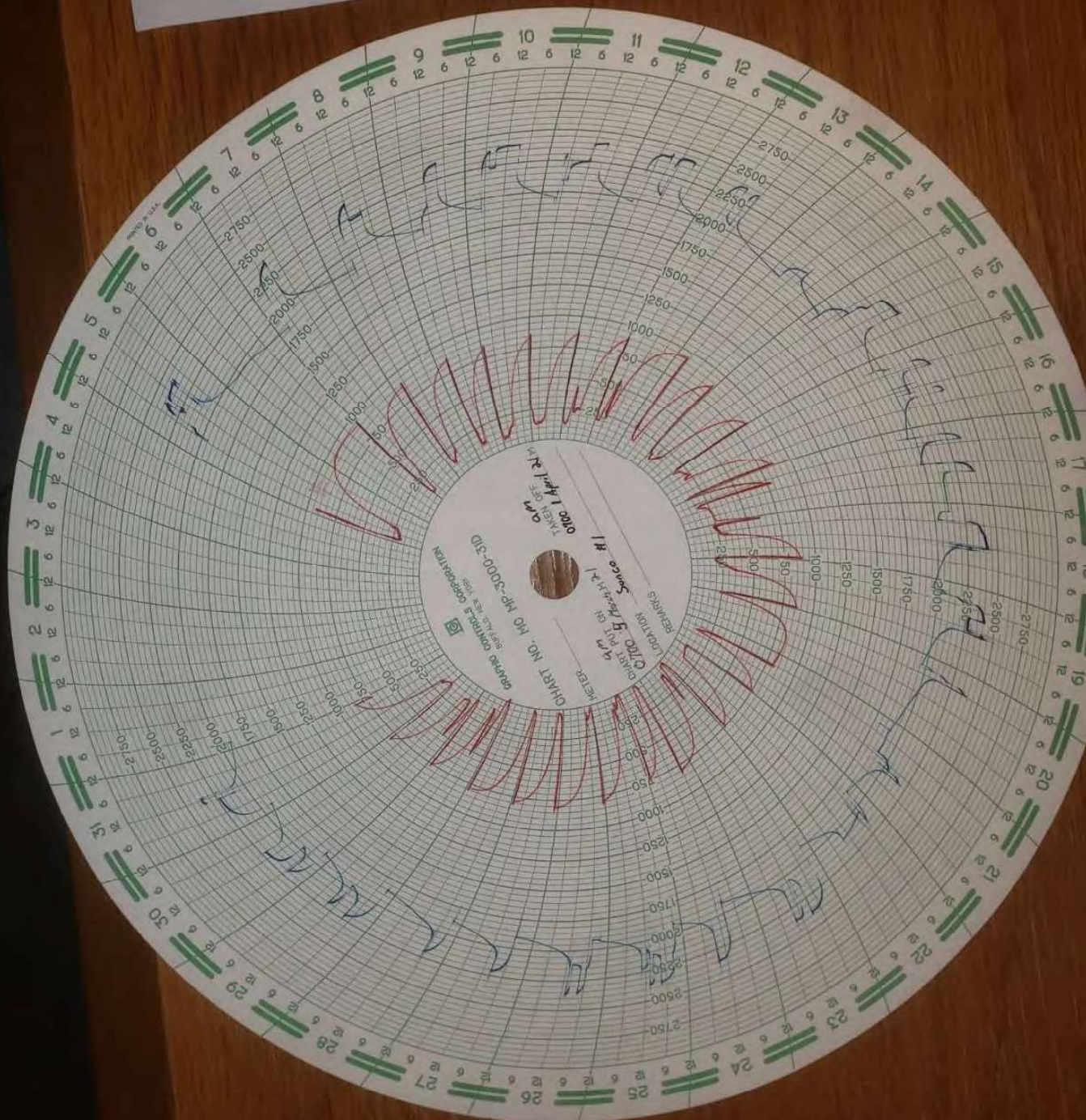




Turn chemical pump at well head off before sh
Turn chemical pump at pit 4 off when closing p



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**2022 AREA OF REVIEW
UNIT LETTERS ENCOMPASSED BY THE 2-MILE AOR**

Sec	TWN	RNG	UL	
1	29N	12W	ALL	
2	29N	12W	ALL	
3	29N	12W	ALL	
4	29N	12W	ACFJKNP	
9	29N	12W	ABH	
10	29N	12W	ABCDIJN	
11	29N	12W	ACDGHILOP	
12	29N	12W	AEFKM	
25	30N	12W	EMN	
26	30N	12W	FGLNOP	
27	30N	12W	LMP	
28	30N	12W	O	
33	30N	12W	GHIJK	
34	30N	12W	ALL	
35	30N	12W	ALL	
36	30N	12W	AEIMN	

Radius expanded to 2 miles for permit renewal requirements.

API	Well Name	Well #	Current Operator	Type	Lease	Status	Sec	TWN	RNG	UL	Spud Date	TD	Surface Casing			INT Casing			Production Casing			Perfs	Packer	PLUGGED
													size	depth	Sacks TOC	size	depth	Sacks TOC	size	depth	Sacks TOC			
30-045-08851	ALLEN A	#001	BP America	Gas	Private	Plugged	1	29N	12W	D	3/12/1961	6785	8,265	264	200 surf	4.5	6785	300 surf	4.5	6785	300 surf	6518-6718		3/27/2018
30-045-26214	ALLEN A	#001E	SIMCOE LLC	Gas	Federal	Active	1	29N	12W	L	3/22/1985	5825	8,625	318	225 surf				5.5	6622	820 surf	6425-6602		
30-045-08661	Dudley Cornell A	#001	SIMCOE LLC	Gas	Federal	Active	1	29N	12W	O	11/15/1960	6730	9,625	263	200 surf				4.5	6707	300 surf	6434-6587		
30-045-24129	Dudley Cornell A	#001E	SIMCOE LLC	Gas	Federal	Active	1	29N	12W	G	4/28/1980	6722	9,625	348	250 surf				4.5	6710	180 surf	6496-6629		
30-045-34348	Allen Com	#100	Burlington	Gas	Federal	Plugged	1	29N	12W	B	10/22/2007	138												1/22/2009
30-045-08782	Cornell	5	Burlington	Gas	Federal	Plugged	1	29N	12W	G	9/30/1955	9999												4/28/1994
30-045-29167	Hike	1	Dugan Production	Gas	Federal	Active	1	29N	12W	G	7/10/1994	3840	8,625	260	175 surf				4.5	3820	595 surf	3710-3718	3710	
30-045-08656	Cornell	2	Energien Resources	Gas	Federal	Plugged	1	29N	12W	M	10/2/1955	1996												9/15/2005
30-045-29539	Cornell	3R	Epic Energy	Gas	Federal	Plugged	1	29N	12W	I	10/7/1955	0	7	131	45-53				3.5	2193	434-741	1991-2041		7/13/2018
30-045-29538	Cornell	5R	HilCorp	Gas	Federal	Active	1	29N	12W	A	4/14/1998	2225	7	131	45-53				3.5	2215	434-741	2029-2059		
30-045-08783	PRE-ONGARD WELL	#001	Pre Ongard	Gas	Private	Plugged	1	29N	12W	F	7/9/2003	2090												12/31/1901
30-045-08641	PRE-ONGARD WELL	#003	Pre Ongard	Gas	Federal	Plugged	1	29N	12W	O	4/11/1998	2203												11/16/1981
30-045-08793	Pre-Ongard		Southern union	Gas	Private	Plugged	1	29N	12W	E	3/16/1948	2125												3/16/1948
30-045-32346	CORNELL	#002R	Southland Royalty	Gas	Federal	Active	1	29N	12W	M	7/22/2004	2152	7	137	90 surf				4.5	2151	310 surf	1702-1926		
30-045-31612	Cornell	2S	Southland Royalty	Gas	Federal	Active	1	29N	12W	O	7/27/1957	0	7	136	56 surf				4.5	2058	225 surf	1725-1921		
30-045-28653	SUNCO DISPOSAL	#001	Agua Moss	Salt Water Disposal	Private	Active	2	29N	12W	E	1/28/1992	4760	8,625	209	150 surf				5.5	4760	1010 surf	4350-4460	4282 10/15/07	4350-4460 TIA'd
30-045-33573	CORNELL COM	#500S	Burlington	Gas	Private	Plugged	2	29N	12W	P	3/18/2006	2210	7	132	34 surf				4.5	2198	279 surf	1754-1939		1/23/2013
30-045-08844	KATTLER	#001	Burlington	Gas	Private	Plugged	2	29N	12W	C	1/26/1945	2069	10	846	surf				3.5	2050	205 surf	1961-2007		5/26/2012
30-045-08713	McGrath SRC	#001	Burlington	Gas	Private	Plugged	2	29N	12W	J	7/7/1973	2136												1998
30-045-30486	MCGRATH SRC	#001R	Burlington	Gas	Private	Plugged	2	29N	12W	J	3/23/2001	2235												6/25/2010
30-045-32241	BECK	#001R	HilCorp	Gas	Private	Active	2	29N	12W	G	12/1/2004	2225	7	135	34 surf				4.5	2221	262 surf	1774-2077		
30-045-33811	BECK	#001S	HilCorp	Gas	Private	Active	2	29N	12W	D	8/17/2006	2200	7	162	85 surf				4.5	2195	255 surf	1730-1951		
30-045-31580	CORNELL COM	#500	HilCorp	Gas	Federal	Active	2	29N	12W	N	7/14/2003	2136	7	139	44 surf				4.5	2126	258 surf	1658-1878		
30-045-08714	CORNELL SRC	#007	HilCorp	Gas	Federal	Active	2	29N	12W	L	7/29/1944	2107	16	42	10 surf				3.5	2106	250 surf	1976-2010		

30-045-08704	MCGRATH B	#001	HilCorp	Gas	Private	Active	2	29N	12W	J	11/19/1961	6720	8,625	318	225 surf				4.5	1865	1065 surf	6489-6596		
30-045-08839	YOUNG	#001	HilCorp	Gas	Private	Active	2	29N	12W	D	8/1/1961	6740	8,625	307	275 surf				4.5	6739	700 surf	6446-6644		
30-045-08797	Pre-Ongard		Southland	Gas	Private	Plugged	2	29n	12w	g	4/14/1948	2125											2/23/1984	
30-045-27635	PRE-ONGARD WELL	#500		Gas	Federal	Plugged	2	29N	12W	M													12/31/1901	
30-045-08709	MCGRATH	#003	Burlington	Gas	Private	Plugged	3	29N	12W	J	3/4/1945	2040											3/1/2013	
30-045-60274	WALKER 2	#002	Burlington	Gas	Private	Plugged	3	29N	12W	D	1/8/1945	1974											7/24/1998	
30-045-08823	Walker SRC	1	Burlington	Gas	Private	Plugged	3	29N	12W	G	2/25/1943	2050											10/12/2009	
30-045-33580	MCGRATH	#003S	HilCorp	Gas	Private	TA'd	3	29N	12W	B	7/13/2007	2132	7	218	150 surf			4.5	2112	289 surf	1692-1904		TA'd 10/23/2009	
30-045-08712	MCGRATH A	#001	HilCorp	Gas	Private	Active	3	29N	12W	I	3/14/1964	6689	8,625	307	250 surf			4.5	6688	500 surf	6432-6524			
30-045-32931	WALKER	#100S	HilCorp	Gas	Private	Active	3	29N	12W	F	8/14/2005	2120	7	144	61 surf			4.5	2117	238 surf	1621-1885			
30-045-08801	WALKER 1	#001	HilCorp	Gas	Private	Active	3	29N	12W	E	4/12/1960	6620	8,625	232	150 surf			4.5	6620	300 surf	6546-6556	1597 CIBP@1609	Tad	
30-045-30244	WALKER 100	#100	HilCorp	Gas	Private	TA'd	3	29N	12W	L	3/30/2001	1948	7	126	140-168			4.5	1940	219-399	1659-1872			
30-045-08711	Pre-Ongard		Union Texas	Gas	Private	Plugged	3	29N	12W	K	6/25/1955	1940											11/10/1964	
30-045-29117	RIGGS	#001	Enduring Resources	Gas	Private	Active	4	29N	12W	A	6/24/1994	1900												
30-045-29118	RIGGS	#002	Enduring Resources	Gas	Private	Plugged	4	29N	12W	N	6/28/1994	1890											5/8/2017	
30-045-32239	RIGGS	#003	Enduring Resources	Gas	Private	Active	4	29N	12W	C	2/21/2005	1906												
30-045-32312	RIGGS	#004	Enduring Resources	Gas	Private	Active	4	29N	12W	P	3/20/2005	2002												
30-045-08718	STANDARD	#001	HilCorp	Gas	Federal	Active	4	29N	12W	J	11/3/1960	6600	8,625	236	175 surf			4.5	6600	250 surf	6356-6510			
30-045-08720	DEVONIAN FEDERAL	#001	Holcomb Oil & Gas	Gas	Federal	Active	4	29N	12W	K	6/23/1959	6538												
30-045-24552	PRE-ONGARD WELL	#001	Pre Ongard	Gas	Federal	Plugged	4	29N	12W	A	5/29/1981	0											12/7/1995	
30-045-08804	FEDERAL	#001	Riggs Oil & Gas	Gas	Federal	Plugged	4	29N	12W	F	5/29/1959	1856											2/9/2017	
30-045-08586	FLORENCE GAS COM B	#001	SIMCOE LLC	Gas	Federal	Active	9	29N	12W	H	1/20/1964	6470												
30-045-28824	ROPCE FEE FC 9	#002	HilCorp	Gas	Private	Active	9	29N	12W	A	11/25/1992	1975												
30-045-26855	PRE-ONGARD WELL	#001	Pre Ongard	Gas	Private	Plugged	9	29N	12W	B	3/18/1988	0											3/9/1989	
30-045-08601	CORNELL A	#001	SIMCOE LLC	Gas	Federal	Active	10	29N	12W	D	12/28/1960	6510												
30-045-24132	CORNELL A	#001E	BP America	Gas	Federal	Plugged	10	29N	12W	N	4/4/1980	6350											1/24/2018	

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Submit 1 Copy To Appropriate District Office
 District I - (575) 393-6161
 1625 N. French Dr., Hobbs, NM 88240
 District II - (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III - (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV - (505) 476-3460
 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-103
 Revised July 18, 2013

WELL API NO. 30-045-08851
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Allen A
8. Well Number 1
9. OGRID Number 000778
10. Pool name or Wildcat Basin Dakota

SUNDRY NOTICES AND REPORTS ON WELLS
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

2. Name of Operator
 BP America Production Company- L48

3. Address of Operator
 1515 Arapahoe St, Tower I, Suite 700
 Denver, CO 80202

4. Well Location
 Unit Letter D : 790 feet from the North line and 790 feet from the West line
 Section 01 Township 29N Range 12W NMPM San Juan County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
 5906'

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
 DOWNHOLE COMMINGLE ☐
 CLOSED-LOOP SYSTEM ☐
 OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
 COMMENCE DRILLING OPNS. ☐ P AND A ☒
 CASING/CEMENT JOB ☐
 OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Please see the attached P&A operations performed March 2018.

Approved for plugging of wellbore only.
 Liability under bond is retained pending
 Receipt of C-103 (Subsequent Report of Well
 Plugging) which may be found @ OCD web
 page under forms
www.emnrd.state.us/oed

Spud Date: 03/12/1961

NMOCO

APR 26 2018

DISTRICT III

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Toya Colvin TITLE Regulatory Analyst DATE 4/24/2018

Type or print name Toya Colvin E-mail address: Toya.Colvin@bp.com PHONE: 281-892-5369
 For State Use Only

APPROVED BY: Brandi Powell TITLE Deputy Oil & Gas Inspector,
 Conditions of Approval (if any): District #3 DATE 5/3/18

Printed on 3/29/2018

BP AMERICA
PRODUCTION
COMPANY

Name: Allen A #1
API:30-045-08851, 03/29/2018

Well Plugging Report

Notification - Notify on 3/13/18 NMOCD @3:18 PM, BLM @3:20 PM

Work Detail

PUX	Activity
03/14/2018	
P	Rode rig and equip to location. Spot equipment.
P	RU pulling unit, unload BOP, spot in and RU pumping equip.
P	Secure location, SDFD.
03/15/2018	
P	S & S rig and equip., fill out JSA, held safety mtg.
P	Check PSI on Well, 2 3/8" tbg-50 PSI, 4 1/2" csg-40 PSI, BH-0 PSI, break down WH, RU A-plus valves, relief lines, blow Well down to 0 PSI.
P	ND WH, NU BOP, RU work-floor, tbg equip.
P	Attempt to work and pull tbg hanger, pulling 40K turned to the right, dragging tbg, LD tbg hanger. Work tbg.
	TOOH slowly and tally 102 stds, 8 jnts, SN, 6' MA, (212 jnts total) 2 3/8" tbg, EUE, EOT @6600' DRAGGED HALF WAY OUT.
	RU A-plus W/L, attempt to RIH w/ gauge ring hit tight spot unable to get pass 4311' attempt to work through, POOH LD gauge ring, RD W/L.
X	PU 4 1/2" string mill TIH to 4311' stacked out.
X	Work string mill to 4342' w/ tbg tongs,
X	TOOH, LD stinger, SIW, secure location, SDFD.
03/16/2018	
P	S & S rig and equip., fill out JSA, held safety mtg.
P	Check PSI on Well, no tbg, 4 1/2" csg-135 PSI, BH-0 PSI, RU relief lines blow Well down to 0 PSI.
X	PU 4 1/2" string mill, TIH to 4342'
X	PU and RU Power-swivel pump load and get circ w/ 90 BBLs
X	Drill and work string mill through from 4342' to 4460' felt free.
X	RD power-swivel.
P	TIH to 6500' attempt to TOOH started dragging
X	RU pump to tbg pump 120 BBLs.
P	TOOH LD string mill, (still dragged from 6500' to 4460')
P	SIW, drain up, secure location, SDFD.
03/19/2018	
P	S & S rig and equip, fill out JSA, held safety mtg.
P	Check PSI on Well, no tbg, 4 1/2" csg-325 PSI, BH-0 PSI, RU relief lines attempt to blow Well down unable to RU pump to csg pump 40 BBLs kill Well
P	RU A-plus W/L RIH w/ 4 1/2" gauge ring to 6480', RIH w/ 4 1/2" CIBP to 6468' set POOH, RD W/L.
P	TIH to 6468', w/ 2 3/8" tbg.
P	RU pump to tbg load and est circ w/ 50 BBLs pumped 105 BBLs, attempt to PT csg to 800 PSI, got a rate of 1 BPM @900 PSI, no test.
P	TOOH w/ tbg, RU pump to csg load w/ 10 BBLs.

Printed on 3/29/2018

X RU W/L, Attempt to run CBL, unable to pass 4173', WOO, Run CBL from 4173' to surface.

P SIW, drain up, secure location, SDFD.

03/20/2018

P S & S rig and equip., fill out JSA, held safety mtg.

P PU plugging sub, TIH to 6468', RU pump to tbg load and est circ w/ 1 BBLs

P Pumped Plug #1 - (Dakota) Mix & pump 20sxs Class C cmt (26.4 cu/ft, 15.0#) from 6468' to 6330'.

P LD tbg. PUH to 4935'

P WOC

P TIH and tag Plug #1 @6330' tag good.

P TOOH w/ tbg.

P SIW, drain up, secure location, SDFD.

03/21/2018

P HSM on JSA. S & S equipment. Check well PSI no Tbg, 0 PSI Csg, 0 PSI BH. RU relief - open to pit.

X PU HSC gun-RIH to 5774'. Perf 6 holes POOH, PU W/L. RIH w/ 4.5" CR set at 5756' POOH LD setting tool.

P PU W/L stinger. TIH w/tbg. Tag CR. RU pump and est. circ. w/ 5 BBLs. SI csg pump and est. rate of 1 BBL a min. at 900 PSI, sting into CR pump and est. rate of 1.5 BBL a min. at 1400 PSI.

X Pumped Plug #2 - (Gallup) Mix & pump 57sxs Class C cmt (75.24 cf, 1.32 yield, 15.1 PPG) from 5776' to 5285' w/ 35sxs outside/ 2sxs below/ 20sxs above.

X TOOH, EOT at 4671" TOC. SIW Drain pump lines secure location. SDFD.

