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 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

eather M. Woods

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		/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 tertachloride		<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 CaCO3)		1,916	mg/L Ca	
Carbonate (as CaCO3)		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	J, _	
		20	mg/L	
Bromide				

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

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,

Andy Freeman

Laboratory Manager

andyl

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 ReportLab Order **2103428**

Date Reported: 3/26/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Project: Aqua Moss Sunco Disposal # 1

Lab ID: 2103428-001

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

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

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	Н	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
D 0 1 000				. ~ .	_		

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical ReportLab Order **2103428**

Date Reported: 3/26/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Project: Aqua Moss Sunco Disposal # 1

Lab ID: 2103428-001

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

Collection Date: 3/5/2021 5:45:00 PM **Received Date:** 3/6/2021 8:55:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Anal	lyzed	Batch
SM2320B: ALKALINITY							Analyst:	CAS
Bicarbonate (As CaCO3)	1916	50.00		mg/L Ca	2.5	3/16/2021	3:52:22 PM	R76029
Carbonate (As CaCO3)	188.8	5.000		mg/L Ca	2.5	3/16/2021	3:52:22 PM	R76029
Total Alkalinity (as CaCO3)	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
рН	8.39		Н	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

Matrix: AQUEOUS

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Pace Analytical ANALYTICAL REPORT





Ss











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

Entire Report Reviewed By: Jahn V Houkins

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, Pace Analytical National

12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858

800-767-5859

www.pacenational.com

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Wet Chemistry by Method 2580

Collected date/time Received date/time

SRG

Mt. Juliet, TN

03/11/21 15:00

SAMPLE SUMMARY

Collected by

03/11/21 15:00

2103428-001F S-17 (3/5/21) L1325250-01 WW				03/05/21 17:45	03/10/21 09:0	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
Wet Chemistry by Method 4500 CN E-2011	WG1633983	1	date/time 03/12/21 20:01	date/time 03/14/21 04:10	SDL	Mt. Juliet, TN
Wet Chemistry by Method 4500H+ B-2011	WG1633563	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. Ju l iet, TN
Wet Chemistry by Method D93/1010A	WG1635305	1	03/16/21 19:00	03/16/21 19:00	LRP	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
2103428-001G S-17 (3/5/21) L1325250-02 GW				03/05/21 17:45	03/10/21 09:0	00
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location

WG1632606



















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

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SAMPLE RESULTS - 01

Wet Chemistry by Method 4500 CN E-2011

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



Wet Chemistry by Method 4500H+ B-2011

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



Sample Narrative:

L1325250-01 WG1632660: 8.47 at 19.8C



Wet Chemistry by Method 9034-9030B

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



Gl

Wet Chemistry by Method D93/1010A

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



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SAMPLE RESULTS - 02

Wet Chemistry by Method 2580

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

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



















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DATE/TIME: 03/17/21 10:31

SDG: L1325250

PROJECT:

ACCOUNT:
Hall Environmental Analysis Laboratory

WG1632606	thod 2580				QUALITY	TY CONTROL SUMMARY	Recei
21323617-01 Original Sample (OS) • Duplicate (DUP)	nal Sample (OS) •	Dupli	cate (I	DUP)			ived (
OS) L1323617-01 03/11/2	!1 15:00 • (DUP) R362973	35-3 03	3/11/21 15	00:			by (
Original Result DUP Result Dilution D	Original Result DUP Result Dilution DUP Diff	esult	Dilution	DUP Diff	DUP Qualifier	er DUP Diff Limits) C.
<i>Il</i> Analyte	mV mV			μV		mV	D:
S.ORP	217 212		<u></u>	5.30		20	9/1
11/2							/ 2 02
1323617-04 Original Sample (OS) • Duplicate (DUP)	nal Sample (OS) •	Dupl	icate ((DUP)			22 5:
COS) L1323617-04 03/11/21 15:00 • (DUP) R3629735-4 03/11/21 15:00	21 15:00 • (DUP) R362973	35-4 0	3/11/21 15	5:00			96:
10:	Original Result DUP Result	esult	Dilution	Dilution DUP Diff	DUP Qualifier	PUP Diff Limits	47
S Analyte	/m			νm		mV	PM S
30SP	224 223		—	0.900		20	7
AM							G Q C
L1323617-05 Origi	_1323617-05 Original Sample (OS) • Duplicate (DUP)	ond.	icate	(DUP)			7
(OS) L1323617-05 03/11/2115:00 • (DUP) R3629735-5 03/11/2115:00	21 15:00 • (DUP) R36297;	35-5 0	3/11/21 15	2:00			<u>U</u>