03/22/2018

P HSM on JSA. S & S equipment. Check well PSI no Tbg, 0 PSI Csg, 0 PSI BH. RU relief -open to pit. TIH & Tag TOC at 5285' RU to tbg pump and est. circ. w/ 4 BBLs. SI csg pump and est. rate of 1 BBL a min at 1000 PSI. TOOH. LD stinger.

X PU HSC gun. RIH perf 4 HSC holes at 4833', PU W/L. RIH w/ 4.5" CR set at 4804'.

P PU W/L stinger. TIH w/ tbg. Tag CR. RU pump, est. circ. Attempt PT csg - no test leak off 300 PSI in 6 min. Sting into CR pump and est rate of 1 BBL a min at 800 PSI.

X Pumped Plug #3 - (Mancos) Mix & pump 57sxs Class C cmt (1.32 yield, 14.9 PPG) from 4833' to 4458' w/ 35sxs outside/2sxs below/ 20sxs above.

P POOH w/ tbg. WOC overnight. SIW drain pump and lines secure location SDFD.

03/23/2018

P HSM on JSA. S & S equipment. Check well PSI no Tbg, 0 PSI Csg, 0 PSI BH. RU relief - open to pit. TIH & Tag TOC at 4458'. EOT at 3736' pump and est. circ. w/ 1 BBL SI csg. Attempt PT csg - NO TEST. Lost 200 PSI in 3 min. Pre mix 2% cal. chlor. for 20 sxs.

P Pumped Plug #4 - (MV) Mix & pump 20sxs Class C cmt w/ 2% CACL (1.32 yield, 15.0 PPG) from 3736' to 3402'. WOC.

X TIH & tag TOC at 3402' RU pump and est. circ. w/ 1 BBL PT csg to 1000 PSI PT good. TOOH w/ tbg.

P PU Perf gun. RIH & perf 4 HSC holes @ 3150'. POOH, pump and est. rate of 1.5 BBLs a min at 600 PSI.

P RIH w/ CR set @ 3100'. PT tbg to 1000 PSI good pump and est. circ. w/ 1 bbl sting into CR.

P Pumped Plug #5 - (Chacra) Mix & pump 52sxs Class G cmt (1.15 yield, 15.8 ppg) from 3150' to 2999' w/ 40sxs outside/ 4sxs below/ 8sxs above..

P TOOH w/ tbg.

X PU HSC gun RIH & perf 4 HSC holes @ 2108'. POOH LD gun, Pump and est. rate of 2 BBLs a min at 400 PSI.

Printed on 3/29/2018

X RIH w/ 4.5" CR set @ 2058'. Sting into CR.
 P Pumped Plug #6 - (PC) Mix & pump 52sxs Class G cmt (1.15 yield, 15.9 ppg) from 2108' to 1937' W/ 40sxs outside/ 4sxs below/ 8sxs above.. POOH w/ tbg. SIW drain pump and Equipment. SDFD.

03/26/2018

P S & S rig and equip., fill out JSA, held safety mtg.
 P Check PSI on Well, no tbg-0 PSI, 4 1/2" csg-0 PSI, BH-0 PSI, open Well, WOO. NMOC (John Durham) Requested Tag Plug #6.
 P TIH tag Plug #6 @1937' tag good, LD, TOOH.
 P RU A-plus W/L, RIH w/ 3 1/8" HSC to 1787' perf 3 holes, POOH, RU pump to csg attempt to get a rate pressured up to 1200#, bleed down to 800 PSI, (NMOC request balanced plug WOC and tag) RD W/L.
 P PU plugging sub TIH to 1937', RU pump to tbg load and est circ. w/ 1 BBL.
 P Pumped Plug #7 - (Fruitland Top) Mix & pump 24sxs Class G cmt w/ 2% CACL (27.6 cu/ft, 15.8#) from 1837' to 1534'. TOOH w/ tbg. WOC.
 P TIH tag Plug #7 @1534' tag good. TOOH, load csg w/ 3.5 BBLs.
 P RU W/L, RIH w/ 3 1/8" HSC to 875' perf 3 holes, POOH, got a rate of 1.5 BPM @400 PSI, RD W/L.
 P RIH w/ CR set @ 825'. Release and sting out. Load and est circ w/ 1 BBL, sting in got a rate of 1 BPM @500 PSI.
 P Pumped Plug #8 - (Kirtland/Ojo Alamo) Mix & pump 159sxs Class G cmt (182.85 cu/ft, 15.6#) from 875' to 498' w/ 129sxs outside/ 4sxs below/ 26sxs above.. TOOH w/ tbg.
 P RU W/L, RIH w/ 3 1/8" HSC to 314' perf 3 holes, POOH got a rate of 1.5 BPM @200 PSI, RD W/L.
 P RIH w/ CR set @ 264'. Release and sting out load and est circ w/ 1 BBL, sting in got a rate of 1 BPM @400 PSI.
 P Pumped Plug #9 - (Csg Shoe) Mix & pump 54sxs Class G cmt (65.1 cu/ft, 15.6#) from 314' to 68' w/ 42sxs outside/ 4sxs below/ 8sxs above.
 P TOH LD setting tool, SIW, secure location, SDFD.

03/27/2018

P S & S rig and equip., fill out JSA, held safety mtg.
 P Check PSI on Well, no tbg-0 PSI, 4 1/2" csg-0 PSI, BH-0 PSI, open Well,
 P Tag TOC at 68', RIH w/ 3 1/8" HSC & Perf 3 holes at 60'. Approved by NMOC (Monica Kuehling) on location. Est. circ. out BH & circ. clean.
 P RD floor. ND BOP. NU WH.
 P Re-est. circ. Pumped Plug # 10 - (Surface) Mix & pump 34sxs Class G cmt (38.64 cf, 6.88 bbls, slurry 1.15 yield, 15-8#) from 60'- surface. Circ. good cement out BH & SIW (NMOC requiring 3 hrs. WOC)
 P RD PT & load BOP, RD rig.
 P Finish digging out WH, JSEA. Cut off WH w/air saw, Tag TOC in 4.5 csg @ 4', weld on cap & DHM (found TOC in 4.5 & annulus down 6", OK'd by NMOC rep.), clean up location. RD. MOL
 COORDINATES - LONG. -108.056240 LAT.+36.760000

* P - Procedure Planned; U - Unplanned A+ issue; X - COA, Well Conditions

On Site Reps:

Name	Association	Notes
John Durham	NMOC	on location
Monica Kuehling	NMOC	on location

Allen A #1

As Plugged

Basin Dakota

P&A'd: 3/27/2018

790' FNL, 790' FWL, Section 1, T-29-N, R-12-W, San Juan County, NM

Spud: 3/13/61

Completion: 5/22/61

API #30-045-08851

Elevation: 5905' GL

12.25" hole

8.625", 24#, Casing set @ 264'

Cement with 200 sxs, circulate to surface

Ojo Alamo @ 625'

Kirtland @ 825'

Fruitland @ 1475'

Csg leak @ 1720'; squeezed

with 75sx (1993)

Pictured Cliffs @ 2058'

Csg leak @ 2080'; squeezed

with 75sx (1993)

Chacra @ 3376'

Csg leak @ 4055'; squeezed

with 150sx (1993)

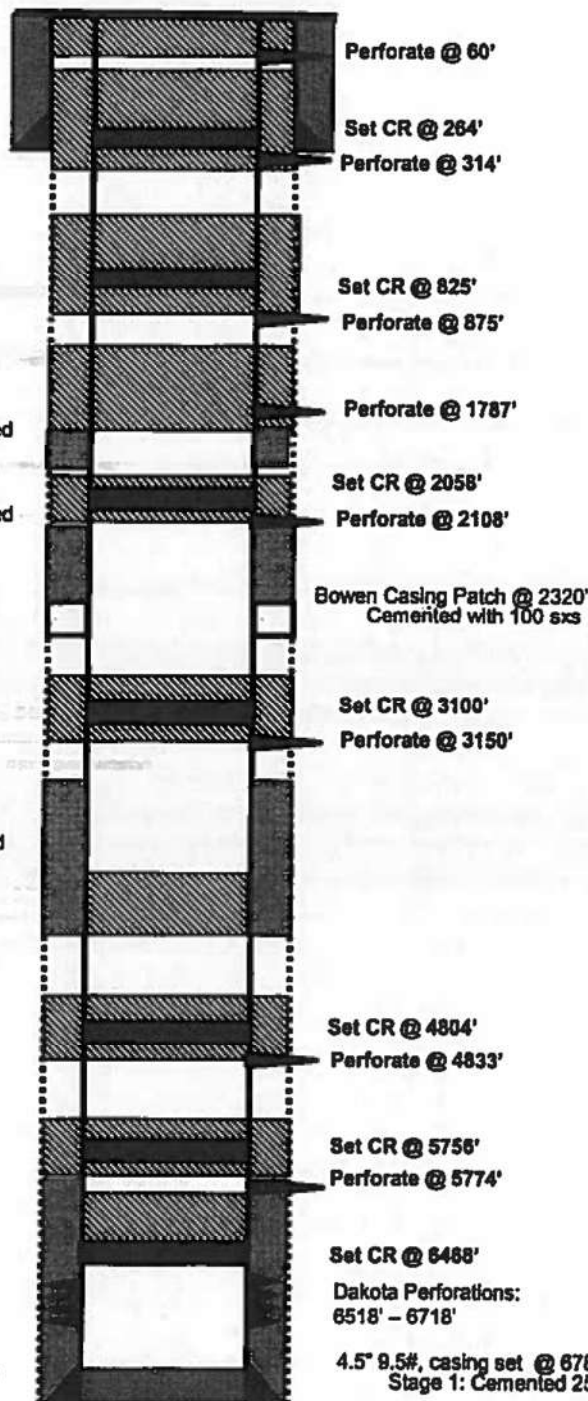
Mesaverde @ 4110'

Mancos @ 4735'

Gallup @ 5726'

Dakota @ 6516'

7-7/8" Hole



Plug #10: 60' - 0'

34sxs Class G cmt

Plug #9: 314' - 68'

54sxs Class G cmt (42sxs

outside/4sxs below/8sxs

above) TOC @ 68'

Plug #8: 875' - 498'

159sxs Class G cmt (129sxs

outside/4sxs below/26sx

above)

Plug #7: 1837' - 1534'

24sxs Class G cmt w/ 2%

CACL TOC @ 1534'

Plug #6: 2108' - 1937'

52sxs Class G cmt (40sxs

outside/4sxs below/8sxs

above) TOC @ 1937'

Plug #5: 3150' - 2999'

52sxs Class G cmt (40sxs

outside / 4sxs below/8sxs

above)

Plug #4: 3736' - 3402'

20sxs Class C cmt w/ 2%

CACL TOC @ 3402'

Plug #3: 4833' - 4458'

57sxs Class C cmt (35sxs

outside/2sxs below/20sxs

above). TOC @ 4458'

Plug #2: 5776' - 5285'

57sxs Class C cmt (35sxs

outside/2sxs inside/20sxs

above). TOC @ 5285'

Plug #1: 6488' - 6330'

20sxs Class C cmt

TOC @ 6330'

TD 6786'

PBTD 6750'

Form 3160-5
(August 1999)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0135
Expires June 30, 2000

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or reenter an abandoned well. Use Form 3160-3 (APD) for such proposals.

Bureau of Land Management
SUBMIT IN TRIPLICATE - Other instructions on reverse side

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. SF-065557-A
2. Name of Operator Epic Energy, LLC		6. If Indian, Allottee or Tribe Name
3a. Address 7415 East Main, Farmington, NM 87402	3b. Phone No. (include area code) 505-327-4892	7. If Unit or C/A Agreement, Name and/or No.
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 1450' FSL & 1190' FEL, Section 1, T29N, R12W		8. Well Name and No. Cornell #3R
		9. API Well No. 30-045-29539
		10. Field and Pool, or Exploratory Area Fulcher Kutz, Pictured Cliffs
		11. County or Parish, State San Juan County, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input checked="" type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposal or Completed Operations (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BLA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Epic Energy, LLC, permanently plugged and abandoned the Cornell #3R on July 13, 2018 as follows:

Removed rods/pump and tubing from wellbore. Established injection rate w/ 20 bbls of water. Pumped a total of 240 sx (283 cf) of Class B cement. After pumping the 1st bbl of cement, dropped 36 ea. 1.3 SG ball sealers with the following 5 bbls of cement. Filled casing from perforations to surface. Pressured up to max of 500 psi. Bled off pressure and cut off well head. Topped with 2 sx (2.36 cf) Class B cement. Welded on P&A marker and placed additional 3 sx (3.54 cf) of Class B around 7" casing and P&A marker. Removed all surface equipment. Location ready for reclamation.

Note: P&A job witnessed by Mr. Casey w/ BLM

AUG 08 2018

FARMINGTON FIELD OFFICE

14. I hereby certify that the foregoing is true and correct

Name (Printed/Typed)

John C. Thompson

Title

By:

VP of Engineering & Operations

Signature

Date

May 29, 2018

THIS SPACE FOR FEDERAL OR STATE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease.

Office

Title 18 U.S.C. Section 1001, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

NMOG 17

Submit 1 Copy To Appropriate District Office
 District I - (575) 393-6161
 1625 N. French Dr., Hobbs, NM 88240
 District II - (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III - (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV - (505) 476-3460
 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-103
 Revised August 1, 2011

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-045-29118
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
2. Name of Operator Four Star Gas & Oil Company		6. State Oil & Gas Lease No.
3. Address of Operator ATTN: Regulatory Specialist 332 Road 3100 Aztec, New Mexico 87410		7. Lease Name or Unit Agreement Name Riggs
4. Well Location Unit Letter <u>N</u> : 1175 feet from the <u>S</u> line and 16401 feet from the <u>W</u> line Section <u>4</u> Township <u>29N</u> Range <u>12W</u> NMPM County <u>San Juan</u>		8. Well Number 2
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5732'		9. OGRID Number 131994
10. Pool name or Wildcat Blanco Fruitland Coal		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

5/4/2017

Check well pressures: 2 3/8in tbg-0 psi, 5.5in csg-10 psi, BH-0 psi. Open well. RD tbg equip. RU rod equip. Unseat rod pump; LD polish rod. TOOH, LD 68 3/4in rods, 2in sinker bars, 4ft guided pony-rod pump. SWIFN.

5/5/2017

ND wellhead. NU BOP, install 2 3/8in sub, PT 2 3/8in pipe rams to 800#, test good.

Pull tbg hanger, found a chemical liner. Got a pair of clippers for bands; company rep request to cut in 10ft sections, LD.

TOOH, LD chemical line. Tally 67 jts tbg w 6ft sub, 5N and MA. Round trip 5.5in string mill to 1708ft.

PU 5 1/2in CR and TIH; set CR at 1695ft. Load tbg w 6 BBLs, PT tbg to 1000#, test good. Release, sting out of CR. Est circ w 35 BBLs; pumped 45 BBLs total. PT csg to 800#, test good.

Plug 1 - PC- FRLD tops, with CR at 1695ft mix, pump 29 sxs, (34.22 cu/ft, 15.7#), Class B cement 1695ft to 1439ft TOC.

LD tbg to 584ft, est circ w 2 BBLs.

Plug 2 - Kirtland, Surface Csg. Shoe, Ojo Alamo tops, spot 47 sxs, (55.46 cu/ft, 15.6#), Class B cement 584ft to 169ft TOC.

LD remaining tbg. SWIFN.

5/8/2017

RU WL. Perf 3 squeeze holes @ 100ft. Est circ out BH w 1 BBL; pump 5 BBLs total. RD WL. RD tbg equip. ND BOP. NU WH.

Plug 3 - Surface, mix and pump 45 sxs, (53.1 cu/ft, 15.5#), Class B cement 100ft to 0ft, w/12 sxs csg, 33 sxs annulus; good cement returns out BH. RDMO.

Spud Date:

Rig Release Date:

OIL CONS. DIV DIST. 3

MAY 23 2017

PNR only

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE April E. Pohl TITLE Permitting Specialist DATE 5/23/2017

Type or print name April E. Pohl E-mail address: April.Pohl@chevron.com PHONE: 505-333-1941

For State Use Only

APPROVED BY: [Signature] TITLE Deputy Oil & Gas Inspector, DATE 9/15/17
District #3
 Conditions of Approval (if any): AV

Riggs #2 As Plugged 5/8/17

Basin Fruitland Coal

1175' FSL, 1640' FWL, Section 4N, T-29-N, R-12-W

San Juan County, NM, API #30-045-29118

Today's Date: 1/20/17
Spud: 6/28/94
Completed: 8/30/94
Elevation: 5732' GL
5747' KB

Plug #3: 100' - 0'
Class B cement, 45 sxs

Perforate @ 100'

2013 Workover: Cut 31' of 5.5" and
replaced casing and inserted patch
TOC @ 150' ('94 CBL)

8-5/8" 24# J-55 Casing set @ 270'
Cement with total 210 sxs, circulated

12 25" hole

Ojo Alamo @ 410'

Kirtland @ 530'

Plug #2: 584' - 169'
Class B cement, 47 sxs

Fruitland @ 1544'

Plug #1: 1695' - 1439'
Class B cement, 29 sxs

Set cement retainer @ 1695'

Fruitland Coal Perforations:
1745' - 1780'

Pictured Cliffs @ 1794'

7.875" hole

5 5", 15 5#, J-55 Casing set @ 1882'
Cement with 285 sxs

TD 1890'
PBTD 1842'

RECEIVED

Form 3160-5
(August 2007)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

MAR 28 2017

FORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON Wells
Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

5. Lease Serial No.
NM014375

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other Instructions on page 2.

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

OIL CONS. DIV DIST. 3

2. Name of Operator
Riggs Oil and Gas Corp.3a. Address
1690 N. Butler Ave, Farmington, NM 874013b. Phone No. (include area code)
505-324-9881

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No.
Federal #19. API Well No.
30-045-0880410. Field and Pool or Exploratory Area
Fulcher Kutz PC/FIC4. Location of Well (Fonage, Sec., T., R., M., or Survey Description)
1670 FNC & 1690 FNC SEC 24 T29N 11W11. Country or Parish, State
San Juan County, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input checked="" type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

Riggs Oil & Gas has plugged this well per the attached sheet

ACCEPTED FOR RECORD

MAR 25 2017

FARMINGTON FIELD OFFICE
BY: *M. Moran*

14. I hereby certify that the foregoing is true and correct.

Name (Printed/Typed)
Thomas J. Smith

Title Agent

Signature

Thomas J. Smith

Date 03/28/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

NMOCD

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979
Farmington, New Mexico 87499
505-325-2627 *fax: 505-325-1211

Riggs Oil & Gas Corp.
Federal #1

February 9, 2017
Page 1 of 2

1670' FNL and 1690' FWL, Section 4, T-29-N, R-12-W
San Juan County, NM
Lease Number: NM-014375
API #30-045-08804

Plug and Abandonment Report
Notified NMOCD and BLM on 2/6/17

Plug and Abandonment Summary:

- Plug #1** Pictured Cliffs and Fruitland tops and perforations, below CR at 1180', with 152 sxs Class B cement (15.4 ppg, 179.36 cf) from 1788' to 1180'; no tag required, no cement above CR.
- Plug #2** Ojo Alamo and Kirtland tops, with SQZ holes at 562' and CR at 512', mix and pump 164 sxs Class B cement (15.6 ppg, 193.52 cf), from 562' to 202', with 122 sxs in annulus, 6 sxs below CR and 36 sxs above CR.
- Plug #3** Surface casing shoe, with SQZ holes at 152', inside outside, with 73 sxs Class B cement (15.5 ppg, 86.14 cf) from 152' to surface with 18 sxs in 5-1/2" casing and 55 sxs in annulus; install P&A marker with coordinates Long: 36° 45.466' N / Lat: 108° 6.404' W.

Plugging Work Details:

- 2/6/17 MIRU. Check well pressures: SITP (1") 90 PSI, SITP (1-1/4") 90 PSI, SICP 90 PSI, SIBHP 0 PSI. Blow down well. Work wellhead cap loose. Attempt to pull on 1" string unable to pull slips, work 1" slips cap free. Pulled 1" tubing found the tubing was hanging up, worked tubing free. Strip on and NU BOP. TOH and LD 75 jnts, 1" line tubing, last joint had parted pin on bottom. SIFN.
- 2/7/17 Check well pressures: SITP 85 PSI, SICP 85 PSI, SIBHP 0 PSI. Blow down well. RU 2-3/8" sub to tubing hanger. Pull 1-1/4" tubing to 8K attempt to release packer, leave 8K pulled on packer for 45 minutes. Attempt to work packer free, unable. *Note:* Tom Smith, Riggs O&G, received approval from BLM and NMOCD on procedure change. RU A-Plus wireline. Attempt to RIH with 1-1/4" GR, unable to pass to 1033'. POH. Pumped 10 bbl. water down 1-1/4" tubing while pulling 5K tension. Leave in tension. Attempt to RIH with 1" bar, unable to get passed 1365'. POH. Wait on orders. *Note:* Tom Smith, Riggs O&G, received approval from BLM and NMOCD on procedure change. RIH with 1-1/4" jet to 1180', cut tubing, ROH. Pull tubing hanger. TOH and LD 3 - 3' and 1 - 4' sub, 38 jnts, and 25' cut jnt of 1-1/4" tubing IJ. SIFN.
- 2/8/17 Check well pressures: no tubing, SICP 85 PSI, SIBHP 0 PSI. Blow well down. Tally A-Plus 2-3/8" tubing workstring. PU 5-1/2" WD CR and set at 1180'. Pressure test tubing to 1000 PSI, OK. Circulate casing clean with 40 bbl. water. Pressure test casing to 800 PSI, OK. **Spot plug #1** with calculated TOC at 1180'. RU A-Plus wireline. Run CBL from 1180' to surface, found TOC at 982'. *Note:* Tom Smith, Riggs O&G, received approval from BLM and NMOCD on procedure change. RU A-Plus wireline. Perforate squeeze holes at 562'. Pump down casing and establish circulation out bradenhead valve at a rate of 2.5 BPM at 500 PSI. PU 5-1/2" WD CR and set at 512'. **Spot plug #2** with calculated TOC at 202'. *Note:* During plug circulation out bradenhead slowly started dying down to a stream; when 130 sxs pumped away, Darrin Halliburton with BLM approved to stop plug and cover the Ojo Alamo and Kirtland. TOH. SI well. SIFN.

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979

Farmington, New Mexico 87499

505-325-2627 *fax: 505-325-1211

**Riggs Oil & Gas Corp.
Federal #1****February 9, 2017
Page 2 of 2****Plugging Work Details (continued):**

2/9/17 Check well pressures; no tubing, 0 SICP, bradenhead on vacuum. RU A-Plus wireline. RIH and perforate 4 HSC squeeze holes at 152'. Pump down casing with fresh water and establish circulation out bradenhead valve. ND BOP, NU WH. Re-establish circulation. **Spot plug #3** with TOC at surface. Dig out wellhead. *Note:* Darren Halliburton, BLM, request to WOC surface. RU A-Plus cut off. Cut off wellhead. Found cement down 2' in 5-1/2" casing and in 5-1/2" x 8-5/8" annulus. *Note:* Darren Halliburton, BLM, approved to weld on casing cap and P&A marker. Install P&A marker with coordinates 36° 45.466' N / 108° 6.404' W. RD and MOL.

Tom Smith, Riggs O&G representative, was on location.
Darren Halliburton, BLM representative, was on location.

Form 3160-5
(June 2015)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*FORM APPROVED
OMB NO 1004-0137
Expires, January 31, 20185. Lease Serial No.
NMNM014375

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 27. If Unit or CA/Agreement, Name and/or No.
14080018221

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other8. Well Name and No.
CORNELL A 1E

2. Name of Operator

BP AMERICA PRODUCTION COMPANY

Contact: TOYA COLVIN

Mail: Toya.Colvin@bp.com

9. API Well No.
30-045-24132-00-S1

3a. Address

501 WESTLAKE PARK BLVD. THREE ELDORGE PLACE
HOUSTON, TX 77079

3b. Phone No. (include area code)

Ph: 281 892.5369

10. Field and Pool or Exploratory Area
BASIN DAKOTA

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 10 T29N R12W SESW 0910FSL 1760FWL
36.736191 N Lat, 108.088867 W Lon

11. County or Parish, State

SAN JUAN COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☐ Notice of Intent☒ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Hydraulic Fracturing☐ New Construction☒ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☐ Other

13 Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Please see the attached P&A operations performed on the subject well January 2018.

14080018221

OIL CO. IS. DIV DIST. 3

FEB 13 2018

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #402766 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington
Committed to AFMSS for processing by JACK SAVAGE on 02/07/2018 (17AE0306SE)

Name (Printed/Typed) TOYA COLVIN

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 01/31/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USEApproved By **ACCEPTED**JACK SAVAGE
Title PETROLEUM ENGINEER

Date 02/07/2018

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office Farmington

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

NMOCOPY

BP America Production Co.**Plug And Abandonment End Of Well Report****Cornell A 1E****910' FSL & 1760' FWL, Section 10, T29N, R12W****San Juan County, NM / API 30-045-24132****Work Summary:**

- 1/12/18** Made BLM, and NMOCD P&A operations notifications at 9:00 AM MST.
- 1/15/18** MOL and R/U P&A unit. Checked well pressures: Tubing: N/A, Casing: 10 psi, Bradenhead: 80 psi. Blew down well. N/D wellhead and N/U BOP. P/U 3500' of tubing with casing scraper and bit off of tubing float. Shut-in well for the day.
- 1/16/18** Checked well pressures: Tubing 0 psi, Casing: 0 psi, Bradenhead: 0 psi. Blew down well. TIH with casing scraper to 5960' and tagged hard scale. Rotated through 20' of scale and stopped making headway with casing scraper. TOH and P/U string mill. TIH and swivel-up to start milling tight spot on 1-17-18.
- 1/17/18** Milled 90' of hard scale down to top perforation at 6127'. Circulated bottoms up and TOH with mill. P/U CR, TIH and set at 6077'. Loaded tubing with 25 bbl of fresh water and pressure tested to 1000 psi in which it successfully held pressure. Stung out of CR and circulated hole with 100 bbl fresh water until returns were clean. Attempted to pressure test casing to 800 psi in which it failed to hold adequate pressure. R/U cementing services and pumped balanced Plug #1: (Dakota Perforations and Formation Top 6077'-5846', 24 Sacks Class B Cement) Mixed 24 sx Class B cement and spotted a balanced plug to cover Dakota perforations and formation top. R/D cementing services and shut-in well for the day. WOC overnight. Ron Chavez was BLM inspector on location.

- 1/18/18** TOH, L/D stinger and P/U cementing sub. TIH with cementing sub and tagged plug #1 top at 5846'. Pressure tested casing to 800 psi in which it failed to hold adequate pressure. Pumped plug #2 at 5330' **Plug #2: (Gallup Formation Top 5330'-5066', 20 Sacks Class B Cement)** Mixed 20 sx Class B cement and spotted a balanced plug to cover Gallup formation top. WOC 4 hours. TIH and tagged plug #2 top at 5066'. PUH and pumped plug #3 at 4418'. **Plug #3: (Mancos and Pt. Lookout Formation Tops 4418'-3907', 52 Sacks Class B Cement)** Mixed 52 sx Class B cement and spotted a balanced plug to cover Mancos and Pt. Lookout formation top. Shut-in well for the day. WOC overnight. Ron Chavez was BLM inspector on location.
- 1/19/18** TIH and tagged plug #3 top at 3907'. TOH with tubing and R/U wireline services. Ran CBL from top of plug #3 at 3907' to surface. CBL results showed no cement behind casing from 3675' to surface. R/U wireline services. RIH and perforated squeeze holes at 3294'. TIH with CR and set at 3244'. Stung out of CR and pressure tested casing to 800 psi in which it failed to hold pressure. **Plug #4: (Mesa Verde(Cliffhouse) Formation Top 3294'-3074', 66 Sacks Class B Cement)** RIH with 4-1/2" CR and set at 3244'. Mix 66 sx Class B cement. Squeezed 50 sx outside casing leaving 16 sx inside casing to cover Mesa Verde(Cliffhouse) formation top. TOH with tubing. Shut-in well for the day. WOC overnight. Ron Chavez was BLM inspector on location.
- 1/22/18** TIH with cementing sub and tagged cement at 3074'. TOH and R/U wireline services. RIH and perforated squeeze holes at 2705'. P/U CR, TIH and set at 2655'. Stung out of CR and pressure tested casing to 800 psi in which it failed to hold pressure. **Plug #5: (Chacra Formation Top 2705'-2553', 50 Sacks Class B Cement)** Mix 50 sx Class B cement. Squeezed 43 sx outside casing leaving 7 sx inside casing to cover Chacra formation top. WOC 4 hours. TIH with cementing sub and tagged cement at 2553'. Pressure tested casing to 800 psi in which it successfully held pressure. Pressure test witnessed by BLM inspector Ron Chavez. Shut-in well for the day.
- 1/23/18** TOH with tubing. R/U wireline services. RIH and perforated squeeze holes at 1773'. P/U CR, TIH and set at 1722'. R/U cementing services for 1-24-18. Shut-in well for the day.
- 1/24/18** R/U cementing services and pumped **Plug #6: (Pictured Cliffs Formation Top 1773'-1573', 74 Sacks Class B Cement)** RIH and perforate 3 squeeze holes at 1773'. RIH with 4-1/2" CR and set at 1722'. Mix 74 sx Class B cement. Squeezed 62 sx outside casing leaving 12 sx inside casing to cover Pictured Cliffs formation top. R/U wireline services. RIH and perforated squeeze holes at 1339'. P/U CR, TIH and set at 1286'. R/U cementing services and pumped **Plug #7:**

(Fruitland Formation Top 1339'-1189', 77 Sacks Class B Cement). RIH with 4-1/2" CR and set at 1286'. Mix 77 sx Class B cement. Squeezed 65 sx outside casing leaving 12 sx inside casing to cover Fruitland formation top. Put pressure gauge on Bradenhead and monitored for 2 hours. R/U wireline services. RIH and perforated at 467'. Circulated 54 bbls of cement around Bradenhead and got good cement returns to surface. N/D BOP and cut-off wellhead. Ran tally tape down hole and tagged cement at 11' inside surface casing, and 45' down in production casing. RIH with 1" poly pipe and topped well off with 36 sx of cement- **Plug #8: (Kirtland, Ojo Alamo Formation Tops, Surface Shoe 467'-surface, 90 Sacks Class B Cement, 36 Sacks for top-off)** Installed P&A marker per BLM regulations. Ron Chavez was BLM inspector on location. R/D MOL.

Wellbore Diagram

Cornell A 1E
API #: 3004524132
San Juan, New Mexico

Plug 8
467 feet - Surface
467 feet plug
90 sacks of Class B Cement
(Top off with 36 sacks)

Plug 7
1339 feet - 1189 feet
150 feet plug
Squeeze 65 sacks through perfs
Leave 12 sacks in casing

Plug 6
1773 feet - 1573 feet
200 feet plug
Squeeze 62 sacks through perfs
Leave 12 sacks in casing

Plug 5
2705 feet - 2553 feet
152 feet plug
Squeeze 43 sacks through perfs
Leave 7 sacks in casing

Plug 4
3294 feet - 3074 feet
220 feet plug
Squeeze 50 sacks through perfs
Leave 16 sacks in casing

Plug 3
4418 feet - 3907 feet
511 feet plug
52 sacks of Class B Cement

Plug 2
5330 feet - 5066 feet
264 feet plug
20 sacks of Class B Cement

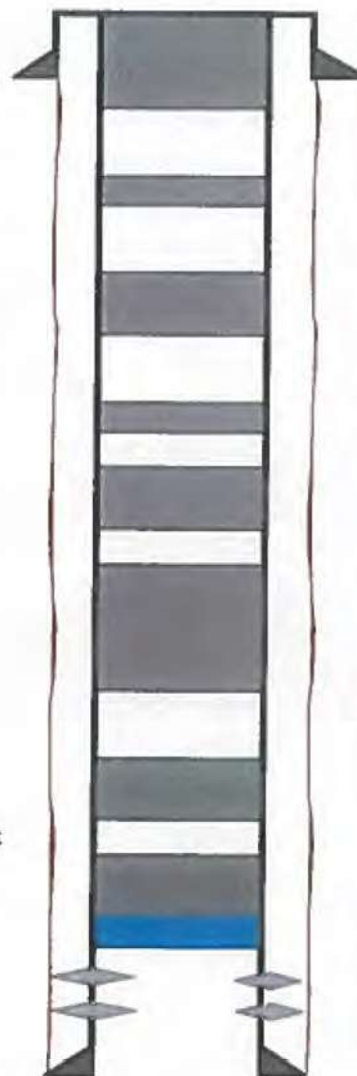
Plug 1
6077 feet - 5846 feet
231 feet plug

Surface Casing
8.625" 24# @ 300 ft

Formation
Ojo Alamo - 300 feet
Pictured Cliffs - 1660 feet
Lewis - 1840 feet
Cliffhouse - 3250 feet
Menefee - 3320 feet
Point Lookout - 402 feet
Mancos - 4400 feet
Gallup - 5300 feet
Greenhorn - 6060 feet
Dakota - 6170 feet

Retainer @ 6077 feet

Production Casing
4.5" 10.5# @ 6370 ft





OCD Received
6/25/2020Form 3160-5
(June 2015)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.***SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well <input type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other: COAL BED METHANE		5. Lease Serial No. NMNM014375
2. Name of Operator SYNERGY OPERATING, LLC Contact: GLEN PAPP E-Mail: gpapp@synergyoperating.com		6. If Indian, Allottee or Tribe Name
3a. Address FARMINGTON, NM 87499	3b. Phone No. (include area code) Ph: 505-599-4908 Ext: 1582 Fx: 505-599-4900	7. If Unit or CA/Agreement, Name and/or No. NMNM121816
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 10 T29N R12W SESW 1165FSL 1510FWL 36.737107 N Lat, 108.090304 W Lon		8. Well Name and No. BECK 29-12-10 108
		9. API Well No. 30-045-34452-00-S1
		10. Field and Pool or Exploratory Area BASIN FRUITLAND COAL
		11. County or Parish, State SAN JUAN COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION				
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off	
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity	
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other	
	<input type="checkbox"/> Change Plans	<input checked="" type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon		
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal		

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Synergy Operating LLC has completed the plugging of the wellbore.

Attached in a separate file are the follow documents:

- 1) Daily reports of the downhole plugging operations
- 2) An as plugged wellbore schematic

The surface production facilities belonging to Synergy Operating have also been removed. Synergy is waiting on Enterprise Products to remove their meter run in order to begin the surface reclamation operations.

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #515895 verified by the BLM Well Information System
For SYNERGY OPERATING, LLC, sent to the Farmington
Committed to AFMSS for processing by JOE KILLINS on 05/28/2020 (20AMW0114SE)

Name (Printed/Typed) GLEN PAPP

Title OPERATIONS MANAGER / PARTNER

Signature (Electronic Submission)

Date 05/19/2020

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By ACCEPTED	JOE KILLINS Title ENGINEER	Date 05/28/2020
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		
Office Farmington		

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

AV

Synergy Operating, LLC

**Beck 29-12-10 # 108
1165' FSL & 1510' FWL, Section 10
T29N, R12W, San Juan County, NM**

Notified BLM & NMOCD (Brandon Powell) prior to MIRU

April 23, 2020

MIRU A Plus Rig #9. Spot plugging equipment.

April 24, 2020

TOOH & LD 3/4" rods and pump. ND WH, NU BOPE & Function Test. TOOH tallying 2-3/8" tbg. TIH w/ 2-3/8" tbg to 1715'. Est. circ w/ 45-Bbls FW. Mix & pump Plug #1, 1715'-1450', 30-sxs Cl 'G' cmt w/ 2% CaCl₂ @ 15.8 PPG, 1.15-ft³/sx, 34.5-ft³, 6.1-Bbls slurry & displace w/ FW. TOOH. WOC. PT BH - failed. TIH & tag TOC @ 1450'. Est. circ w/ 5-Bbls FW. PT 5-1/2" csg to 500# - failed. PUH to 1266'. Mix & pump Plug #2, 1266'-1050', 32-sxs Cl 'G' cmt w/ 2% CaCl₂ @ 15.8 ppg, 1.15-ft³/sx, 36.8-ft³, 6.5-Bbls slurry & displace w/ FW. TOOH w/ 2-3/8" tbg. SI well & WOC over weekend.

April 27, 2020

TIH & tag TOC @ 1050'. Est circ w/ 3-Bbls FW. PT 5-1/2" csg for 30-minutes-PT held. Attempt to PT BH, had small leakoff. BLM/NMOCD decided not to shoot perms but rather top off BH w/ cmt using 1" polypipe. Mix & pump Plug #3, 550' - 73', 55-sxs Cl 'G' cmt @ 15.8 PPG, 1.15 ft³/sx, 63.25-ft³, 11.26-Bbls slurry. TOOH laying down all 2-3/8" tbg. ND BOP. Cut-off WH. Run 1' polypipe inside 5-1/2" csg & find TOC @ 80', run 1" polypipe in 8-5/8" x 5-1/2" annulus and find TOC @ 75'. Install dry hole marker. Mix & pump Plug #4, 40-sxs Cl 'G' cmt @ 15.8 PPG, 1.15-ft³/sx, 46-ft³, 8.2-Bbls slurry (10-sxs inside 5-1/2" csg, 16-sxs in 8-5/8" x 5-1/2" annulus, 14-sxs in cellar). RD A Plus rig #9.

See attached post plugging wellbore diagram.

BLM Representative on location: Jimmie Dobson

Beck 29-12-10 #108**As Plugged 4/27/20**

Basin FtC

1165' FSL & 1510' FWL, Section 10, T29N, R12W

San Juan County, NM, API #30-045-34452

Today's Date: 11/15/19

Spud: 2/20/08

Completed: 5/20/08

Elevation: 5603' GL

12-1/4" hole

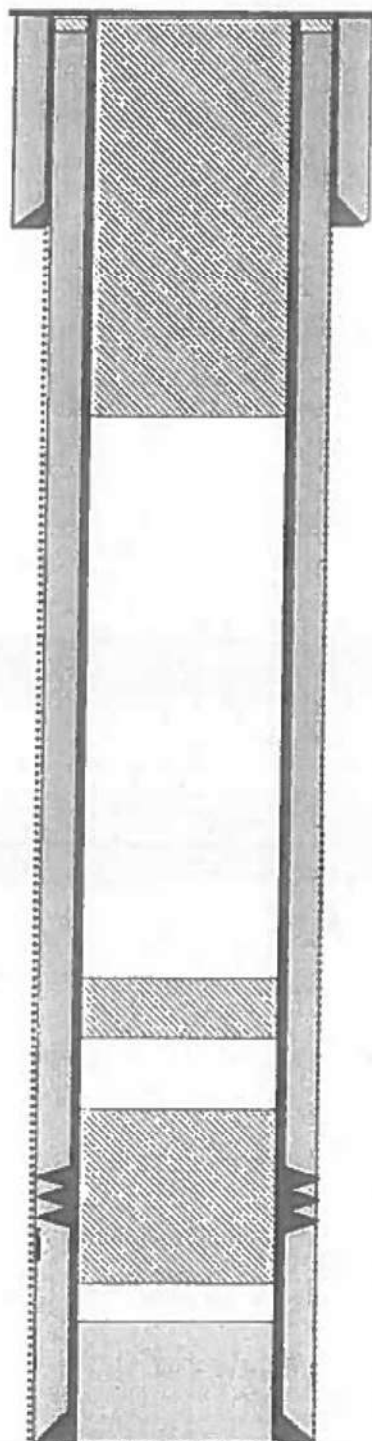
Ojo Alamo @ 329'

Kirtland @ 410'

Fruitland @ 1124'

Pictured Cliffs @ 1660'

7-7/8" hole

TD 1865'
PBD 1832'Plug #4: 80' - 0'
Class G cement, 40
sxs8-5/8" 24# K-55 Casing set @ 208'
Cement with 142 sxs, circulated to surface.Plug #3: 550' - 73'
Class G cement, 55 sxs
Tag TOC @ 80 in 5.5"
And 75' in 8-5/8"Plug #2: 1266' - 1000'
Class G cement, 32 sxs
w/2% CaCl2
Tag TOC @ 1050'Plug #1: 1715' - 1457'
Class G cement, 30 sxs
w/2% CaCl2
Tag TOC @ 1450'Fruitland Coal Perforations:
1622' - 1657'5.5" 15.5# J-55 Casing set @ 1853'
Cement with 280 sxs, circulated

Form 3160-5
(June 2015)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*FORM APPROVED
OMB NO. 1004-0137
Expires January 31, 20185. Lease Serial No.
NMSF065557A

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on page 27. If Unit or CA/Agreement, Name and/or No.
SW978. Well Name and No.
CORNELL E 19. API Well No.
30-045-08444-00-S1

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

BP AMERICA PRODUCTION COMPANY

Contact TOYA COLVIN

Mail Toya Colvin@bp.com

3a. Address

501 WESTLAKE PARK BLVD. THREE ELDRIDGE PLACE
HOUSTON, TX 77079

3b. Phone No. (include area code)

Ph: 281.892.5369

10. Field and Pool or Exploratory Area
BASIN DAKOTA

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 12 T29N R12W SWSW 0790FSL 0900FWL
36.735352 N Lat, 108.055862 W Lon

11. County or Parish, State

SAN JUAN COUNTY, NM

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☐ Notice of Intent☒ Subsequent Report☐ Final Abandonment Notice☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Hydraulic Fracturing☐ New Construction☒ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☐ Other

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

Please see the attached P&A operations performed on the subject well June 2017.