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DUP Diff Limits mV

DUP Qualifier

 Original Result
 DUP Result
 Dilution
 DUP Diff

 mV
 mV
 mV

 224
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 3.20

Analyte ORP

		DUP Qualifier DUP Diff Limits	νm	20
		DUP Qualifier		
	00:	DUP Diff	μV	3 40
	03/11/21 15	Dilution		_
	र3629735-6	DUP Result	μV	89.3
	OS) L1325250-02 03/11/2115:00 • (DUP) R3629735-6 03/11/2115:00	Original Result DUP Result Dilution DUP Diff	μV	85.9
)	250-02 03/11/2			
	(OS) L13252		Analyte	ORP

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

(LCS) R3629735-1 03/11/2115:00 • (LCSD) R3629735-2 03/11/2115:00	115:00 • (LCSD)	R3629735-2	03/11/21 15:00						
	Spike Amount	Spike Amount LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier Diff	Diff Limits
Analyte	MV	mV	mV	%	%	%		Λm	μV
ORP	106	106	105	8.66	98.6	86.0-105		1.30	20

PAGE: 8 of 14

DATE/TIME: 03/17/21 10:31

SDG: L1325250

PROJECT:

Hall Environmental Analysis Laboratory

ACCOUNT:

Recei	ived 1	by (0 C.	D:	9/1/202	2 5:(36: 4	7 P.	M	o O C
QUALITY CONTROL SUMMARY										
\ \								DUP RPD Limits	%	20
QUALIT			_		00			DUP Qualifier		2
			MB RDL	l/gm	0.00500	JP)	28	UP RPD	%	200
			MB MDL	mg/l	0.00180	icate (Dl	3/14/21 04:	Dilution DUP RPD	6	7
N E-2011			MB Qualifier			Idna • (SO)	P) R3630469-7 C	Original Result DUP Result	l/gm	QN
\$ ethod 4500 Cl	B)	//21 04:03	MB Result	l/gm	n	yinal Sample	1/21 04:25 • (DUI	Original Resu.	mg/I	0.0208
WG1633983	pse Method Blank (MB)	(MB) R3630469-1 03/14	ma	S Analyte	Reactive Cyanide	1325471-05 Original Sample (OS) • Duplicate (DUP)	GOS) L1325471-05 03/14/21 04:25 • (DUP) R3630469-7 03/14/21 04:28	10:3	Analyte	Reactive Cyanide

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

LCS Qualifier

Rec. Limits

LCS Rec.

LCS Result

Spike Amount

mg/l 0.100

Laboratory Control Sample (LCS)

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

90.0-117

110

mg/l 0.110

Analyte Reactive Cyanide

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	RPD Limits	%	20
	RPD	%	53.5
	MSD Qualifier		J3 J6
	MS Qualifier		9f
	Rec. Limits	%	90.0-110
	Dilution		_
04:12	MSD Rec.	%	11.9
59-4 03/14/21	ult MS Rec.	%	22.2
(MSD) R36304(MSD Result	mg/l	0.0141
3/14/21 04:11 •	MS Result	l/gm	0.0244
3630469-3 0	Original Result	/bm	QN
/21 04:10 • (MS) R	Spike Amount Original Result MS Result	mg/l	0.100
(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	Reactive Cyanide

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

	RPD Limits	%	20
	RPD	%	28.9
	MSD Qualifier		3 JE
	MS Qualifier		96
	Rec. Limits	%	90.0-110
	Dilution		-
104:22	MSD Rec.	%	59.0
30469-6 03/14/21 04:22	MS Rec.	%	11.0
(MSD) R36304	MSD Result	mg/l	0.190
3/14/21 04:21 •	t MS Result	l/bm	0.142
3630469-5	Spike Amount Original Result MS Result	mg/l	0.131
′21 04:20 • (MS) F	Spike Amount	mg/l	0.100
(OS) L1325471-01 03/14/21 04:20 • (MS) R3630469-5 03/14/21 04:21 • (MSD) R3630		Analyte	Reactive Cyanide