OIL CONS. DIV DIST. 3

JUL 20 2017

14. I hereby certify that the foregoing is true and correct

Electronic Submission #381260 verified by the BLM Well Information System
For BP AMERICA PRODUCTION COMPANY, sent to the Farmington
Committed to AFMSS for processing by ABDELGADIR ELMADANI on 07/18/2017 (17AE0211SE)

Name (Printed/Typed) TOYA COLVIN

Title REGULATORY ANALYST

Signature (Electronic Submission)

Date 07/13/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By

ACCEPTED

ABDELGADIR ELMANDANI
Title PETROLEUM ENGINEER

Date 07/18/2017

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

Office Farmington

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

NMOCD

**BP AMERICA
PRODUCTION
COMPANY**Cornell E #1
API:30-045-08444**Well Plugging Report**

Work Detail**06/15/2017**

Travel to location.

Service and start equipment. Held JESA.

LOTO with Ernie Cardin, BP representative. Spot in and RU rig. Check pressures: SITP 40#, SICP #160, SIBHP 25#.

Lay out relief lines to pit and blow well down. Note: casing and tubing blew down immediately; then tubing starting flowing back heavy drilling mud. Pump 30 bbls down tubing and casing started flowing after pumping 1 bbl.

ND WH. NU BOP and tongs.

PU on tubing and TOH with total 204 joints 2-3/8" EUE tubing, 2 - 6' and 1-8' subs. Total tally 6356'. Note: first 30 stands flowing water; used witches hat to catch the water.

PU 4.5" string mill and TIH to 4000'. SI well. SDFD. Secure location.

Travel back to yard.

06/16/2017

Travel to location.

Service and start equipment. Held JESA.

Check well pressures: SITP and SICP 160#, SIBHP 15#. Well blew down immediately. Function test pipe rams. Finish TIH w/mill to 6300'. TOH and LD mill.

PU 4.5 WD cement retainer and TIH; set at 6288'. P/T tbg to 1500#, held OK.

Sting out of CR. Circulate casing clean with 120 bbls of water. Note: circulated drilling mud in returns. Attempt to P/T 4.5" csg; bled down from 750-500 in 2 minutes. Establish injection rate 1.5 bpm at 750#.

Plug #1 with CR at 6288' spot 14 sxs (16.52 cf) Class B cement 15.6# from 6288 to 6160 to cover the Dakota perforations and top. TOH with tubing and LD setting tool.

Held JSEA. Run CBL from 6050 to surface; send to all appropriate personnel.

06/21/2017

Rode rig and spot equipment to location.

JSEA. RU rig and equipment.

Check well pressures: SITP 460#, SICP 420# SIBHP 15#. Lay out relief lines to pit and blow down well in 1 minute. NU BOP and floor. TIH with tubing and tag Plug #1 low at 6253' (Note: CR set at 6288').

Pump 20 bbls ahead. Pump Plug #1a with 14 sxs 15.6# Class B cement (16.52 cf) from 6253-6153; estimated TOC 6072'.

TOH with tubing. SI well and WOC overnight.

Travel back to yard.

06/22/2017

Travel to location

Service and start rig, JSEA

Check well pressures: SITP 500#,SICP 400# SIBHP 15#. Blow down in about 30 seconds. TIH and tag plug #1a low at 6253'. Plug #1b with 32 sxs (37.76 cf) with 2 % calc. 15. 6# Class B cement from 6253 to 5839'.
 TOH with tubing. SIW and WOC.
 TIH and tag plug #1b at 5990'. Attempt to PSI test casing, same bleed off. TOH with tubing.
 JSEA. Perforate 3 3-1/8" HSC squeeze holes at 5534'.
 PU WD 4.5" cement retainer; TIH and set CR at 5484'. Sting out. Load csg with 1 bbl. Attempt to PSI test casing; established injection rate 1.5 bpm at 750 psi.
 Sting in and establish injection rate 1.5 bpm at 1000 psi.
 Plug #2 (Gallup) with 51 sxs (60.18 cf) 15.6# Class B cement from 5534' - 5362'; squeeze 39 sxs outside, 4 sxs below CR and 8 sxs above . TOH and WOC overnight.
 Travel back to yard.

06/23/2017

Travel to loc.

Service and start equipment. JSEA.

Check well pressures: SICP 430#,SITP 480#,SIBHP 15#. Blow down well to pit. TIH with tbq and tag TOC at 5362'. LD tubing. Attempt to pressure test csg, test failed. TOH.

JSEA. Perforate 3 3-1/8" squeezes holes at 4630'.

PU 4.5" WD cement retainer and TIH; set CR at 4577'. Sting out and attempt to pressure test casing; same leak. Sting in and establish rate 1.5 BPM at 750#.

Plug #3 (Mancos) with 51 sxs (60.18 cf) with 2% CaCl2 15.6# Class B cement from 4630'-4473'; squeeze 39 sxs outside, 4 sxs below CR, 8 sxs on top. PUH. SI well. WOC (cut and slip tubing line).

TIH and tag Plug #3 at 4473'. Attempt to pressure test casing, same leak. PUH. Perforate 3 3-1/8" HSC squeeze holes at 3500'.

PU WD 4.5" cement retainer and TIH; set CR at 3457'. Attempt to pressure test csg above CR; same leak. Sting in and establish rate 1.5 BPM at 750#. Plug #4 (Mesaverde) with 51 sxs (60.18 cf) 15.6# Class B cement 3500'-3336'. TOH. SIW and WOC over weekend. Secure well.

Travel back to yard

06/26/2017

Travel to location.

Check well pressures: Tbg and Csg 0# and bradenhead 15#. TIH and tag cement at 3336'. Pressure test 4.5 csg to 800#, held OK. TOH and LD setting tool.

JSEA. Perforate 3 3-1/8" HSC squeeze holes at 2946'. Establish Injection rate 1.5 BPM at 900#

PU 4.5" WD CR and TIH; set CR at 2895'. Plug #5 (Chacra) mix 51 sxs (60.18 cf) 15.6# Class B cement from 2946' to 2846'; squeeze 39 sxs outside, 4 sxs below CR and 8 sxs on top.

LD tbg to 1930'. Plug #6 (PC) spot 39 sxs (46.02 cf) 15. 6# Class B cement from 1930' to 1427'. LD tbg to 1427' and reverse circulate csg clean w/15 bbls.

POOH w/22 stands and LD setting tool

JSEA. Perf 3 3-1/8" at 1405'. Establish injection rate 2BPM at 750#.

PU WD CR and TIH; set at 1365'. Plug #6A (Fruitland) mix 51 sxs (60.18 cf) 15.6# Class B cement from 1405'-1305'; squeeze 39 sxs, outside, 4 sxs below CR, 8 sxs on top.

TOH and LD setting tool. JSEA. Perforate 3 3-1/8" HSC squeeze holes at 750'. Establish rate 2 BPM at 500#.

PU 4.5" WD CR and TIH; set at 700'. Plug #7 (Kirtland and Ojo Alamo tops) mix 134 sxs (158.12 cf) 15.6# Class B cement from 750' to 470'; Squeeze 108 sxs outside, 4 sxs below CR, 22 sxs on top.

TOH and LD setting tool.

JSEA. Perforate 3 3-1/8" HSC squeeze holes at 301'. Establish circulation and

circulate clean with 25 bbls.

ND BOP. NU wellhead. Plug #8 (Surface) mix 105 sxs (123.9 cf) 15.6# Class B cement from 301 to surface; circulate good cement out bradenhead. SI BH and squeeze 10 sxs. SI well with 500# pressure. Wash up equipment and WOC overnight.

Travel back to yard.

06/27/2017

Service and start equipment. JSEA. Open up well; no pressures. RD Floor. ND wellhead and tag TOC in 4.5 csg at 9'. Dig out wellhead.

JSEA. Monitor wellhead. Write Hot Work Permit. Cut off wellhead with air saw. Tag TOC in 4.5 at 6' and in annulus at 5'. No top-off required per John Hagstrom, BLM representative on location. Weld on plate and P&A Marker. Rig down Pump Truck and Rig. Clean up location. MOL.

Darrell Priddy and John Hagstrom, BLM representatives, were on location and approved all procedure changes.

Cornell E 001 **Proposed P&A**

Basin Dakota

790' FSL & 900' FWL, Section 12M, T-29-N, R-12-W, San Juan County, NM

API 30-045-08444

Today's Date: 1/31/17

Spud: 9/28/62

Comp: 10/11/62

Elevation: 5689' GI
5701' KB

Ojo Alamo @ 585'

Kirtland @ 700'

Fruitland @ 1355'

Pictured Cliffs @ 1865'

Chacra @ 2895'

Mesaverde @ 3450'

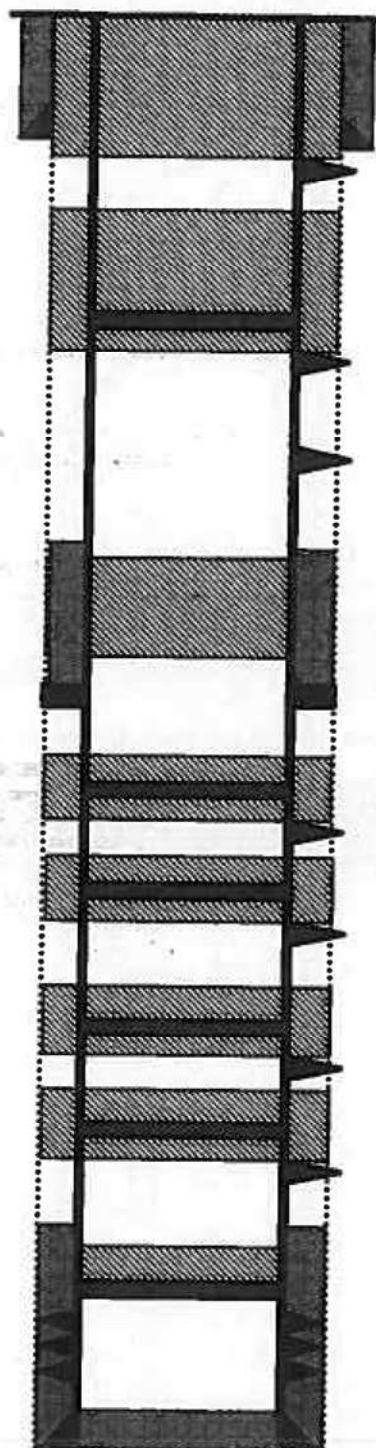
Mancos @ 4580'

Gallup @ 5484'

Dakota @ 6210'

12-1/4" hole

7.875" hole



TD 6110'
PBTD 6073'

8-5/8", 24#, J-55 Casing set @ 251'
Cement with 200 sxs, circulated

Perforate @ 301'

Plug #8: 301' - 0'
Class B cement, 105 sxs,
123.9 cf, 15.6#. Squeeze 10
sxs. Tag 6' inside and 5' in
annulus.
Plug #7: 750' - 470'
Class B cement, 134 sxs,
158.12 cf, 15.6#. 108 sxs
outside, 4 sxs below, 22 sxs
above

Set CR @ 700'

Perforate @ 750'

Set CR @ 1365'

Perforate @ 1405'

Plug #6a: 1405' - 1305'
Class B cement, 51 sxs, 60.18
cf, 15.6#. 39 sxs outside, 4
sxs below, 8 sxs above

TOC unknown, did not circulate

Plug #6: 1930' - 1427'
Class B cement, 39 sxs, 46.02
cf

DV Tool @ 1957'
2nd Stage: Cement with 50 sxs

Set CR @ 2895'

Perforate @ 2945'

Plug #5: 2945' - 2846'
Class B cement, 51 sxs, 60.18
cf, 15.6#. 39 sxs outside, 4
sxs below, 8 sxs above.

Set CR @ 3457'

Perforate @ 3500'

Plug #4: 3500' - 3336'
Class B cement, 51 sxs, 60.18
cf, 15.6#. 39 sxs outside, 4
sxs below, 8 sxs above. Tag
3336'.

Set CR @ 4577'

Perforate @ 4630'

Plug #3: 4630' - 4473'
Class B cement, 51 sxs, 60.18
cf, 15.6#. 39 sxs outside, 4
sxs below, 8 sxs above. Tag
4473'.

Set CR @ 5484'

Perforate @ 5534'

Plug #2: 5534' - 5362'
Class B cement, 51 sxs, 60.18
cf, 15.6#. 39 sxs outside, 4
sxs below, 8 sxs above. Tag
5362'.

TOC unknown, did not
circulate

Set CR @ 6288'

Dakota Perforations:
6336' - 6446'

Plug #1b: 6253' - 5990'
Class B cement, 32 sxs, 37.76
cf, 15.6#. Tag TOC at 5990'
Plug #1a: 6253' - 6253'
Class B cement, 14 sxs, 16.52
cf, 15.6#
Plug #1: 6288' - 6253'
Class B cement, 14 sxs, 16.52
cf, 15.6#

4.5", 9.5#, J-55 Casing set @ 6546'
1st Stage: Cement with 60 sxs

RECEIVED

Form 3160-5
(August 2007)Farmingtton Field Office
Bureau of Land ManagementUNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires July 31, 2010SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an
abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Burlington Resources Oil & Gas Company LP

3a. Address

PO Box 4289, Farmington, NM 87499

3b. Phone No. (include area code)

(505) 326-9700

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface Unit K (NESW), 2200' FSL & 1980' FWL, Sec. 12, T29N, R12W

5. Lease Serial No.

SF-076465

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No.

Cornell SRC 4

9. API Well No.

30-045-08528

10. Field and Pool or Exploratory Area

Fulcher Kutz Pictured Cliffs

11. Country or Parish, State

San Juan, New Mexico

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION

TYPE OF ACTION

☐ Notice of Intent☐ Acidize☐ Deepen☐ Production (Start/Resume)☐ Water Shut-Off☒ Subsequent Report☐ Alter Casing☐ Fracture Treat☐ Reclamation☐ Well Integrity☐ Casing Repair☐ New Construction☐ Recomplete☐ Other☐ Final Abandonment Notice☐ Change Plans☒ Plug and Abandon☐ Temporarily Abandon☐ Convert to Injection☐ Plug Back☐ Water Disposal

13. Describe Proposed or Completed Operation. Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomple horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 must be filed once Testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

3/22/2017 - Contacted AG/BLM & Brandon Powell/OCD to update that the 3 1/2" csg can not be pulled per procedure as it appears to be welded inside the 4 1/2" WH. The 3 1/2"x5 1/2" annulus was hot-tapped 3/21/17 & there is no pressure.

3/24/2017 #1 - Contacted Brandon Powell/OCD to request permission to decrease excess to 50%. Rec'd verbal OK.

3/24/2017 #2 - Contacted Jack Savage/BLM & Brandon Powell/OCD re tagged plug, TOC @ 672'. Propose to D/O to approx. 780'; perf @ 770'. Rec'd verbal OK.

3/29/2017 - Contacted Brandon Powell/OCD re tagged top of Ojo plug @ 510', proposed not topping it off. Rec'd verbal OK.

The subject well was P&A'd on 3/30/2017 per the notifications above and the attached report.

OIL CONS. DIV. DIST. 3

MAY 18 2017

ACCEPTED FOR RECORD

MAY 15 2017

FARMINGTON FIELD OFFICE

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Dollie L. Busse

Title Regulatory Technician

Signature

Date

4/28/2017

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instruction on page 2)

NMOCD PV

Printed on 4/7/2017

**Burlington Resources**

P.O. Box 2200
Bartlesville, OK 74005

P.O. Box 1979, Farmington, NM 87499
(505) 325-2627

Name: Cornell SRC 4
API:30-045-08528

Well Plugging Report**Cement Summary**

Plug #1 - (PC) with CIBP at 1855' spot 12 sxs (14.16 cf 15.7 PPG) Class B cement inside casing from 1855' to 1477' TOC. (Rev. TOC @ 1621') (BT #221=12sk)

Plug #2 - (Ft) mix and pump 50 sxs (59 cf 15.7 PPG) Class B cement; squeeze 32 sxs outside casing and leave 18 sxs inside casing from 1593' to 1026' TOC. (BT #221=50sk)

Plug #3 - (Kt) (Kt) mix and pump 91 sxs (107.38 cf 15.7 PPG) Class B cement, squeeze 84 sxs outside casing and leave 7 sxs inside casing from 770' to 600'. (BT #221=91sk)

Plug #3A - (Kt) Spot 12 sxs (14.16 cf 15.5 PPG) Class B cement inside casing from 723' to 433' TOC. (BT #221)

Plug #4 - (Ojo Alamo) spot 154 sxs (181.72 cf 15.8 PPG) Class B cement inside casing from 612' to 443' TOC. SI w/ 400# PSI and WOC overnight.

Plug #5 - (Surface) MSurface) spot 16 sxs (18.88 cf 15.7 PPG) Class B cement from 130' to 0' good cmt returns out casing valve. (BT #221=16sk)

P&A marker - mix and pump 40 sxs (47.2 cf) to top off casings and set P&A marker. (BT #221=40sk)

Work Detail

PUX	Activity
-----	----------

03/22/2017

P	Rode rig and equipment to location.
P	Spot in rig and equipment on location. Note: small location.
P	RU day light pulling unit. Perform Start Well/LOTO. Spot in equipment.
P	Check well pressures: tubing and casing 22 psi, intermediate casing 0 PSI. Note: No valve on B.H. RU relief lines and blow down well.
P	ND companion flange. NU WSI companion flange and BOP. Change over to 2 1/6" tubing equipment. Pull tubing hanger.
P	SI well. Secure location. Debrief. SDFD.
P	Travel back to yard.

03/23/2017

P	Travel to location.
P	HSM on JSA. Service and start equipment.
P	Check well pressures: casing and tubing 22 psi, intermediate casing 0 PSI. Note: No valve on B.H. RU relief lines and blow well down.
P	TOOH and tally 56 joints 2 1/6" IJ tubing, 1842'.
P	Round trip 3.5" GR to 1865'. PU 3.5" W.L. CIBP and RIH; set @ 1855'.
P	TIH open ended to CIBP at 1855'. Establish circulation and circulate well clean with total 34 bbls of water. Pressure test casing to 800 PSI for 30 minutes; PT good.
P	Plug #1 (PC) with CIBP at 1855' spot 12 sxs (14.16 cf 15.7 PPG) Class B cement inside casing from 1855' to 1477' TOC. (Rev. TOC @ 1621')

Printed on 4/7/2017

P PUH to 1621'. Reverse circulate well clean. TOOH with tubing.

P Perforate 4 bi-wire squeeze holes at 1593'. Establish injection rate 2.5 bpm @ 800 PSI. J. Morales got approval not to run CR. Bullhead Plug #2 and WOC overnight with tag in a.m.

P Plug #2 (Ft) mix and pump 50 sxs (59 cf 15.7 PPG) Class B cement; squeeze 32 sxs outside casing and leave 18 sxs inside casing from 1593' to 1026' TOC.

P SI well. Drain pump and lines. Debrief. SDFD.

P Travel back to yard.

03/24/2017

P Travel to location.

P HSM on JSA. Service and start equipment.

P Open up well; no tubing or pressure. RU relief lines.

P TIH and tag cement high at 645'. W.O.O. COP requested attempt to work down. Unable to get past 673'. W.O.O. COP requested to drill out to 780'.