PAGE: 9 of 14

DATE/TIME: 03/17/2110:31

SDG: L1325250

Received	by OCD: 9/1. ¬	/ 2022 5: 06 :4	47 PM SO SO	, Q	, G	\overline{A}	Sc 8

QUALITY CONTROL SUMMARY 113252550-01

Separation of the second secon

ole (LCS)

	s LCS Qualifier		
	Rec. Limits	%	99.0-101
	LCS Rec.	%	6.66
	LCS Result	Su	6.99
1/11/21 01:19	Spike Amount	ns	10.0
CLCS) R3629499-1 03/11/21 01:19	ma	Analyte	Corrosivity by pH

CS: 9.99 at 21.67 ample Narrative: LCS: 9.99 at 21.67 ample Narrative: 11/21/2023 AM

PROJECT:

Hall Environmental Analysis Laboratory ACCOUNT:

PAGE: 10 of 14

DATE/TIME: 03/17/21 10:31

SDG: L1325250

PROJECT:

ACCOUNT:
Hall Environmental Analysis Laboratory

WG1631392	ethod 9034-90	030B		ŊØ	QUALITY	CONTRO L1325250-01	CONTROL SUMMARY	۱RY				Rece
per Method Blank (MB)	18)											ived (
(MB) R3629878-1 03/11/21 19:12	1/21 19:12											by (
ma	MB Result	MB Qualifier	MB MDL	MB RDL								0C
Sa Analyte	l/gm		l/gm	mg/l								D:
Reactive Sulfide	ם		0.0250	0.0500								9/1
11/2												/ 2.0
21-aboratory Control Sample (LCS)	rol Sample (L	CS)										22 5:
C(LCS) R3629878-2 03/11/2119:12	′11/21 19:12											<u>06:</u>
10:	Spike Amount	Spike Amount LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier							47
∰nalyte	l/gm	mg/l	%	%								PM
Reactive Sulfide $oldsymbol{7}$	0.500	0.502	100	85.0-115								1
M												S S
L1325250-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)	ginal Sample	e (OS) • Mat	trix Spike (MS) • Matrix	Spike Du	plicate (MSL	<u>(</u>					7
(OS) L1325250-01 03/11/2119:21 • (MS) R3629878-4 03/11/2119:22 • (MSD) R3629878-5 03/11/21	11/21 19:21 • (MS) F	र3629878-4 03	3/11/21 19:22 • (1	MSD) R3629878	3-5 03/11/2119	19:22						U
	Spike Amount	Spike Amount Original Result MS Result	t MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	l/gm	mg/l	l/bm	mg/l	%	%	%			%	%	$\overline{\forall}$
Reactive Sulfide	1.00	0.732	1.28	1.22	55.2	48.6	1 80.0-120	97	<u>J6</u>	5.28	20	
												(6

11 of 14 PAGE:

03/17/21 10:31 DATE/TIME:

L1325250 SDG:

PROJECT:

Received by OCD: 9/ /1/2022 PM Ū

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QUALITY CONTROL SUMMARY

RPD Limits 9 RPD 1.59 LCSD Qualifier LCS Qualifier Rec. Limits WG1635305

AVG1635305

AVG1635305

AUGLITY CONT
13252

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

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

Spike Amount LCS Result LCSD Result LCSD Rec. LCSD Rec. Limits

Geg F deg F deg F % % %

Hearthpoint 126 125 127 99:2 101 96.0-104 11/21/2023 10:33:23 AM

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Hall Environmental Analysis Laboratory ACCOUNT:

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

Appleviations and	a 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.

















Т8

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

Pace Analytica	l National	12065 Lebanor	n Rd Mount Julie	et. 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
lowa	364	Pennsy l vania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky 16	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	Al30792	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

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

TN00003

EPA-Crypto



















^{*} 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.