P Wait on drilling equipment.

P Spot in drilling equipment. Tally A Plus 1 1/4" EUE tubing workstring. PU 2 3/4" 3 Blade bit, B.S., PU 22 joints and tag up at 776'. RU drilling equipment.

P Drill from 776' to 783' and circulate well clean w/ 10 bbls of water. RD drilling equipment.

P TOH with tubing and LD BHA.

P Perforate 4 bi-wire squeeze holes at 770'. Establish injection rate of 1 bpm at 1500 PSI. W.O.O. COP requested run W.L. CR. PU 3.5" W.L. CR and RIH to 608'; unable to get deeper. Attempt to work past; unable to. POOH LD CR. PU 3.8" GR and attempt make past 608'; could not work past 608'. POOH and LD GR. RD W.L.

P SI well. Secure loc. Debrief. SDFD.

P Travel back to yard.

03/27/2017

P Travel to location.

P HSM on JSA. Service start equipment.

P Open up well; no pressures. Note: no B.H. valve. Layout relief lines. Perform BOP function test.

P W.O.O. J. Morales received approval not to use a CR on Plug #3. Note: NMOCD requires 50% excess in annulus due to Ojo Alamo formation.

P Plug #3 (Kt) mix and pump 91 sxs (107.38 cf 15.7 PPG) Class B cement, squeeze 84 sxs outside casing and leave 7 sxs inside casing from 770' to 600'.

P W.O.C. Per sample. Cement sample still green; J. Morales, COP representative required W.O.C. over night.

P Secure location. Debrief. SDFD.

P Travel back to yard.

03/28/2017

P Travel to location.

P HSM on JSA. Service and start equipment.

P Open up well; no pressures. Note: B.H. does not have a valve. RU relief lines. Perform BOP function test.

P TIH with tubing and tag TOC at 723'. Establish circulation w/ 2 bbls of water. Attempt to PT casing; bled down to 100 PSI in 1 minute.

P Plug #3A (Kt) Spot 12 sxs (14.16 cf 15.5 PPG) Class B cement inside casing from 723' to 433' TOC.

P PUH to 630'. Reverse circulate well to TOC @ 630'. TOH with tubing. SI well.

P W.O.C. per cement sample.

P TIH with tubing and tag TOC at 630'. TOH and LD tubing. load casing w/ 2 bbls of water.

P Perforate 4 bi wire squeeze holes at 612'. SI well for 30 minutes. Check PSI: no

Printed on 4/7/2017

PSI on Csg. or B.H. Establish injection rate 4 bpm at 750 PSI. J. Morales received approval not to run CR on Plug #4.

P Plug #4 (Ojo Alamo) spot 154 sxs (181.72 cf 15.8 PPG) Class B cement inside casing from 612' to 443' TOC. SI w/ 400# PSI and WOC overnight.

P SI Well. Debrief. SDFD.

P Travel back to yard.

03/29/2017

P Travel to location.

P HSM on JSA. Service and start equipment.

P Open up well; no pressures. RU relief line to pit. Perform BOP function test.

P TIH and tag TOC at 510'; good tag. TOH and LD tubing.

P W.O.O. COP request run CBL from 500' to surface. Call for W.L.

P HSM w/ W.L. Run CBL from 500' to surface. Engineers to determine TOC. W.O.O. NMOC request perforate 1 hole @ 50' and attempt to establish injection rate not going over 100 PSI.

P Perforate 1 bi-wire squeeze hole at 50'. Attempt to establish injection rate; pressured up to 100 PSI and bled down to 30 PSI in 5 minutes. J. Morales received approval to go 50' below perforations and circulate cement out casing valve and WOC.

P PU 4 joint tubing and TIH to 130'. Establish circulation with .5 bbls of water.

P Plug #5 (Surface) spot 16 sxs (18.88 cf 15.7 PPG) Class B cement from 130' to 0' good cmt returns out casing valve.

P TOH and LD tubing. RD tubing and work floor. ND BOP. NU W.H.

P SI well. Debrief. SDFD.

P Travel to yard.

03/30/2017

P Travel to location.

P HSM on JSA. Service and start equipment.

P Open up well; no pressures. RU relief lines to pit.

P Dig out W.H. Perform Hot Work Permit. Cutoff W.H. and found down 2' in casing and down 6' in annulus. Mix and pump 40 sxs (47.2 cf) to top off casings and set P&A marker.

P RD Daylight pulling unit. Secure location. MOL.

* P - Procedure Planned; U - Unplanned A+ issue; X - COA, Well Conditions

Submit 3 Copies To Appropriate District Office
 District I
 1625 N. French Dr., Hobbs, NM 88240
 District II
 1301 W. Grand Ave., Artesia, NM 88210
 District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Jun 19, 2008

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-045-08844
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other P&A		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
2. Name of Operator Burlington Resources Oil Gas Company LP		6. State Oil & Gas Lease No. FEE
3. Address of Operator P.O. Box 4289, Farmington, NM 87499-4289		7. Lease Name or Unit Agreement Name Kattler
4. Well Location Unit Letter <u>C</u> : <u>990</u> feet from the <u>North</u> line and <u>1650</u> feet from the <u>West</u> line Section <u>2</u> Township <u>29N</u> Range <u>12W</u> NMPM <u>San Juan County</u>		8. Well Number <u>1</u>
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5855' GR		9. OGRID Number 14538
12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data		10. Pool name or Wildcat Fulcher Kutz PC

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☒
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
 DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
 COMMENCE DRILLING OPNS. ☐ P AND A ☒
 CASING/CEMENT JOB ☐

OTHER: ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

5/24/12 Notified Brandon Powell/OCD that we ran CBL which indicated cmt between 3/12" & 5 1/2" was not good. Unable to squeeze. Verbal approval received to proceed.

The subject well was P&A'd per the notification above and the attached report.

5-29-12

Approved for plugging of wellbore only
 Liability under bond is retained pending
 Receipt of C-103 (Subsequent Report of Well
 Plugging) which may be found @ OCD web page
 under forms
www.enmr.state.us/oed

Spud Date:

Rig Released Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Dollie L. Busse TITLE Staff Regulatory Technician DATE 6/22/12

Type or print name Dollie L. Busse E-mail address: dollie.l.busse@conocophillips.com PHONE: 505-324-6104

For State Use Only

APPROVED BY: Brandon Powell TITLE Deputy Oil & Gas Inspector,
District #3 DATE 6/25/12
 Conditions of Approval (if any):

Av

RCVD JUN 25 '12
 OIL CONS. DIV.

DIST. 3

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979

Farmington, New Mexico 87499

505-325-2627 *fax: 505-325-1211

Burlington Resources
Kattler #1May 29, 2012
Page 1 of 2990' FNL and 1650' FWL, Section 2, T-29-N, R-12-W
San Juan County, NM
Lease Number: FEE
API #30-045-08844**Plug and Abandonment Report**
Notified NMOCD and BLM on 5/18/12**Plug and Abandonment Summary:**

- Plug #1** with CIBP at 1911' pump 8 sxs (9.44 cf) Class B cement inside casing from 1911' to 1728' to cover the Pictured Cliffs interval.
- Plug #2** pump 10 sxs (11.8 cf) Class B cement with 2% CaCl inside casing from 1500' to 1271' to cover the Fruitland top.
- Plug #3** with CR at 594' pump 118 sxs (139.24 cf) Class B cement 111 sxs (130.98 cf) in annulus 2 sxs below cement retainer, 5 sxs (5.9 cf) above cement retainer leaves TOC at 594' to cover the Kirtland top.
- Plug #4** pump 154 sxs (181.72 cf) Class B cement 146 sxs (172.28 cf) in annulus, 2 sxs (2.36 cf) below cement retainer 6 sxs (7.08 cf) above cement retainer leaves TOC at 371' to cover the Ojo Alamo top.
- Plug #5** pump 222 sxs (261.96 cf) Class B cement down 3.5" casing from 97' to surface; circulate good cement returns out casing and bradenhead.
- Plug #6** pump 31 sxs (36.58 cf) Class B cement to top off casing and annulus; then install P&A marker.

Plugging Work Details:

5/21/12 MOL and RU. SDFD.

5/22/12 Check well pressures: casing 50 psi, tubing 11 psi. Fill out Hot Work Permit and weld 2" collar on 5-1/2" casing. Hot tap with 2" valve 0 psi and no cement. ND wellhead and NU companion flange. NU kill spool. NU BOP; unable to test due to style of donut. SI well. SDFD.

5/23/12 Check well pressures: tubing 0 psi, casing 50 psi and bradenhead 0 psi. Pull hanger; found tubing 1-1/2". Change out tubing equipment to 1-1/2" equipment and wait on 1-1/2" pipe rams. TOH and tally 61 joints 1-1/2" with 10' sub. RU A-Plus Wireline. Found trip 3.5" gauge ring to 1931'. RIH with 3-1/2 wireline CIBP and set at 1911'. TIH with tubing and tag CIBP at 1911'. RU pump to tubing. Load and establish circulation with 15 bbls of fresh water. Shut in casing. Pressure test casing to 800 psi. Spot Plug #1. PUH. SD due to high winds. SI well. SDFD.

5/24/12 Open up well; no pressures. Finish TOH. RU Blue Jet Wireline. Run CBL from 1800' to surface. Found cement between 5-1/2 x 3-1/2 but spotty to surface. B. Powell, NMOCD, approved to follow procedure as approved. RU A-Plus Wireline. Perforate 6 bi-wire squeeze holes at 1450'. Attempt to establish rate into squeeze holes; pressured up to 1200#. B.

Powell, NMOCD, approved procedure change. Spot Plug #2. PUH and WOC. TI Hand tag cement at 1320'. Perforate 6 bi-wire squeeze holes at 750'. Load casing with 5 bbls of water and establish rate 2 bpm at 250#. PU 3.5" wireline cement retainer and RIH; set at 708'. TIH with tubing and tag CR at 594'. Establish injection rate. Spot Plug #3. TOH and LD tubing. SI well. SDFD.

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979

Farmington, New Mexico 87499

505-325-2627 *fax: 505-325-1211

Burlington Resources
Kattler #1

May 29, 2012
Page 2 of 2

Plugging Work Details (cont'd):

5/25/12 Open up well; no pressures. Perforate 6 bi-wire squeeze holes at 550'. RIH with wireline CR. Before setting CR establish rate into squeeze holes 2 bpm at 250#. Set CR at 508'. Sting into CR and establish rate 2 bpm at 250#. Spot Plug #4. TOH with tubing. Perforate 6 bi-wire squeeze holes at 97'. ND BOP. ND kill spool. Break out wellhead. Too windy to rig down. SI well. SDFD.

5/29/12 Open up well; no pressures. Dig out wellhead with backhoe to expose 15" hole. RU pump to 3-1/2" casing and establish circulation out 15" hole with 10 bbls of water. Spot Plug #5. WOC. Issue Hot Work Permit. Cut off wellhead. Spot Plug #6. Install P&A marker. RD and MOL.

John Durham, NMOCD representative, was on location.
Jimmy Morris, MVCI representative, was on location.

Submit 3 Copies To Appropriate District Office
District I
 1625 N. French Dr., Hobbs, NM 88240
District II
 1301 W. Grand Ave., Artesia, NM 88210
District III
 1000 Rio Brazos Rd., Aztec, NM 87410
District IV
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Jun 19, 2008

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-045-33573
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other P&A		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
2. Name of Operator Burlington Resources Oil Gas Company LP		6. State Oil & Gas Lease No. FEE
3. Address of Operator P.O. Box 4289, Farmington, NM 87499-4289		7. Lease Name or Unit Agreement Name Cornell Com
4. Well Location Unit Letter <u>P</u> : <u>760</u> feet from the <u>South</u> line and <u>1135</u> feet from the <u>East</u> line Section <u>2</u> Township <u>29N</u> Range <u>12W</u> NMPM <u>San Juan County</u>		8. Well Number 500S
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5845' GR		9. OGRID Number 14538
12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data		10. Pool name or Wildcat Basin FC / South Crouch Mesa FS

NOTICE OF INTENTION TO:
 PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
 DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:
 REMEDIAL WORK ☐ ALTERING CASING ☐
 COMMENCE DRILLING OPNS. ☐ P AND A ☒
 CASING/CEMENT JOB ☐

OTHER: ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

The subject well was P&A'd on 1/23/13 per the attached report.

RCVD FEB 15 '13
 OIL CONS. DIV.
 DIST. 3

Spud Date:

PNR only

Approved for plugging of wellbore only.
 Liability under bond is retained pending
 Receipt of C-103 (Subsequent Report of Well
 Plugging) which may be found @ OCD web
 page under forms
www.emnrd.state.us/oed



I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE *Dollie L. Busse* TITLE Staff Regulatory Technician DATE 2/14/13

Type or print name Dollie L. Busse E-mail address: dollie.l.busse@conocophillips.com PHONE: 505-324-6104
 For State Use Only

APPROVED BY: *Red Oak* TITLE Deputy Oil & Gas Inspector,
 Conditions of Approval (if any): District #3 DATE 2-20-13

Av

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979
Farmington, New Mexico 87499
505-325-2627 *fax: 505-325-1211

Burlington Resources
Cornell Com 500S

January 23, 2013
Page 1 of 2

760' FSL and 1135' FEL, Section 2, T-29-N, R-12-W
San Juan County, NM
Lease Number: FEE
API #30-045-33573

Plug and Abandonment Report
Notified NMOCD and BLM on 1/16/13

Plug and Abandonment Summary:

- Plug #1** with 12 sxs (14.16 cf) Class B cement inside casing from 2024' to 1866' to cover the Pictured Cliffs top.
- Plug #2** with 16 sxs (18.88 cf) Class B cement from 1681' to 1471' to cover the Fruitland top.
- Plug #3** with 33 sxs (38.94 cf) Class B cement with 2% CaCl from 814' to 379' to cover the Ojo Alamo and Kirtland tops.
- Plug #4** with 24 sxs (28.32 cf) Class B cement inside casing from 189' to surface to cover the surface casing shoe.
- Plug #5** with 28 sxs Class B cement found cement to surface in 4.5" casing and install P&A marker.

Plugging Work Details:

- 1/17/13 Road rig and equipment to location. Spot in and RU. Check well pressures: tubing 90 PSI, casing 90 PSI and bradenhead 0 PSI. RU relief lines and blow well down. ND wellhead. NU BOP. RU tubing equipment for 1-1/4". TOH and LD tally 1-1/4" 1 joint tubing 2', 8', 62 joints, jet pump nozzle EOT at 2030'. SI well. SDFD.
- 1/18/13 Check well pressures: tubing 0 PSI, casing 90 PSI and bradenhead 0 PSI. Change out tubing equipment and rams to 2-7/8" equipment. RU sub. Pull 2-7/8" tubing hanger and install stripping rubber and wiping rubber. TOH and LD tally 61 joints of 2-7/8" UFJ 6.4#, Jet pump EOT at 2023'. Pressure test pipe rams to 250 PSI for 15 minutes and 1500 PSI for 15 minutes, OK. PU and tally 65 joints (A-Plus) J 55 4.7# to EOT at 2024'. RU sand line. RIH with sinker bar found fluid level at 1900'. POH. Spot plug #1 with estimated TOC at 1866'. SI well. SDFD.
- 1/21/13 Check well pressures: no tubing, casing 130 PSI and bradenhead 0 PSI. PU 4.5" string mill. TIH with 30 stands (60 joints) 2-3/8" tubing. PU 2 joints tag cement at 1888'. LD 8 joints. TOH with 27 stands (54 joints) LD string mill. PU 4.5" DHS CR. TIH and set CR at 1681'. Pressure test tubing to 1000 PSI. Establish circulation. Attempt to pressure test unable to bleed down from 800 PSI to 600 PSI in 2 minutes, no test. TOH with 6' sub 27 stands (54 joints) LD setting tool. RU Blue Jet Wireline. Ran CBL from 1681' to surface, good cement from 1681' to 1370' and from 1100' to 40'. PU 4' tag sub TIH with 27 stands (54 joints) to 1681'. Spot plug #2 with estimated TOC at 1471'. SI well. SDFD.
- 1/22/13 Open up well; no pressures. TIH and tag cement at 1477'. Attempt pressure test to 800 PSI, bleed down to 600 PSI in 5 minutes, no test. Spot plug #3 with estimated TOC at 379'. SI well and WOC. TIH and tag cement at 392'. Pressure test to 300 PSI, OK. Attempt pressure test casing to 800 PSI and bleed down to 600 PSI in 5 minutes, no test. Spot plug #4 with estimated TOC at surface. SI well. SDFD.

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979
Farmington, New Mexico 87499
505-325-2627 *fax: 505-325-1211

Burlington Resources
Cornell Com 500S

January 23, 2013
Page 2 of 2

Plugging Work Details (continued):

1/23/13 Open up well; no pressures. Tag top of cement at surface. ND BOP and kill spool. Dig out wellhead. Fill out and perform Hot Work Permit. Cut off wellhead. Found cement at surface in 4.5" casing. Spot plug #5 and install P&A marker. RD & MOL.

Jim Morris, MVCI representative, was on location.

Submit 3 Copies To Appropriate District Office
 District I
 1625 N. French Dr., Hobbs, NM 88240
 District II
 1301 W. Grand Ave., Artesia, NM 88210
 District III
 1000 Rio Brazos Rd., 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-103

Jun 19, 2008

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-045-08709
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other P&A		5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
2. Name of Operator Burlington Resources Oil Gas Company LP		6. State Oil & Gas Lease No. FEE
3. Address of Operator P.O. Box 4289, Farmington, NM 87499-4289		7. Lease Name or Unit Agreement Name McGrath
4. Well Location Unit Letter J : 1650 feet from the South line and 1650 feet from the East line Section 3 Township 29N Range 12W NMPM San Juan County		8. Well Number 3
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5845' GR		9. OGRID Number 14538
12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data		10. Pool name or Wildcat Basin Fruitland Coal

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
 DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
 COMMENCE DRILLING OPNS. ☐ P AND A ☒
 CASING/CEMENT JOB ☐

OTHER: ☐OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

2/27/13 Notified Brandon Powell/OCD re Plug 2. Perf'd @ 1510', couldn't pump into. PT to 1000#. Verbal approval to POOH, & perf @ 1475'.

The subject well was P&A'd on 3/1/13 per the notification above and the attached report.

RCVD MAR 28 '13

OIL CONS. DIV.

DIST. 3

Spud Date:

Rig Released Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE *Dollie L. Busse* TITLE Staff Regulatory Technician DATE 3/25/13

Type or print name Dollie L. Busse E-mail address: dollie.l.busse@conocophillips.com PHONE: 505-324-6104

For State Use Only

APPROVED BY: *Mona Kuehling* TITLE Deputy Oil & Gas Inspector, District #3 DATE 4-1-13

Conditions of Approval (if any):

Approved for plugging of wellbore only.
 Liability under bond is retained pending.
 Receipt of C-103 (Subsequent Report of Well Plugging) which may be found @ OCD web page under forms
www.emnrd.state.us/oed

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979
Farmington, New Mexico 87499
505-325-2627 *fax: 505-325-1211

Burlington Resources
McGrath #3

March 1, 2013
Page 1 of 2

1650' FSL and 1650' FEL, Section 3, T-29-N, R-12-W
San Juan County, NM
Lease Number: FEE
API #30-045-08709

Plug and Abandonment Report
Notified NMOCD and BLM on 2/25/13

Plug and Abandonment Summary:

- Plug #1** with 8 sxs (9.44 cf) Class B cement inside casing from 1837' to 1654' to cover the Fruitland Coal and Pictured Cliffs tops.
- Plug #2** with 43 sxs (50.74 cf) Class B cement 39 sxs (46.02 cf) in annulus, 2 sxs (2.36 cf) below CR, 2 sxs (2.36 cf) above CR leaves TOC at 1414' to cover the Intermediate Shoe.
- Plug #2a** with 44 sxs (51.92 cf) Class B cement 39 sxs (46.02 cf) in annulus, 2 sxs (2.36 cf) below CR, 3 sxs (3.54 cf) above CR leaves TOC at 1392' to cover the Intermediate Shoe.
- Plug #3** with 8 sxs (9.44 cf) Class B cement inside casing from 1345' to 1162' to cover the Fruitland top.
- Plug #4** with 74 sxs (87.32 cf) Class B cement 62 sxs (73.16 cf), 2 sxs (2.36 cf) below CR, 10 sxs (11.8 cf) above CR leaves TOC at 461' to cover the Ojo Alamo and Kirtland tops.
- Plug #5** with 278 sxs (328.04 cf) Class B cement in annulus displace to perf at 100' no circulation.
- Plug #5a** with 200 sxs (236 cf) Class B cement, 4 sxs (4.72 cf) in 3.5" casing, 196 sxs (231.28 cf) in annulus from 100' to 0' to cover the surface casing shoe.
- Plug #6** with 16 sxs Class B cement found cement in 3.5" casing down 15' and install P&A marker.

Plugging Work Details:

- 2/25/13 Rode rig and equipment to location. Spot in and RU. Check well pressures: tubing 50 PSI and casing 40 PSI. RU A-Plus valves blow well down. ND wellhead. Strip on kill spool and BOP. X-over tubing equipment to 1.5" equipment and handrails. SI well. SDFD.
- 2/26/13 Check well pressures: tubing 50 PSI and casing 50 PSI. Blow well down. Function test BOP. TOH and tally 29 stands, LD 2 joints, SN, 1 joint sawtooth collar (61 joints total) of 1.5" tubing, EOT at 1896'. Round trip 3.5" gauge ring to 1850'. TIH with 3.5" CIBP to 1837', set CIBP. Establish circulation. Pressure test casing to 800 PSI, OK. Spot plug #1 with estimated TOC at 1654'. TOH. SI well. Fill out and Perform Hot Work Permit. Perform Hot tap on 5.5" casing 0 PSI, no gas. SI well. SDFD due to windy conditions.

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979

Farmington, New Mexico 87499

505-325-2627 *fax: 505-325-1211

Burlington Resources
McGrath #3March 1, 2013
Page 2 of 2**Plugging Work Details (continued):**

- 2/27/13 Open up well; no pressures. No tubing. TIH with 1-11/16" bi-wire and perforate 3 holes at 1510'. Attempt to establish rate in squeeze holes pressured up to 1000 PSI then bled down to 600 PSI in 2 minutes. Note: B. Powell, NMOCD and J. Morris, MVCI approved procedure change. TIH with 1-11/16" bi-wire and perforate 3 holes at 1475'. Establish rate of 2 bpm at 800 PSI. TIH with 3.5" DHS CR and set at 1460'. TIH and tag CR at 1460'. Establish rate of 2 bpm at 800 PSI. Spot plug #2 with estimated TOC at 1414'. WOC. Attempt to pressure test casing, leak sting into CR, 2 bpm at 200 PSI. TIH and attempt to tag TOC, no tag. Note: called NMOCD to re-do plug #2. Establish circulation 2 bpm at 800 PSI. Spot plug #2a with estimated TOC at 1392'. SI well. SDFD.
- 2/28/13 Open up well; no pressures. TIH with wireline bar and tag TOC at 1345'. Note: B. Powell, NMOCD approved procedure change. TIH with bi-wire and perforate 3 holes at 1343'. Attempt to establish rate, pressured up to 1000 PSI. Note: M. Keuhling, NMOCD approved to spot balanced plug. Spot plug #3 with estimated TOC at 1162'. TIH with bi-wire and perforate 3 holes at 729'. Establish rate 2.5 bpm at 800 PSI. TIH with DHS CR and set CR at 690'. Establish circulation. Sting into CR and establish rate 2 bpm at 800 PSI. Spot plug #4 with estimated TOC at 461'. TIH with bi-wire and perforate 3 holes at 100'. ND BOP and kill spool. Dig out wellhead. Attempt to find 8-5/8" casing, dug down 20', no casing. Attempt to establish circulation, no circulation. Spot plug #5. SI well. SDFD.
- 3/1/13 Open up well, no pressures. Establish circulation out surface in hole around wellhead. Wait on water truck. Spot plug #5a with estimated TOC at surface. WOC. Check cement fell 1' on backside. Found cement in 3.5" casing down 15'. Spot plug #6 and install P&A marker. SI well. SDFD.

Monica Keuhling, NMOCD representative, was on location.
Paul Welbe, NMOCD representative, was on location.
Jim Morris, MVCI representative, was on location.

Submit 1 Copy To Appropriate District Office.

District I - (575) 393-6161

1625 N. French Dr., Hobbs, NM 88240

District II - (575) 748-1283

811 S. First St., Artesia, NM 88210

District III - (505) 334-6178

1000 Rio Brazos Rd., Aztec, NM 87410

District IV - (505) 476-3460

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-103

Revised July 18, 2013

WELL API NO.
30-045-30456

5. Indicate Type of Lease
STATE ☐ FEE ☒

6. State Oil & Gas Lease No.

7. Lease Name or Unit Agreement Name

Katy Com

8. Well Number #2

9. OGRID Number 14634

10. Pool name or Wildcat
Aztec PC/Basin FC

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other

2. Name of Operator
Merrion Oil & Gas Corporation

3. Address of Operator
610 Reilly Ave Farmington, NM 87401

4. Well Location

Unit Letter P: 1199 feet from the South line and 1263 feet from the East line
Section 26 Township 30N Range 12W NMPM San Juan County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
5686

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☒
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
DOWNHOLE COMMINGLE ☐
CLOSED-LOOP SYSTEM ☐
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☒
CASING/CEMENT JOB ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Merrion Oil & Gas Corporation P&Ad the above mentioned well on 8/10/2015. Please see attached PA report.

OIL CONS. DIV DIST. 3

SEP 03 2015

Approved for plugging of wellbore only.
Liability under bond is retained pending
Receipt of C-103 (Subsequent Report of Well
Plugging) which may be found @ OCD web
page under forms
www.emard.state.us/oed

Spud Date:

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Philana Thompson TITLE Regulatory Compliance Specialist DATE 8/31/2015

Type or print name Philana Thompson E-mail address: pthompson@merrion.bz PHONE: 505-324-5336
For State Use Only

APPROVED BY: Deputy Oil & Gas Inspector TITLE DISTRICT #3 DATE 9/24/15
Conditions of Approval (if any): AV

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979
Farmington, New Mexico 87499
505-325-2627 *fax: 505-325-1211

OIL CONS. DIV DIST. 3**SEP 03 2015**

Merrion O&G Corporation
Katy Com #2

August 10, 2015
Page 1 of 1

1199' FSL and 1263' FEL, Section 26, T-30-N, R-12-W
San Juan County, NM
Lease Number: FEE
API #30-045-30456

Plug and Abandonment Report
Notified NMOCD and BLM on 8/5/15

Plug and Abandonment Summary:

- Plug #1** with CR at 1850' spot 24 sxs (28.32 cf) Class B cement from 1850' to 1533' to cover the Pictured Cliffs interval and Fruitland perms. Tag TOC at 1588'.
- Plug #2** with 12 sxs (14.16 cf) Class B cement from 1475' to 1316' to cover the Fruitland Coal tops.
- Plug #3** with 24 sxs (28.32 cf) Class B cement from 572' to 255' to cover the Kirtland and Ojo Alamo tops.
- Plug #4** with squeeze holes at 177' and 127' spot 48 sxs (56.64 cf) Class B cement from 228' to surface good cement returns with 18 in and 15 out.
- Plug #5** with 16 sxs Class B cement top off casings and install P&A marker with coordinates N 36° 46' 46.5852" / W 108° 3' 46.8792".

Plugging Work Details:

- 8/5/15 Rode rig and equipment to location. SDFD.
- 8/6/15 Check well pressures: tubing TSTM, casing 40 PSI and bradenhead 0 PSI. Spot in rig and RU. Perform start well. X-over to rod equipment. Unseat pump and LD polish rod. LD 1-2', 3 6', 1-4' pony rod, 74 3/4" rods, pump onto gooseneck trailer. ND wellhead and NU BOP. Function test BOP. RU and x-over tubing equipment. LD 58 jnts, SN, 16' MA tall. Round trip A-Plus 4-1/2" string mill to 1890'. PU 4-1/2" DHS CR and set at 1850'. Pressure test tubing to 1000 PSI, OK. Establish circulation. Spot plug #1 with calculated TOC at 1533'. SI well. SDFD.
- 8/7/15 Open up well; no pressures. RU relief lines. TIH and tag TOC at 1588'. Attempt to pressure test bradenhead, no test 300 PSI to 0 PSI. Note: M. Keuhling, NMOCD approved procedure change. Establish circulation. Pressure test casing to 800 PSI, OK. Spot plugs #2 and #3. RU A-Plus wireline. Perforate 4 HSC squeeze holes at 177'. Attempt to circulate. Bradenhead pressured up to 500 PSI to 0 PSI in 20 seconds. Wait on orders. Perforate 4 HSC squeeze holes at 127'. Establish circulation. Spot plug #4 with TOC at surface. SI well. SDFD.
- 8/10/15 Open up well; no pressures. ND BOP. Dig out wellhead. Write Hot Work Permit. Cut off wellhead. Found cement in casing at surface and down 2.5' on backside. Spot plug #5 top off casings and install P&A marker with coordinates N 36° 46' 46.5852" / W 108° 3' 46.8792". RD and MOL.

Shacie Murray, Merrion Oil & Gas representative was on location.
John Durham, NMOCD representative was on location.

8-6-15

OIL CONS. DIV-DIST. 3

SEP 08 2015

To: Merriam J. Ibas

Re: Katy 2 Fence

I see you are plugging the Katy 2.

I would like you to please leave the
fence up.

Thank You

Glen Spencer
Glen Spencer

Submit 1 Copy To Appropriate District Office
 District I - (575) 393-6161
 1623 N. French Dr., Hobbs, NM 88240
 District II - (575) 748-1283
 811 S. First St., Artesia, NM 88210
 District III - (505) 334-6178
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV - (505) 476-3460
 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-103
 Revised July 18, 2013

WELL API NO. 28-029-02889 30-045-09177
5. Indicate Type of Lease STATE <input type="checkbox"/> FEE <input checked="" type="checkbox"/>
6. State Oil & Gas Lease No.
7. Lease Name or Unit Agreement Name Paul Palmer
8. Well Number #1
9. OGRID Number 14634
10. Pool name or Wildcat Flora Vista MV

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.) 1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other <input type="checkbox"/>	
2. Name of Operator Merrion Oil & Gas Corporation	
3. Address of Operator 610 Reilly Ave, Farmington NM 87401	
4. Well Location Unit Letter <u>L</u> : <u>2360</u> feet from the <u>South</u> line and <u>830</u> feet from the <u>West</u> line Section <u>26</u> Township <u>30N</u> Range <u>12W</u> NMPM San Juan County	
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 5630	

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input checked="" type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input checked="" type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
DOWNHOLE COMMINGLE <input type="checkbox"/>			
CLOSED-LOOP SYSTEM <input type="checkbox"/>			
OTHER: <input type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Merrion Oil & Gas Corporation plugged the above mentioned well on 8/14/2015. Please see attached plugging procedure.

Approved for plugging of wellbore only.
 Liability under bond is retained pending
 Receipt of C-103 (Subsequent Report of Well
 Plugging) which may be found @ OCD web
 page under forms
www.emnrd.state.us/oed

OIL CONS. DIV DIST. 3
 SEP 25 2015

Spud Date: 9/13/1961

Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Philana Thompson TITLE Regulatory Compliance Specialist DATE 9/23/2015

Type or print name Philana Thompson E-mail address: pthompson@merrion.bz PHONE: 505-324-5336

For State Use Only

APPROVED BY: [Signature] TITLE DEPUTY OIL & GAS INSPECTOR DATE 10/14/15
 Conditions of Approval (if any):

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979
Farmington, New Mexico 87499
505-325-2627 *fax: 505-325-1211

Merrion O&G Corporation
Paul Palmer #1

August 14, 2015
Page 1 of 2

2360' FSL and 830' FWL, Section 26, T-30-N, R-12-W
San Juan County, NM
Lease Number: FEE
API #30-045-09177

Plug and Abandonment Report
Notified NMOCD and BLM on 8/10/15

Plug and Abandonment Summary:

- Plug #1** with 32 sxs (37.76 cf) Class B cement from 3425' to 3003' to cover the Mesaverde top and fish. Tag TOC at 3332'.
- Plug #2 (combined #3)** with bi-wire holes at 2990 and CR at 1918' spot 516 sxs (608.88 cf) Class B cement from 2990' to 1192' with 82 sxs under, 55 sxs above and 379 sxs outside to cover the Chacra, Pictured Cliffs and Fruitland Coal.
- Plug #4** with squeeze holes at 530' spot 175 sxs (206.5 cf) Class B cement from 530' to surface. Tag TOC at 25'.
- Plug #5** with 36 sxs Class B cement top off casings and install P&A marker with coordinates N 36° 46' 58.44" / W 108° 04' 24.78".

Plugging Work Details:

- 8/10/15 Rode rig and equipment to location. Spot in and RU. Check well pressures: tubing 50 PSI, casing 100 PSI and bradenhead 0 PSI. RU relief lines. Perform start well. ND wellhead. NU BOP. Pull tubing hanger. Tubing hung up. Wait on weight indicator. SI well. SDFD.
- 8/11/15 Travel to location. Perform Hot Work Permit. Repair rig. RU and attempt to pull tubing. Could not work free. Pulling to 2700' approximately. PU Sandline tools with tools, sinker bar and jars and no-go. Check with depth meter, estimated at 3400'. LD tools. Attempt to work tubing free, unable. Note: P. Weibe, NMOCD and T. Saylers, BLM approved procedure change. RU A-Plus wireline. RIH with 2-3/8" GR to 3443'. Tight spot at 2600'. POH and LD GR. PU 2-3/8" tubing jet cutter RIH to 3401'. PU tubing 5k over cut tubing at 3401'. LD cutter. Free tubing and LD 31 jnts with 2 subs. Tubing and collars pitted as more LD. Shut down to get 2-3/8" MYT. LD 78 jnts collars on tubing. Look better had flat bottom for elevator. PU 4-1/2" GR to 1919' could not work past. SI well. SDFD.
- 8/12/15 Check well pressures: no tubing, casing 128 PSI and bradenhead 0 PSI. RU relief lines. Round trip 4-1/2" string mill to 1919', attempt to work past unable. Attempt to work past call for power swivel. RU pump attempt to mill fish. Pump total 60 bbls, no circulation. Attempt to work for 1 hr. RD power swivel. RU tubing. PU 2-3/8" SN and tag fish at 3425'. Establish circulation. Spot plug #1 with calculated TOC at 3003'. Note: P. Wiebe, NMOCD approved procedure change. TH with tubing. Establish circulation. SI well. SDFD.

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979

Farmington, New Mexico 87499

505-325-2627 *fax: 505-325-1211

**Merrion O&G Corporation
Paul Palmer #1****August 14, 2015
Page 2 of 2****Plugging Work Details (continued):**

8/13/15 Open up well; no pressures. RU relief lines. Tag TOC at 3332'. Note: P. Wiebe, NMOCD and B. Powell approved procedure change Plug #2. Pressure test casing to 800 PSI, OK. RU A-Plus wireline. RIH with 3-1/8" gun to 1919', could not get past. Wait on bi-wire gun. Perforate 4 bi-wire holes at 2990'. Establish rate of 3.5 bpm at 750 PSI. PU 4-1/2" wireline CR and set at 1918'. TIH with tubing and stinger, sting into CR. Establish circulation, found leaking in 9-5/8" casing through ground. Spot plug #2 combined #3 with calculated TOC at 1192'. RU A-Plus wireline. Perforate 3 HSC squeeze holes at 530'. Establish circulation. Found leak in 9-5/8" casing. Wait on water truck to vacuum cellar while pumping clean returns. Pump total 200 bbls of water. Circulate well. Note: B. Powell, NMOCD approved procedure change. Spot plug #3. SI well and WOC. SDFD.

8/14/15 Open up well; no pressures. RU relief lines. Tag TOC at 25'. Chip out cement behind blind rams. ND BOP. Dig out wellhead. Perform Hot Work Permit. Cut off wellhead. Found cement down 4' in 9-5/8" x 4-1/2" casing. Spot plug #5 top off casings and install P&A marker with coordinates N 36° 46' 58.44" / W 108° 04' 24.78". RD and MOL.

Shacie Murray, Merrion O&G representative was on location.
Paul Weihe, NMOCD representative was on location.

RECEIVED

Form 3160-5
(August 2007)

AUG 22 2013

UNITED STATES

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010Farmington Field Office
Bureau of Land ManagementNOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an
abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2.

1. Type of Well

☐ Oil Well☒ Gas Well☐ Other

2. Name of Operator

Burlington Resources Oil & Gas Company LP

3a. Address

PO Box 4289, Farmington, NM 87499

3b. Phone No. (include area code)

(505) 326-9700

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface Unit B (NWNE), 800' FNL & 1730' FEL, Sec. 34, T30N, R12W

5. Lease Serial No.

SF-077922

6. If Indian, Allottee or Tribe Name

7. If Unit of C/A Agreement, Name and/or No.

8. Well Name and No.

McGrath SWD 4

9. API Well No.

30-045-25923

10. Field and Pool or Exploratory Area

Mesaverde SWD

11. Country or Parish, State

San Juan, New Mexico

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION

☐ Notice of Intent☒ Subsequent Report☐ Final Abandonment Notice

TYPE OF ACTION

☐ Acidize☐ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☐ Deepen☐ Fracture Treat☐ New Construction☒ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☐ Other

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof.

If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once Testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

7/12/13 The 4197' packer in procedure is not holding, asked permission to pump plug from 4374' to end of tbg @ 4213'.

Called Steve Mason w/ BLM & Charlie Perrin w/ OCD. Both gave verbal approval.

7/16/13 The packer in hole was supposed to shut off water, asked approval to shoot tbg off @ 3896' & set 150' plug on top of it.

Called Steve Mason w/ BLM & Charlie Perrin w/ OCD. Both gave verbal approval.

7/19/13 Plug 4&5 need to be combined as there is only 120' between them. Bill Diers on site w/ BLM, Called Brandon Powell w/ OCD and got verbal approval.

7/19/2013 2nd call. Surface perfs @ 281' PT to 1000#-OK. Tied onto Bradenhead & pumped 5 bbl's water down (145') PT to 500# and test was good. Bill Diers on site w/ BLM wants to perf @ 125', run in tbg and circ to surface inside and in annulus. Called Brando Powell w/ OCD & got verbal approval.

The subject well was P&A'd on 7/25/13 per the above notifications and the attached reports.

RCVD AUG 26 '13
OIL CONS. DIV.
DIST. 3

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

Kenny Davis

Title Staff Regulatory Technician

Signature

Date

8/22/2013

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Office

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instruction on page 2)

NMOCDA

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979
Farmington, New Mexico 87499
505-325-2627 *fax: 505-325-1211

Burlington Resources
McGrath SWD 4

July 22, 2013
Page 1 of 2

800' FNL and 1730' FEL, Section 34, T-30-N, R-12-W
San Juan County, NM
Lease Number: SF-077922
API #30-045-25923

Plug and Abandonment Report
Notified NMOCD and BLM on 7/8/13

Plug and Abandonment Summary:

- Plug #1** with 40 sxs (47.2 cf) Class B cement inside casing to 4212'. Tag TOC at 3896'.
Plug #2 with 17 sxs (20.06 cf) Class B cement with 2% CaCl inside casing from 3893' to 3743' disp with 13.8# mud to cover the Mesaverde top.
Plug #2a with 23 sxs (27.14 cf) Class B cement inside casing from 3893' to 3690' disp with 13.8# mud to cover the Mesaverde top.
Plug #2b with CR at 3485' spot 88 sxs (103.84 cf) Class B cement inside casing with 59 sxs in annulus, 6 sxs below CR, 23 sxs above CR TOC at 3282' to cover the Mesaverde top.
Plug #3 with CR at 2594' spot 48 sxs (56.64 cf) Class B cement inside casing from 2644' to 2489', 30 sxs in annulus, 6 sxs below CR, 12 sxs above CR TOC at 2489' to cover the Chacra top.
Plug #4 (original plug #3 and plugs 4&5 combined) with 49 sxs (57.82 cf) Class B cement inside casing from 1940' to 1508' to cover the Pictured Cliffs, Fruitland Coal tops.
Plug #6 with 36 sxs (42.48 cf) Class B cement inside casing from 628' to 311' to cover the Kirtland and Ojo Alamo tops.
Plug #7 with 37 sxs (43.66 cf) Class B cement inside casing from 281' to surface to cover the surface casing shoe.
Plug #8 with 30 sxs Class B cement top off casings and install P&A marker.