Website: clients.hallenvironmental.com

ENVIRONMENTAL LABORATORY ANALYSIS

CHAIN OF CUSTODY RECORD PAGE:

F082

Hall Environmental Analysis Laboratory

4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107

SUB CO	SUB CONTRATOR. Pace TN		COMPANY:	PACE TN		PHONE:	(800) 767-5859	5859 FAX:	(615) 758-5859
ADDRESS:		12065 Lebanon Rd	9			ACCOUNT #		EMAIL:	
CITY, S	TATE, ZIP. Mt. Ju	CHY, STATE, ZIP. Mt. Juliet, TN 37122							
ITEM	SAMPLE	CLIENT SAMPLE ID	А	BOTTLE	MATRIX	COLLECTION	# CONTAINERS	ANALYTIC	L/325250 ANALYTICAL COMMENTS
	2103428-001F S-17 (3/5/21)	5-17 (3/5/21)		500HDPE	Aqueous	Aqueous 3/5/2021 5:45:00 PM	3 RCI		12-
7	2103428-001G S-17 (3/5/21)	5-17 (3/5/21)		125HDP	Aqueous	Aqueous 3/5/2021 5, 45:00 PM	1 ORP		n

hoch sheb by 11 water

Pres.Correct/Check: Receipt Checklist

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

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.

Refinquished By: Date: Time:	9-58 AM	Kecelved by.	Lun Zhoh	J. june: 1	CI IKANSMII IAL DESIKED.
-Auto-		Received By:	Date	Time:	HARDCOPY (extra cost) PAX EMAIL ONLINE
					FOR LAB USE ONLY
Relinquished By: Date: Time:		Received By:	Date:	Time	
TAT.	RITSH	Next BD 2nd BD	3rdBD		とというまする
					Comments:

Hall Environmental Analysis Laboratory, Inc.

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

Sample ID: LCS-58669 SampType: LCS TestCode: EPA Method 200.7: Metals Client ID: LCSW Batch ID: 58669 RunNo: 75907 Analysis Date: 3/12/2021 SeqNo: 2685800 Prep Date: 3/11/2021 Units: mg/L **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Analyte 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 0 85 0.48 0.0060 0.5000 96.9 Chromium 115

0

90.5

85

115

Qualifiers:

Silver

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 4 of 18

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: MSLLLCS-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 SegNo: 2686970 Units: mg/L

PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte 0.0010 0.001000 0 95.8 50 ND 150 Arsenic 0.00050 0.0005000 0 98.4 50 Lead ND 150

0

133

50

150

Sample ID: MSLCS-58669 SampType: LCS TestCode: EPA 200.8: Metals

Client ID: LCSW Batch ID: 58669 RunNo: 75932

0.0010

0.0013

Prep Date: 3/11/2021 Analysis Date: 3/12/2021 SeqNo: 2686971 Units: mg/L

0.001000

SPK Ref Val %REC %RPD Analyte **PQL** SPK value LowLimit HighLimit **RPDLimit** Qual 0.0010 0.025 0.02500 n 99.4 85 115 Arsenic 0.012 0.00050 0.01250 0 99.4 85 115 Lead Selenium 0.024 0.0010 0.02500 0 95.2 85 115

Qualifiers:

Selenium

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 5 of 18

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: LLLCS-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 11

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 6 of 18

Hall Environmental Analysis Laboratory, Inc.

ND

0.20

WO#: **2103428 26-Mar-21**

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco Disposal # 1

Sample ID: MB	SampT	ype: mb	olk	Tes	tCode: El	PA Method	300.0: Anions	3		
Client ID: PBW	Batch	n I D: R7	5861	F	RunNo: 7	5861				
Prep Date:	Ana l ysis D	ate: 3 /	10/2021	S	SeqNo: 2	684104	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	SampT	ype: Ics	;	Tes	tCode: El	PA Method	300.0: Anions	}		
Client ID: LCSW	Batch	n I D: R7	5861	F	RunNo: 7	5861				
Prep Date:	Analysis D	ate: 3/	10/2021	S	SeqNo: 2	684105	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	SampT	ype: mb	olk	Tes	tCode: El	PA Method	300.0: Anions	,		
Client ID: PBW	Batch	n I D: A7	6059	F	RunNo: 7	6059				
Prep Date:	Analysis D	ate: 3 /	18/2021	S	SeqNo: 2	692455	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

Sample ID: LCS	SampT	ype: Ics	i	Tes	tCode: El	PA Method	300.0: Anions	5		
Client ID: LCSW	Batch	ID: A7	6059	F	RunNo: 7 0	6059				
Prep Date:	Analysis D	ate: 3/	18/2021	S	SeqNo: 20	692456	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	SampTy	/pe: m k	olk	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: PBW	Batch	ID: R7	6100	F	RunNo: 7	6100				
Prep Date:	Analysis Da	ate: 3/	20/2021	8	SeqNo: 2	694279	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Chloride ND 0.50