Plugging Work Details:

- 7/10/13 Rode rig equipment to location. Spot in. Bump test H2S equipment. Check well pressures: tubing 600 PSI, casing 160 PSI and bradenhead TSTM. RU relief lines and blow well down. ND wellhead. NU BOP and noticed tubing started blowing. Shut in tubing. Pressured up to 1000 PSI. Attempt to blow well down. Wait on Phoenix. RU Phoenix and retrieve plug in tubing. RIH and set another plug at 4212'. Pressure still at 1000 PSI. Wait on orders. RIH and retrieve plug at 4212'. RIH and set another plug on/off tool at 4198'. Pressure still the same. SI well. SDFD. Note: Procedure change approved BLM/ NMOCD.
- 7/11/13 Bump test H2S equipment. Check well pressures: tubing 1040 PSI, casing and bradenhead 0 PSI. RU relief lines attempt to blow well down. SI well and wait on orders. RU Phoenix and RIH retrieve plug. Pump 80 bbls of water establish a rate of 2 bpm at 1200 PSI, SI tubing. Wait on acid. RU Baker Petrolite. Pump 500 gals acid with 1 bbl flush. RU pump to tubing and pump 24 bbls to spot acid at 2800'. SI tubing. Wait 30 minutes and pump 2 bbls to 3130'. SI well. SDFD.
- 7/12/13 Bump test H2S equipment. Check well pressures: tubing 1040 PSI, casing and bradenhead 0 PSI. Pump 10 bbls flush acid past packer and SI well. RU Phoenix. RIH and set plug at 4212' below packer. POH. Open tubing still flowing. SI pressure at 1040 PSI. Note: Procedure change approved BLM/NMOCD. Spot plug #1a with estimated TOC at 4212'. SI well. SDFD.

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979
Farmington, New Mexico 87499
505-325-2627 *fax: 505-325-1211

Burlington Resources
McGrath SWD 4

July 22, 2013
Page 2 of 2

Plugging Work Details (continued):

- 7/15/13 Bump test H2S equipment. Check well pressures: tubing 420 PSI, casing and bradenhead 0 PSI. RU relief lines tubing blew right down. SI for an hour and 0 PSI. Start mixing gel to VISC at 13.8#. Check pressure on tubing 0 PSI. Attempt to release off packer at 4196' unable to release. Wait on orders to jet cut tubing. SI well. SDFD.
- 7/16/13 Bump test H2S equipment. Open up well; no pressures. RU relief lines. RU Wireline Specialties. Tag TOC at 3896'. Note: Procedure change approved BLM/ NMOCD. RIH and cut tubing at 3893'. Pull tubing hanger. Establish circulation. Pump 60 bbls 13.8# mud. SI casing attempt to pressure test pump 4 bbls no pressure, pulled 1 joint discover need slip grip elevators. Wait on elevators. Regulator broken. SI well. SDFD.
- 7/17/13 Bump test H2S equipment. Open up well; no pressures. Establish circulation. Spot plug #1 with estimated TOC at 3743'. LD 1 joint, 2-6' subs, 2-4' sub, LD 118 joints (119 joints total) EUE 9.3# 3-1/2" at 3893'. Tally 124 joints 2-3/8" tubing, EUE 4.7#, A-Plus tubing. Tag top of 3.5" cut at 3893'. Establish circulation. SI casing attempt to pressure test to 820 PSI bled down to 780 PSI. Spot plug #1a with estimated TOC at 3690'. SI well. SDFD.
- 7/18/13 Bump test H2S equipment. Open up well; no pressures. Tag TOC at 3781'. RIH with 5.5" GR to 1362' unable to get down. Perforate 3 HSC squeeze holes at 3535'. Attempt to get rate, pumped 35 bbls 13.8# mud, no pressure. TIH with 5.5" string mill to 3507'. TIH with 5.5" DHS CR and set at 3485'. Pressure test tubing to 1000 PSI. Reverse circulate with 96 bbls till clean returns. Establish rate of 1.5 bpm at 900 PSI. Pressure test casing to 800 PSI, OK. Spot plug #2 with estimated TOC at 3282'. Reverse circulate from 3254' to 2644'. SI well. SDFD.
- 7/19/13 Bump test H2S equipment. Open up well; no pressures. Perforate 3 HSC squeeze holes at 2644'. Establish rate of 1 bpm at 1100 PSI. TIH with 5.5" DHS CR and set at 2594'. Establish circulation. Spot plug #3 with estimated TOC at 2489'. Reverse circulate 11 bbls from 2470' to 1960'. Establish circulation. Note: Procedure change approved BLM/NMOCD. Spot plug #4 (combined 4&5) with estimated TOC at 1508'. Reverse circulate with 8 bbls from 1471' to 620'. Spot plug #6 with estimated TOC at 311'. Perforate 3 HSC squeeze holes at 281'. Attempt to get circulation pressured up to 1000 PSI. Bradenhead pressured to 500 PSI. Note: Procedure change approved BLM/ NMOCD. Perforate 3 HSC squeeze holes at 125'. Establish circulation. Spot plug #7 with estimated TOC at surface. SI well. SDFD.
- 7/22/13 Bump test H2S equipment. Open up well; no pressures. Tag TOC at 8'. ND BOP and dig out wellhead. RU High Desert. Cut off wellhead. Top off casings. Spot plug #6 and install P&A marker. RD and MOL.

Jim Morris, MSCI representative, was on location.
Bill Diers, BLM representative, was on location.

Submit 3 Copies To Appropriate District Office
 District I
 1625 N. French Dr., Hobbs, NM 88240
 District II
 1301 W. Grand Ave., Artesia, NM 88210
 District III
 1000 Rio Brazos Rd., Aztec, NM 87410
 District IV
 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
 Energy, Minerals and Natural Resources

Form C-103
 Jun 19, 2008

OIL CONSERVATION DIVISION
 1220 South St. Francis Dr.
 Santa Fe, NM 87505

WELL API NO.	30-045-28177
5. Indicate Type of Lease	STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
6. State Oil & Gas Lease No.	B-11303-10
7. Lease Name or Unit Agreement Name	FC State Com
8. Well Number	24
9. OGRID Number	217817
10. Pool name or Wildcat	Basin Fruitland Coal

SUNDRY NOTICES AND REPORTS ON WELLS
 (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☒ Other P&A

2. Name of Operator
 ConocoPhillips Company

3. Address of Operator
 P.O. Box 4289, Farmington, NM 87499-4289

4. Well Location
 Unit Letter M : 1140 feet from the South line and 1220 feet from the West line
 Section 36 Township 30N Range 12W NMPM San Juan County

11. Elevation (Show whether DR, RKB, RT, GR, etc.)
 5819' GR

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
 TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
 PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐
 DOWNHOLE COMMINGLE ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
 COMMENCE DRILLING OPNS. ☐ P AND A ☒
 CASING/CEMENT JOB ☐

OTHER: ☐

OTHER: ☐

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

The subject well was P&A'd on 3/26/13 per the attached report.

RCVD APR 24 '13
 OIL CONS. DIV.
 DIST. 3

Spud Date:

Rig Released Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Dollie L. Busse TITLE Staff Regulatory Technician DATE 4/24/13

Type or print name Dollie L. Busse E-mail address: dollie.l.busse@conocophillips.com PHONE: 505-324-6104

For State Use Only

APPROVED BY: [Signature] TITLE Deputy Oil & Gas Inspector, DATE 4/26/13
District #3

Conditions of Approval (if any):

RV

Approved for plugging of wellbore only.
 Liability under bond is retained pending
 Receipt of C-103 (Subsequent Report of Well
 Plugging) which may be found @ OCD web page
 under forms.
 www.emmrd.state.us/oed

A-PLUS WELL SERVICE, INC.

P.O. BOX 1979

Farmington, New Mexico 87499

505-325-2627 *fax: 505-325-1211

Conoco Phillips
FC State Com #24

March 26, 2013

Page 1 of 1

1140' FSL and 1220' FWL, Section 36, T-30-N, R-12-W
San Juan County, NM
Lease Number: B-11303-10
API #30-045-28177**Plug and Abandonment Report**
Notified NMOCD on 3/22/13 and BLM on 3/21/13**Plug and Abandonment Summary:**

- Plug #1** pump 16 sxs (18.88 cf) Class B cement inside casing from 2044' to 1900' to cover the Pictured Cliffs top.
- Plug #2** with 49 sxs (57.82 cf) Class B cement inside casing from 1684' to 1241' to cover the Fruitland Coal top.
- Plug #3** with 43 sxs (50.74 cf) Class B cement inside casing from 809' to 421' to cover the Ojo Alamo and Kirtland tops.
- Plug #4** with 45 sxs (53.1 cf) Class B cement from 289' to surface to cover the surface casing shoe.
- Plug #5** with 40 sxs Class B cement found cement in 5.5" casing at surface and 9-5/8" x 5.5" casing 29' from surface and install P&A marker.

Plugging Work Details:

- 3/22/13 Road rig and equipment to location and RU. Open up well; no pressures. X-over to rod equipment. Pressure test tubing to 1000 PSI, OK. Unseat pump and LD polish rod with stuffing box, 72 - 3/4, 32' 3/4", 6 S. Balls and pump on Double S Hot Shot Float. Pump 10 bbls to kill well. ND wellhead. NU BOP and perform function test. Pressure test BOP to 1000 PSI and 500 PSI for 10 minutes. Pressure test bradenhead to 300 PSI for 10 minutes. Tally and TOH with 1 joint, 20' subs, 63 joints, f-nipple, MA total tally 2023' of tubing 4.7# EUE. SI well. SDFD.
- 3/25/13 Check well pressures: no tubing, casing 50 PSI and bradenhead 0 PSI. RU relief lines. TIH with 65 joints to 2044'. Tag fluid level at 1500'. Spot plug #1 with estimated TOC at 1900'. Round trip 5.5" string mill to 1700'. TIH with 5.5" DHS CR and set at 1684'. Establish circulation. Pressure test casing to 800 PSI, bled off. Spot plugs #2, #3 and #4. Dig out wellhead. SI well. SDFD.
- 3/26/13 Open up well; no pressures. ND BOP. RU High Desert perform Hot Work Permit. Cut off wellhead with air saw. Found cement in 5.5" casing at surface and 9-5/8" x 5.5" casing 29' from surface. Spot plug #5 and install P&A marker. RD & MOL.
- Vic Montoya, MSCI representative, was on location.
Monica Kuehling, NMOCD representative, was on location.



Souder, Miller & Associates ♦ 401 West Broadway ♦ Farmington, NM 87401
(505) 325-7535 ♦ (800) 519-0098 ♦ fax (505) 326-0045

March 5, 2021

SMA Project No. 5129666

Ms. Philana Thompson
Agua Moss LLC
P.O. Box 600
Farmington, NM 87499
pthompson@merrion.bz
(505) 324-5300

RE: Sunco Disposal #1 Monitor Well Sampling – January 2021

Dear Ms. Thompson:

This report summarizes sample collection, field screening, and laboratory analysis of groundwater at the Agua Moss LLC Sunco Disposal #1 facility on January 14, 2021.

Field Activities

Souder, Miller & Associates (SMA) personnel collected one groundwater sample from monitoring well MW-1 on January 14, 2021. The sample was collected utilizing a disposable bailer after purging approximately six gallons of water from the well.

Sample Collection and Field Screening Procedures

The groundwater sample was field screened for time sensitive parameters including pH, temperature, reduction potential, specific conductance, and total dissolved solids. Field screening was conducted utilizing a handheld water quality meter calibrated on the day of use with laboratory-grade standards.

Groundwater collected for analysis was placed directly 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 groundwater 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. A dilution due to matrix qualifier is indicated on the laboratory report for total dissolved solids.

Closure and Limitations

This report is prepared for the exclusive use of Agua Moss LLC and is subject to the terms, conditions, and limitations stated in SMA's Master Professional Services Agreement with Agua Moss LLC. All work has been performed in accordance with generally accepted professional environmental consulting practices. No other warranty is expressed or implied.

Ms. Philana Thompson

March 5, 2021

Page 2

Souder, Miller & Associates appreciates the opportunity to provide services to Agua Moss LLC. If you have any questions, please contact me at (505) 325-7535.

Sincerely,

MILLER ENGINEERS, INC. d/b/a
SOUDER, MILLER & ASSOCIATES



Heather M. Woods, P.G.

Project Geoscientist

Heather.Woods@soudermiller.com

Attachments:

Table 1. Summary of Field Screening and Laboratory Analytical Results

Laboratory Analytical Reports (Hall 2101615)

Table 1:
Summary of Field Screening and Laboratory Analytical Results

AGUA MOSS LLC
SUNCO DISPOSAL #1

Sample ID	MW-1		Units	WQCC Groundwater Standards*
Collection Date	1/14/2021			
Analyte	Laboratory Results	Field Results		
pH	6.97 H	7.52	su	6 to 9 su
Temperature	--	12.9	°C	
Reduction Potential	--	-190.1	mV	
Specific Conductance	4,100	1,720	µmhos/cm	
Total Dissolved Solids	3,540 D	3,110	mg/L	1,000.0 mg/L
Bicarbonate (As CaCO ₃)	537.1	--	mg/L	
Carbonate (As CaCO ₃)	<2.000	--	mg/L	
Fluoride	<0.50	--	mg/L	1.6 mg/L
Chloride	36	--	mg/L	250.0 mg/L
Bromide	<0.50	--	mg/L	
Phosphorus, Orthophosphate	<2.5	--	mg/L	
Sulfate	2,200	--	mg/L	600.0 mg/L
Nitrogen, Nitrate (as N)	<0.50	--		10.0 mg/L
Nitrogen, Nitrite (as N)	<0.50	--	mg/L	1.0 mg/L
Calcium	660	--	mg/L	
Magnesium	59	--	mg/L	
Potassium	7.5	--	mg/L	
Sodium	440	--	mg/L	
Benzene	<1.0	--	µg/L	5 µg/L
Toluene	<1.0	--	µg/L	1,000 µg/L
Ethylbenzene	<1.0	--	µg/L	700 µg/L
Methyl tert-butyl ether	<1.0	--	µg/L	100 µg/L
1,2,4-Trimethylbenzene	<1.0	--	µg/L	
1,3,5-Trimethylbenzene	<1.0	--	µg/L	
1,2-Dichloroethane	<1.0	--	µg/L	5 µg/L
1,2-Dibromoethane	<1.0	--	µg/L	0.05 µg/L
Napthalene	<2.0	--	µg/L	30 µg/L
1-Methylnaphthalene	<4.0	--	µg/L	
2-Methylnaphthalene	<4.0	--	µg/L	
Acetone	<10	--	µg/L	
Bromobenzene	<1.0	--	µg/L	
Bromodichloromethane	<1.0	--	µg/L	
Bromoform	<1.0	--	µg/L	
Bromomethane	<3.0	--	µg/L	
2-Butanone	<10	--	µg/L	
Carbon disulfide	<10	--	µg/L	
Carbon tetrachloride	<1.0	--	µg/L	5 µg/L
Chlorobenzene	<1.0	--	µg/L	
Chloroethane	<2.0	--	µg/L	
Chloroform	<1.0	--	µg/L	100 µg/L
Chloromethane	<3.0	--	µg/L	
2-Chlorotoluene	<1.0	--	µg/L	
4-Chlorotoluene	<1.0	--	µg/L	
cis-1,2-DCE	<1.0	--	µg/L	70 µg/L
cis-1,3-Dichloropropene	<1.0	--	µg/L	
1,2-Dicbbromo-3-chloropropane	<2.0	--	µg/L	
Dibromochloromethane	<1.0	--	µg/L	
Dibromomethane	<1.0	--	µg/L	

Table 1:
Summary of Field Screening and Laboratory Analytical Results

AGUA MOSS LLC
SUNCO DISPOSAL #1

Sample ID	MW-1		Units	WQCC Groundwater Standards*	
Collection Date	1/14/2021				
Analyte	Laboratory Results	Field Results			
1,2-Dichlorobenzene	<1.0	--	µg/L	600	µg/L
1,3-Dichlorobenzene	<1.0	--	µg/L		
1,4-Dichlorobenzene	<1.0	--	µg/L	75	µg/L
Dichlorodifluoromethane	<1.0	--	µg/L		
1,1-Dichloroethane	<1.0	--	µg/L	25	µg/L
1,1-Dichloroethene	<1.0	--	µg/L		
1,2-Dichloropropane	<1.0	--	µg/L	5	µg/L
1,3-Dichloropropane	<1.0	--	µg/L		
2,2-Dichloropropane	<2.0	--	µg/L		
1,1-Dichloropropene	<1.0	--	µg/L		
Hexachlorobutadiene	<1.0	--	µg/L		
2-Hexanone	<10	--	µg/L		
Isopropylbenzene	<1.0	--	µg/L		
4-isopropyltoluene	<1.0	--	µg/L		
4-Methyl-2-pentanone	<10	--	µg/L		
Methylene chloride	<3.0	--	µg/L	5	µg/L
n-Butylbenzene	<3.0	--	µg/L		
n-Propylbenzene	<1.0	--	µg/L		
sec-Buytlbenzene	<1.0	--	µg/L		
Styrene	<1.0	--	µg/L	100	µg/L
tert-Buytlbenzene	<1.0	--	µg/L		
1,1,1,2-Tetrachloroethane	<1.0	--	µg/L		
1,1,2,2-Tetrachloroethane	<2.0	--	µg/L	10	µg/L
Tetrachloroethene	<1.0	--	µg/L	5	µg/L
trans-1,2-DCE	<1.0	--	µg/L	100	µg/L
trans-1,3-Dichloropropene	<1.0	--	µg/L		
1,2,3-Trichlorobenzene	<1.0	--	µg/L		
1,2,4-Trichlorobenzene	<1.0	--	µg/L	70	µg/L
1,1,1-Trichloroethane	<1.0	--	µg/L	200	µg/L
1,1,2-Trichloroethane	<1.0	--	µg/L	5	µg/L
Trichloroethene	<1.0	--	µg/L	5	µg/L
Trichlorofluoromethane	<1.0	--	µg/L		
1,2,3-Trichloropropane	<2.0	--	µg/L		
Vinyl chloride	<1.0	--	µg/L	2	µg/L
Xylenes,total	<1.5	--	µg/L	620	µg/L

Notes: su - standard units

°C - degrees Celcius

°F - degrees Farenheit

mV - millivolts

µmhos/cm - micromohs per centimeter

mg/L - milligrams per liter

µg/L - micrograms per liter

H - Holding times for preparation or analysis exceeded

D - Sample diluted due to matrix

WQCC - Water Quality Control Commission

*Per 20.6.3103 NMAC



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

January 27, 2021

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

RE: Agua Moss Sunco Disposal 1

OrderNo.: 2101615

Dear Heather Woods:

Hall Environmental Analysis Laboratory received 1 sample(s) on 1/15/2021 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".

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Analytical Report

Lab Order 2101615

Date Reported: 1/27/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: MW-1 (01/14/21)

Project: Agua Moss Sunco Disposal 1

Collection Date: 1/14/2021 11:20:00 AM

Lab ID: 2101615-001

Matrix: AQUEOUS

Received Date: 1/15/2021 7:52:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: CAS
Fluoride	ND	0.50		mg/L	5	1/15/2021 4:43:09 PM	R74675
Chloride	36	2.5		mg/L	5	1/15/2021 4:43:09 PM	R74675
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	1/15/2021 4:43:09 PM	R74675
Bromide	ND	0.50		mg/L	5	1/15/2021 4:43:09 PM	R74675
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	1/15/2021 4:43:09 PM	R74675
Phosphorus, Orthophosphate (As P)	ND	2.5		mg/L	5	1/15/2021 4:43:09 PM	R74675
Sulfate	2200	25		mg/L	50	1/18/2021 5:42:58 PM	R74685
SM2510B: SPECIFIC CONDUCTANCE							Analyst: MH
Conductivity	4100	10		µmhos/c	1	1/18/2021 12:39:47 PM	R74696
SM2320B: ALKALINITY							Analyst: MH
Bicarbonate (As CaCO ₃)	537.1	20.00		mg/L Ca	1	1/18/2021 12:39:47 PM	R74696
Carbonate (As CaCO ₃)	ND	2.000		mg/L Ca	1	1/18/2021 12:39:47 PM	R74696
Total Alkalinity (as CaCO ₃)	537.1	20.00		mg/L Ca	1	1/18/2021 12:39:47 PM	R74696
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: MH
Total Dissolved Solids	3540	40.0	*D	mg/L	1	1/20/2021 3:09:00 PM	57621
SM4500-H+B / 9040C: PH							Analyst: MH
pH	6.97		H	pH units	1	1/18/2021 12:39:47 PM	R74696
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Calcium	660	10		mg/L	10	1/19/2021 2:48:34 PM	B74718
Magnesium	59	1.0		mg/L	1	1/19/2021 2:41:35 PM	B74718
Potassium	7.5	1.0		mg/L	1	1/19/2021 2:41:35 PM	B74718
Sodium	440	5.0		mg/L	5	1/19/2021 2:43:46 PM	B74718
EPA METHOD 8260B: VOLATILES							Analyst: JMR
Benzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Toluene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Ethylbenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Naphthalene	ND	2.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1-Methylnaphthalene	ND	4.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
2-Methylnaphthalene	ND	4.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Acetone	ND	10		µg/L	1	1/23/2021 12:49:04 AM	A74821
Bromobenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821

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

Page 1 of 12

Analytical Report

Lab Order 2101615

Date Reported: 1/27/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: MW-1 (01/14/21)

Project: Agua Moss Sunco Disposal 1

Collection Date: 1/14/2021 11:20:00 AM

Lab ID: 2101615-001

Matrix: AQUEOUS

Received Date: 1/15/2021 7:52:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JMR
Bromodichloromethane	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Bromoform	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Bromomethane	ND	3.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
2-Butanone	ND	10		µg/L	1	1/23/2021 12:49:04 AM	A74821
Carbon disulfide	ND	10		µg/L	1	1/23/2021 12:49:04 AM	A74821
Carbon Tetrachloride	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Chlorobenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Chloroethane	ND	2.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Chloroform	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Chloromethane	ND	3.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
2-Chlorotoluene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
4-Chlorotoluene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
cis-1,2-DCE	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Dibromochloromethane	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Dibromomethane	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,2-Dichlorobenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,3-Dichlorobenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,4-Dichlorobenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Dichlorodifluoromethane	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,1-Dichloroethane	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,1-Dichloroethene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,2-Dichloropropane	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,3-Dichloropropane	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
2,2-Dichloropropane	ND	2.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,1-Dichloropropene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Hexachlorobutadiene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
2-Hexanone	ND	10		µg/L	1	1/23/2021 12:49:04 AM	A74821
Isopropylbenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
4-Isopropyltoluene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
4-Methyl-2-pentanone	ND	10		µg/L	1	1/23/2021 12:49:04 AM	A74821
Methylene Chloride	ND	3.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
n-Butylbenzene	ND	3.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
n-Propylbenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
sec-Butylbenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Styrene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
tert-Butylbenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821

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

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Analytical Report

Lab Order 2101615

Date Reported: 1/27/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Client Sample ID: MW-1 (01/14/21)

Project: Agua Moss Sunco Disposal 1

Collection Date: 1/14/2021 11:20:00 AM

Lab ID: 2101615-001

Matrix: AQUEOUS

Received Date: 1/15/2021 7:52:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 8260B: VOLATILES							Analyst: JMR
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
trans-1,2-DCE	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,1,1-Trichloroethane	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,1,2-Trichloroethane	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Trichloroethene (TCE)	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Trichlorofluoromethane	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
1,2,3-Trichloropropane	ND	2.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Vinyl chloride	ND	1.0		µg/L	1	1/23/2021 12:49:04 AM	A74821
Xylenes, Total	ND	1.5		µg/L	1	1/23/2021 12:49:04 AM	A74821
Surr: 1,2-Dichloroethane-d4	99.4	70-130		%Rec	1	1/23/2021 12:49:04 AM	A74821
Surr: 4-Bromofluorobenzene	107	70-130		%Rec	1	1/23/2021 12:49:04 AM	A74821
Surr: Dibromofluoromethane	87.9	70-130		%Rec	1	1/23/2021 12:49:04 AM	A74821
Surr: Toluene-d8	106	70-130		%Rec	1	1/23/2021 12:49:04 AM	A74821

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

WO#: 2101615

27-Jan-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco Disposal 1

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: PBW	Batch ID: B74718	RunNo: 74718								
Prep Date:	Analysis Date: 1/19/2021	SeqNo: 2636917 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0								
Magnesium	ND	1.0								
Potassium	ND	1.0								
Sodium	ND	1.0								

Sample ID: LLCS	SampType: LCSLL	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: BatchQC	Batch ID: B74718	RunNo: 74718								
Prep Date:	Analysis Date: 1/19/2021	SeqNo: 2636918 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	ND	1.0	0.5000	0	102	50	150			
Magnesium	ND	1.0	0.5000	0	103	50	150			
Potassium	ND	1.0	0.5000	0	103	50	150			
Sodium	ND	1.0	0.5000	0	113	50	150			

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: LCSW	Batch ID: B74718	RunNo: 74718								
Prep Date:	Analysis Date: 1/19/2021	SeqNo: 2636919 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Calcium	51	1.0	50.00	0	103	85	115			
Magnesium	51	1.0	50.00	0	103	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Sodium	50	1.0	50.00	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 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#: 2101615

27-Jan-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco Disposal 1

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R74675	RunNo: 74675								
Prep Date:	Analysis Date: 1/15/2021	SeqNo: 2635664	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrite (As N)	ND	0.10								
Bromide	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								
Phosphorus, Orthophosphate (As P)	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R74675	RunNo: 74675								
Prep Date:	Analysis Date: 1/15/2021	SeqNo: 2635665	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.52	0.10	0.5000	0	103	90	110			
Chloride	4.7	0.50	5.000	0	94.1	90	110			
Nitrogen, Nitrite (As N)	0.94	0.10	1.000	0	94.3	90	110			
Bromide	2.4	0.10	2.500	0	97.2	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.5	90	110			
Phosphorus, Orthophosphate (As P)	4.6	0.50	5.000	0	92.8	90	110			

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R74685	RunNo: 74685								
Prep Date:	Analysis Date: 1/18/2021	SeqNo: 2636249	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	ND	0.50								

Sample ID: LCS	SampType: lcs	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R74685	RunNo: 74685								
Prep Date:	Analysis Date: 1/18/2021	SeqNo: 2636261	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sulfate	9.4	0.50	10.00	0	94.0	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 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#: 2101615

27-Jan-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco Disposal 1

Sample ID: 100ng lcs	SampType: LCS				TestCode: EPA Method 8260B: VOLATILES					
Client ID: LCSW	Batch ID: A74821				RunNo: 74821					
Prep Date:	Analysis Date: 1/22/2021				SeqNo: 2640690	Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	21	1.0	20.00	0	104	70	130			
Toluene	20	1.0	20.00	0	98.3	70	130			
Chlorobenzene	20	1.0	20.00	0	99.5	70	130			
1,1-Dichloroethene	20	1.0	20.00	0	98.9	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	102	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.4	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	8.1		10.00		81.4	70	130			
Surr: Toluene-d8	9.3		10.00		92.7	70	130			

Sample ID: mb1	SampType: MBLK				TestCode: EPA Method 8260B: VOLATILES					
Client ID: PBW	Batch ID: A74821				RunNo: 74821					
Prep Date:	Analysis Date: 1/22/2021				SeqNo: 2640691	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

Page 6 of 12

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

WO#: 2101615

27-Jan-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco Disposal 1

Sample ID: mb1		SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW		Batch ID: A74821		RunNo: 74821						
Prep Date:		Analysis Date: 1/22/2021		SeqNo: 2640691		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 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

Page 7 of 12

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2101615
27-Jan-21

Client: Souder, Miller and Associates
Project: Agua Moss Sunco Disposal 1

Sample ID: mb1		SampType: MBLK		TestCode: EPA Method 8260B: VOLATILES						
Client ID: PBW		Batch ID: A74821		RunNo: 74821						
Prep Date:		Analysis Date: 1/22/2021		SeqNo: 2640691		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	9.7		10.00		96.8	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		104	70	130			
Surr: Dibromofluoromethane	8.2		10.00		81.9	70	130			
Surr: Toluene-d8	10		10.00		104	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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2101615

27-Jan-21

Client: Souder, Miller and Associates

Project: Agua Moss Sunco Disposal 1

Sample ID: Ics-1 99.5uS eC	SampType: Ics			TestCode: SM2510B: Specific Conductance						
Client ID: LCSW	Batch ID: R74696			RunNo: 74696						
Prep Date:	Analysis Date: 1/18/2021			SeqNo: 2636396		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	99.50	0	101	85	115			

Sample ID: 2101615-001B DUP	SampType: dup			TestCode: SM2510B: Specific Conductance						
Client ID: MW-1 (01/14/21)	Batch ID: R74696			RunNo: 74696						
Prep Date:	Analysis Date: 1/18/2021			SeqNo: 2636405		Units: µmhos/cm				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	4100	10						0.130	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

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2101615
27-Jan-21

Client: Souder, Miller and Associates
Project: Agua Moss Sunco Disposal 1

Sample ID: 2101615-001B DUP		SampType: dup		TestCode: SM4500-H+B / 9040C: pH						
Client ID: MW-1 (01/14/21)		Batch ID: R74696		RunNo: 74696						
Prep Date:		Analysis Date: 1/18/2021		SeqNo: 2636342		Units: pH units				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	6.99									H

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

WO#: 2101615

27-Jan-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco Disposal 1

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R74696	RunNo: 74696								
Prep Date:	Analysis Date: 1/18/2021	SeqNo: 2636353	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: R74696	RunNo: 74696								
Prep Date:	Analysis Date: 1/18/2021	SeqNo: 2636354	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	78.84	20.00	80.00	0	98.5	90	110			

Sample ID: 2101615-001B DUP	SampType: dup	TestCode: SM2320B: Alkalinity								
Client ID: MW-1 (01/14/21)	Batch ID: R74696	RunNo: 74696								
Prep Date:	Analysis Date: 1/18/2021	SeqNo: 2636356	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	539.7	20.00						0.483	20	

Sample ID: mb-2 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R74696	RunNo: 74696								
Prep Date:	Analysis Date: 1/18/2021	SeqNo: 2636376	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: R74696	RunNo: 74696								
Prep Date:	Analysis Date: 1/18/2021	SeqNo: 2636377	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	79.52	20.00	80.00	0	99.4	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 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#: 2101615

27-Jan-21

Client: Souder, Miller and Associates**Project:** Agua Moss Sunco Disposal 1

Sample ID: MB-57621	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 57621	RunNo: 74741								
Prep Date: 1/19/2021	Analysis Date: 1/20/2021	SeqNo: 2637693 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	ND	20.0								

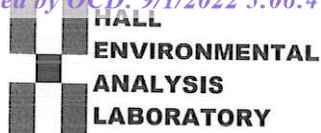
Sample ID: LCS-57621	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 57621	RunNo: 74741								
Prep Date: 1/19/2021	Analysis Date: 1/20/2021	SeqNo: 2637694 Units: mg/L								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1040	20.0	1000	0	104	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 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

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

Sample Log-In Check List

Client Name: **Souder, Miller and Associ**Work Order Number: **2101615**

RcptNo: 1

Received By: **Isaiah Ortiz**

1/15/2021 7:52:00 AM

I-Ox

Completed By: **Isaiah Ortiz**

1/15/2021 11:15:45 AM

I-Ox

Reviewed By: **JR 1/15/21**

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 $>0^{\circ}\text{C}$ 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 ☐
9. Received at least 1 vial with headspace $<1/4"$ for AQ VOA? Yes ☒ No ☐ NA ☐
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: 2
(≤ 2 or >12 unless noted)

Adjusted? NOChecked by: JO 1/15/21

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 $^{\circ}\text{C}$	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.6	Good	Not Present			

OCD requires the following environmental analytical laboratory testing to adequately address UICI-5 Permit Section 2.A.1 "Monitor and Piezometer Wells" and Item 2 below:

- pH (Method 9040)
- Major dissolved cations and anions, including: fluoride, calcium, potassium, magnesium, sodium bicarbonate, carbonate, chloride, sulfate, bromide, total dissolved solids, and cation/anion balance using the methods specified in 40 CFR 136.3
- VOCs (Method 8260 Full List)

20.6.2.3103 STANDARDS FOR GROUND WATER OF 10,000 mg/l TDS CONCENTRATION OR LESS: The following standards are the allowable pH range and the maximum allowable concentration in ground water for the contaminants specified unless the existing condition exceeds the standard or unless otherwise provided in Subsection E of Section 20.6.2.3109 NMAC. Regardless of whether there is one contaminant or more than one contaminant present in ground water, when an existing pH or concentration of any water contaminant exceeds the standard specified in Subsection A, B, or C of this section, the existing pH or concentration shall be the allowable limit, provided that the discharge at such concentrations will not result in concentrations at any place of withdrawal for present or reasonably foreseeable future use in excess of the standards of this section. These standards shall apply to the dissolved portion of the contaminants specified with a definition of dissolved being that given in the publication "*methods for chemical analysis of water and waste of the U.S. environmental protection agency*," with the exception that standards for mercury, organic compounds and non-aqueous phase liquids shall apply to the total nonfiltered concentrations of the contaminants. If the secretary determines that there is a reasonable probability of facilitated contaminant transport by colloids or organic macromolecules, or that proper filtration procedures are not being followed, the discharger may be required to test for both filtered and nonfiltered portions of inorganic contaminants to develop appropriate protocol for monitoring contaminants that have the potential to migrate through the aquifer.

A. Human Health Standards

(1) Numerical Standards

(a)	Antimony (Sb) (CAS 7440-36-0).....	0.006 mg/l
(b)	Arsenic (As) (CAS 7440-38-2).....	0.01 mg/l
(c)	Barium (Ba) (CAS 7440-39-3).....	2 mg/l
(d)	Beryllium (be) (CAS 7440-41-7).....	0.004 mg/l
(e)	Cadmium (Cd) (CAS 7440-43-9).....	0.005 mg/l
(f)	Chromium (Cr) (CAS 7440-47-3).....	0.05 mg/l
(g)	Cyanide (CN) (CAS 57-12-5).....	0.2 mg/l
(h)	Fluoride (F) (CAS 16984-48-8).....	1.6 mg/l
(i)	Lead (Pb) (CAS 7439-92-1).....	0.015 mg/l
(j)	Total Mercury (Hg) (CAS 7439-97-6).....	0.002 mg/l
(k)	Nitrate (NO ₃ as N) (CAS 14797-55-8).....	10.0 mg/l
(l)	Nitrite (NO ₂ as N) (CAS 10102-44-0).....	1.0 mg/l
(m)	Selenium (Se) (CAS 7782-49-2).....	0.05 mg/l
(n)	Silver (Ag) (CAS 7440-224).....	0.05 mg/l
(o)	Thallium (Tl) (CAS 7440-28-0).....	0.002 mg/l
(p)	Uranium (U) (CAS 7440-61-1).....	0.03 mg/l
(q)	Radioactivity: Combined Radium-226 (CAS 13982-63-3) and Radium-228 (CAS 15262-20-1).....	5 pCi/l
(r)	Benzene (CAS 71-43-2).....	0.005 mg/l
(s)	Polychlorinated biphenyls (PCB's) (CAS 1336-36-3).....	0.0005 mg/l
(t)	Toluene (CAS 108-88-3).....	1 mg/l
(u)	Carbon Tetrachloride (CAS 56-23-5).....	0.005 mg/l
(v)	1,2-dichloroethane (EDC) (CAS 107-06-2).....	0.005 mg/l
(w)	1,1-dichloroethylene (1,1-DCE) (CAS 75-35-4).....	0.007 mg/l
(x)	tetrachloroethylene (PCE) (CAS 127-18-4).....	0.005 mg/l
(y)	trichloroethylene (TCE) (CAS 79-01-6).....	0.005 mg/l
(z)	ethylbenzene (CAS 100-41-4).....	0.7 mg/l
(aa)	total xylenes (CAS 1330-20-7).....	0.62 mg/l
(bb)	methylene chloride (CAS 75-09-2).....	0.005 mg/l
(cc)	chloroform (CAS 67-66-3).....	0.1 mg/l
(dd)	1,1-dichloroethane (CAS 75-34-3).....	0.025 mg/l
(ee)	ethylene dibromide (EDB) (CAS 106-93-4).....	0.00005 mg/l
(ff)	1,1,1-trichloroethane (CAS 71-55-6).....	0.2 mg/l
(gg)	1,1,2-trichloroethane (CAS 79-00-5).....	0.005 mg/l
(hh)	1,1,2,2-tetrachloroethane (CAS 79-34-5).....	0.01 mg/l
(ii)	vinyl chloride (CAS 75-01-4).....	0.002 mg/l
(jj)	PAHs: total naphthalene (CAS 91-20-3) plus monomethylnaphthalenes	0.03 mg/l
(kk)	benzo-a-pyrene (CAS 50-32-8).....	0.0002 mg/l
(ll)	cis-1,2-dichloroethene (CAS 156-59-2).....	0.07 mg/l
(mm)	trans-1,2-dichloroethene (CAS 156-60-5).....	0.1 mg/l
(nn)	1,2-dichloropropane (PDC) (CAS 78-87-5).....	0.005 mg/l
(oo)	styrene (CAS 100-42-5).....	0.1 mg/l
(pp)	1,2-dichlorobenzene (CAS 95-50-1).....	0.6 mg/l
(qq)	1,4-dichlorobenzene (CAS 106-46-7).....	0.075 mg/l

(rr)	1,2,4-trichlorobenzene (CAS 120-82-1).....	0.07 mg/l
(ss)	pentachlorophenol (CAS 87-86-5).....	0.001 mg/l
(tt)	atrazine (CAS 1912-24-9).....	0.003 mg/l

(2) **Standards for Toxic Pollutants.** A toxic pollutant shall not be present at a concentration shown by credible scientific data and other evidence appropriate under the Water Quality Act, currently available to the public, to have potential for causing one or more of the following effects upon exposure, ingestion, or assimilation either directly from the environment or indirectly by ingestion through food chains: (1) unreasonably threatens to injure human health, or the health of animals or plants which are commonly hatched, bred, cultivated or protected for use by man for food or economic benefit; as used in this definition injuries to health include death, histopathologic change, clinical symptoms of disease, behavioral abnormalities, genetic mutation, physiological malfunctions or physical deformations in such organisms or their offspring; or (2) creates a lifetime risk of more than one cancer per 100,000 exposed persons.

(3) **Standards for Non-Aqueous Phase Liquids.** Non-aqueous phase liquid shall not be present floating atop of or immersed within ground water, as can be reasonably measured.

B. Other Standards for Domestic Water Supply

(1)	Chloride (Cl) (CAS 16887-00-6).....	250.0 mg/l
(2)	Copper (Cu) (CAS 7440-50-8).....	1.0 mg/l
(3)	Iron (Fe) (CAS 7439-89-6).....	1.0 mg/l
(4)	Manganese (Mn) (CAS 7439-96-5).....	0.2 mg/l
(5)	Phenols	0.005 mg/l
(6)	Sulfate (SO ₄) (CAS 14808-79-8).....	600.0 mg/l
(7)	Total Dissolved Solids (TDS) TDS.....	1000.0 mg/l
(8)	Zinc (Zn) (CAS 7440-66-6).....	10.0 mg/l
(9)	pH.....	between 6 and 9
(10)	Methyl tertiary-butyl ether (MTBE) (CAS 1634-04-4).....	0.1 mg/l

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 140289

COMMENTS

Operator: AGUA MOSS, LLC P.O. Box 600 Farmington, NM 87499	OGRID:
	247130
	Action Number:
	140289
Action Type:	
[UF-DP] NOI Discharge Permit (DISCHARGE PERMIT NOI)	

COMMENTS

Created By	Comment	Comment Date
cchavez	Annual Report 2021 Submittal	11/8/2023

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
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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

CONDITIONS

Action 140289

CONDITIONS

Operator: AGUA MOSS, LLC P.O. Box 600 Farmington, NM 87499	OGRID:
	247130
	Action Number:
	140289
Action Type:	
[UF-DP] NOI Discharge Permit (DISCHARGE PERMIT NOI)	

CONDITIONS

Created By	Condition	Condition Date
cchavez	Condition of Approval: 1. Follow Discharge Permit Guidelines for content based on type of report submitted.	11/8/2023