Qualifiers:

Nitrate+Nitrite as N

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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: Ics 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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2103428**

26-Mar-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco Disposal # 1

110Jeeu 11quu 1110	oo Sune Bisp	054177 1							
Sample ID: MB-58634	SampType:	MBLK	Tes	tCode: EF	PA Method	8081: Pestici	des TCLP)	
Client ID: PBW	Batch ID:	58634	F	RunNo: 76	6098				
Prep Date: 3/10/2021	Analysis Date:	3/18/2021	S	SeqNo: 26	694218	Units: mg/L			
Analyte	Result PO	QL SPK va l ue	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane)30							
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	Tes	tCode: EF	PA Method	8081: Pestici	des TCLP)	
Client ID: LCSW	Batch ID:	58634	F	RunNo: 76	6098				
Prep Date: 3/10/2021	Analysis Date:	3/18/2021	S	SeqNo: 26	694219	Units: %Rec	:		
Analyte	Result PO	QL 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	Tes	tCode: EF	PA Method	8081: Pestici	des TCLP)	
Client ID: LCSW	Batch ID:	58634	F	RunNo: 76	6098				
Prep Date: 3/10/2021	Analysis Date:	3/18/2021	S	SeqNo: 26	694220	Units: %Rec	:		
Analyte	Result PC	QL 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	Tes	tCode: EF	PA Method	8081: Pestici	des TCLP)	
Client ID: PBW	Batch ID:	58634	F	RunNo: 76	6098				
Prep Date: 3/10/2021	Analysis Date:	3/18/2021	S	SeqNo: 26	694221	Units: mg/L			
Analyte	Result PO	QL SPK va l ue	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chlordane	ND 0.0)30						_	
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	Tes	tCode: EF	PA Method	8081: Pestici	des TCLP)	
Client ID: S-17 (3/5/21)	Batch ID:	58634	F	RunNo: 76	6098				
Prep Date: 3/10/2021	Analysis Date:	3/18/2021	S	SeqNo: 26	694223	Units: %Rec	;		
Analyte	Result PC	QL 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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2103428 26-Mar-21**

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco Disposal # 1

Sample ID: 2103428-001BMS	D SampT	ype: M \$	SD	Tes	tCode: El	PA Method	8081: Pestici	des TCLP		
Client ID: S-17 (3/5/21)	Batch	n I D: 58	634	F	RunNo: 7	6098				
Prep Date: 3/10/2021	Ana l ysis D	oate: 3 /	18/2021	S	SeqNo: 2	694224	Units: %Red	;		
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	SampT	ype: LC	s	Tes	tCode: El	PA Method	8081: Pestici	des TCLP		

Sample ID. WIDL 36634	Sampi	ype. LC	,3	res	Code. El	PA Wethod	ouo i: Pestici	des ICLP	•	
Client ID: LCSW	Batch	ID: 58	634	F	RunNo: 7	6098				
Prep Date: 3/10/2021	Analysis D	ate: 3/	18/2021	S	SeqNo: 2	694225	Units: %Red	;		
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	SampTy	pe: LC	s	Test	tCode: El	PA Method	8081: Pestici	des TCLP)	
Client ID: LCSW	Batch	ID: 580	634	R	RunNo: 7 0	6098				
Prep Date: 3/10/2021	Ana l ysis Da	ate: 3/	18/2021	S	SeqNo: 2 0	694226	Units: %Red	:		
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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

ND

ND

ND

ND

ND

0.0096

0.0094

0.0092

0.010

0.70

0.70

0.50

0.20

100

0.01000

0.01000

0.01000

0.01000

WO#: **2103428**

26-Mar-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco Disposal # 1

Sample ID: 100ng Ics	Samp1	Гуре: LC	S	Tes	tCode: T (CLP Volatil	es by 8260B			
Client ID: LCSW	Batcl	h I D: D7	5990	F	RunNo: 7 :	5990				
Prep Date:	Ana l ysis D)ate: 3 /	16/2021	8	SeqNo: 2	689517	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	SampT	Гуре: МЕ	3LK	Tes	tCode: T (CLP Volatile	es by 8260B			
Client ID: PBW	Batch	h I D: D7	5990	F	RunNo: 7	5990				
Prep Date:	Ana l ysis D)ate: 3 /	16/2021	S	SeqNo: 20	689518	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								

Qualifiers:

1,1-Dichloroethene

Vinyl chloride

Chlorobenzene

Tetrachloroethene (PCE)

Surr: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

Surr: Dibromofluoromethane

Trichloroethene (TCE)

Surr: Toluene-d8

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

95.8

93.8

92.4

105

70

70

70

70

130

130

130

130

- 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, Inc.

WO#: **2103428**

26-Mar-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco Disposal # 1

SampType: MBLK			Tes	PA Method					
Batch	1D: 58 0	664	RunNo: 76057						
Analysis Date: 3/18/2021			SeqNo: 2692330			Units: mg/L			
Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
ND	200								
ND	200								
ND	0.13								
ND	0.13								
ND	0.50								
ND	3.0								
ND	2.0								
ND	100								
ND	5.0								
ND	400								
ND	2.0								
ND	200								
0.083		0.2000		41.7	15	91.8			
0.066		0.2000		33.1	15	69.6			
0.092		0.2000		46.1	15	115			
0.049		0.1000		49.3	15	109			
0.048		0.1000		47.9	15	96			
0.059		0.1000		58.6	15	133			
	Result ND	Batch ID: 58/ Analysis Date: 3/ Result PQL ND 200 ND 0.13 ND 0.13 ND 0.50 ND 3.0 ND 2.0 ND 100 ND 5.0 ND 400 ND 2.0 ND 2.0 ND 200 0.083 0.066 0.092 0.049 0.048	Batch ID: 58664 Analysis Date: 3/18/2021 Result PQL SPK value ND 200 ND 200 ND 0.13 ND 0.50 ND 3.0 ND 2.0 ND 100 ND 5.0 ND 400 ND 2.0 ND 2.0 ND 2.0 ND 2.0 ND 2.0 0.083 0.2000 0.092 0.2000 0.092 0.2000 0.049 0.1000 0.048 0.1000	Batch ID: 58664 FResult PQL SPK value SPK Ref Val Result PQL SPK value SPK Ref Val ND 200 ND 200 ND 0.13 ND 0.50 ND 3.0 ND 2.0 ND 100 ND 5.0 ND 400 ND 2.0 ND	Batch ID: 58664 RunNo: 76 Analysis Date: 3/18/2021 SeqNo: 26 Result PQL SPK value SPK Ref Val %REC ND 200 ND 200 ND 0.13 ND 0.50 ND 3.0 ND 2.0 ND 100 ND 5.0 ND 400 ND 2.0 ND 400 ND 2.0 ND 2.0 ND 400 ND 2.0 ND 2.0 ND 400 ND 2.0 2.0 41.7	Batch ID: 58864 Result PQL SPK value SPK Ref Val SPK Ref Val<	Batch ID: 58-64 Result PQL SPK value SPK Ref ∨a <	Rath It: 5864 RunNo: 76057 Analysis ball 318/2021 SeqNo: 2692330 Units: mg/L Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD ND 200 PR SPK value PR SPK LowLimit HighLimit %RPD ND 200 PR SPK value PR SPK LowLimit HighLimit %RPD ND 200 PR SPK value PR SPK LowLimit HighLimit %RPD ND 200 PR SPK value PR SPK LowLimit HighLimit %RPD ND 0.13 PR SPK value PR SPK PR S	Batch ID: 5864 RunNo: 76077 Analysis Der 18 18/2021 SeqNo: 2692330 Units: mg/L Result PQL SPK value SPK Ref Val Value Low Limits MRPD RPDLimit ND 2000 SPK Value SPK Ref Value Value Low Limits MRPDLimit MRPDLI

Sample ID: Ics-58664	SampType: LCS			Tes	tCode: E	PA Method				
Client ID: LCSW	Batch ID: 58664			F	6057					
Prep Date: 3/11/2021	Analysis	Analysis Date: 3/18/2021			SeqNo: 20	692331	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

SampType: MS

WO#: **2103428**

26-Mar-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco Disposal # 1

Sample ID: 2103428-001bms

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 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

TestCode: EPA Method 8270C TCLP

Client ID: S-17 (3/5/21) Batch ID: 58664 RunNo: 76057 Prep Date: 3/11/2021 SeaNo: 2692333 Analysis Date: 3/18/2021 Units: mg/L Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.0010 0.055 0.1000 0.005184 49.5 30.5 2-Methylphenol 98.2 0.0010 0.2000 0.003756 48.8 27.4 3+4-Methylphenol 0.10 98.6 59.5 87.4 2,4-Dinitrotoluene 0.060 0.0010 0.1000 0 34.3 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 0.074 0.0010 74.5 Pentachlorophenol 0.1000 n 15 97.5 0.046 0.0010 0.1000 0.003571 42.5 15 Pyridine 65.8 2,4,5-Trichlorophenol 0.084 0.0010 0.1000 n 83.9 36.1 109 0.0010 0.1000 37.8 2,4,6-Trichlorophenol 0.079 78.7 104 0.0010 0.01743 49.1 27.1 Cresols, Total 0.16 0.3000 99.8 Surr: 2-Fluorophenol 0.079 0.2000 39.3 15 91.8 32.1 Surr: Phenol-d5 0.064 0.2000 15 69.6 Surr: 2,4,6-Tribromophenol 0.2000 89.5 15 0.18 115 Surr: Nitrobenzene-d5 0.049 0.1000 49.4 15 109 51.1 0.051 0.1000 15 Surr: 2-Fluorobiphenyl 96 Surr: 4-Terphenyl-d14 0.070 0.1000 70.0 15 133

Sample ID: 2103428-001bmsd	d SampType: MSD TestCode: EPA Method						8270C TCLP			
Client ID: S-17 (3/5/21)	Bato	h ID: 586	664	F	6057					
Prep Date: 3/11/2021	Analysis Date: 3/18/2021			S	SeqNo: 20	692334	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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			F	6057					
Prep Date: 3/11/2021	Analysis Date: 3/18/2021			S	SeqNo: 20	692334	Units: mg/L			
Analyte	Result	PQL	SPK va l ue	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

ND

1.0

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 Analysis Date: 3/18/2021 Prep Date: 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

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 SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** Analyte Result POL LowLimit Qual 50.00 0 98.5 80 Calcium 49 1.0 120 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 n 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 250.0 77.36 75 Calcium 330 5.0 101 125 Magnesium 290 5.0 250.0 34.94 100 75 125 250.0 28.01 97.8 75 Potassium 270 5.0 125

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 %RPD Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit **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 20 0.144

Qualifiers:

Sodium

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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: Ics-1 alk SampType: Ics 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: Ics-2 alk SampType: Ics 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
POL 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, 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

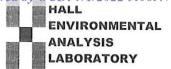
Total Dissolved Solids 988 20.0 1000 0 98.8 80 120

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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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

	ouder, Miller and ssociates	Work Order Number	210	3428		RcptNo: 1
Received By:	Juan Rojas	3/6/2021 8:55:00 AM			Hansay	
Completed By: 0	Cheyenne Cason	3/9/2021 9:54:41 AM				
Reviewed By:	SPA 3.9.21					
Chain of Custo	<u>dy</u>					
1. Is Chain of Custo	ody complete?		Yes	V	No 🗌	Not Present
2. How was the sar	mple delivered?		Cou	rier		
Log In						
3. Was an attempt	made to cool the samples?		Yes	V	No 🗌	NA 🗆
4. Were all samples	s received at a temperature of	f >0° C to 6.0°C	Yes	V	No 🗌	NA 🗆
5. Sample(s) in pro	per container(s)?		Yes	V	No 🗌	
6. Sufficient sample	volume for indicated test(s)?	•	Yes	V	No 🗌	
7. Are samples (exc	cept VOA and ONG) properly	preserved?	Yes	~	No 🗌	
8. Was preservative	added to bottles?		Yes		No 🗸	NA \square
9. Received at least	1 vial with headspace <1/4"	for AQ VOA?	Yes	V	No 🗌	NA 🗆
10. Were any sample	e containers received broken	?	Yes		No 🗸	# of preserved
11.Does paperwork i (Note discrepanci	match bottle labels? ies on chain of custody)		Yes	V	No 🗆	for pH: 2 (2) (2) (2) (2) (3) (4) (4) (4) (4) (4) (4) (4) (4) (4) (4
12. Are matrices corr	ectly identified on Chain of C	ustody?	Yes	V	No 🗌	Adjusted? Y >
	alyses were requested?		Yes	✓	No 🗌	
	times able to be met? omer for authorization.)		Yes	V	No 🗌	Checked by: 10 3 9 71
Special Handling	g (if applicable)					
15. Was client notifie	ed of all discrepancies with th	is order?	Yes		No 🗌	NA 🗹
Person No	tified:	Date:	Chic Collection of the	Andrew Street Street	A A STATE OF THE PARTY OF THE P	
By Whom:	PROFESSIONAL DESCRIPTION AND ADDRESS OF THE PROFESSION ADDRESS OF THE PROFESSION AND ADDRESS OF THE PROFESSION ADDRESS OF THE PROFESSION ADDRESS OF THE PROFESSION ADDRESS OF THE PROFESSION AND ADDRESS OF THE PROFESSION ADDRESS OF THE PROFESSION A	Via:] eM	ail 🔲 I	Phone Fax	☐ In Person
Regarding:	TO A STATE OF THE PARTY OF THE		remara	MODEL STREET, SALES	VICTOR DEFENDENCE DE LA COMPTENCIÓN DE	SH-APT-CAR THE COMMENT OF THE COMMEN
Client Instr	uctions:	SECURIO CONTRACTOR DE CONTRACTOR DE CONTRACTOR AS FORMA	No.			CONTROL TO ANALYSIS COLLEGE CONTROL CO
16. Additional remar	rks: Added - 0.5ml H	NO3 to sample	-0	OIE 6	or proper	PH. Also added O.YMI HA
17. Cooler Informa Cooler No	tion to sample	-001D 491 big	eal D	Ph	Signed By	12,

Received by OCD: 9/1/2022 5.	06:47 PM	Page 42 of 331
HALL ENVIRONMENTAL ANALYSIS LABORATORY www.hallenvironmental.com 4901 Hawkins NE - Albuquerque, NM 87109 Tel. 505-345-3975 Fax 505-345-4107 Analysis Request	8081 Pesticides/8082 PCB's EDB (Method 504.1) PAHs by 8310 or 8270SIMS RCRA 8 Metals CI, F, Br, NO ₃ , NO ₂ , PO ₄ , SO ₄ 8270 (Semi-VOA) Total Coliform (Present/Absent) So ₂ Attached	Fill to Agua Mass Pur Andly Any sub-contracted data will be clearly notated on the analytical report.
4901 Tel.	TPH:8015D(GRO / DRO / MRO)	Remarks: Direct Rates p
	BTEX / MTBE / TMB's (8021)	Rem Rem Spirit Spossib
Turn-Around Time:	Project Manager: Healthur Loods Sampler: Healthur Woods	
Chain-of-Custody Record Client: Sovder, Miller Associates Substanting Address: 401 W. Brodway Farming fon, NM 87401 Phone #: (505) 716-2787	email or Fax#: Heather, Woods @Souckem; Iler co. Qa/QC Package: Cayoc Packag	345/21 (7445) A6 S-17 (3/5/21) Date: Time: Relinquished by: St. (1824)

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)).

EPA HW No.	Contaminant	SW-846 Methods	Regulatory Leve (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	n-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
0029	1,1-Dichloroethylene	8021B 8260B	0.7
D030	2,4-Dinitrotoluene	8091 8270D	0.13
0032	Hexachlorobenzene	8121	0.13
0033	Hexachlorobutadiene	8021B 8121 3260B	0.5
0034	Hexachloroethane	8121	3.0
0008	Lead	1311	5.0
0009	Mercury	7470A 7471B	0.2
0035	Methyl ethyl ketone	8015B 8260B	200.0

Sunco Disposal #1 Quarterly Laboratory Analytical List Page 2

D036	Nitrobenzene	8091 8270D	2.0	
D037	Pentrachlorophenol	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 a-, 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).

ADDTIONALLY:

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.



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,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Analytical ReportLab 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
Hexach l orobutadiene	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	Н	mg/L Ca	2.5	7/15/2021 10:37:37 PM	R79813
Carbonate (As CaCO3)	ND	5.000	Н	mg/L Ca	2.5	7/15/2021 10:37:37 PM	R79813
Total Alkalinity (as CaCO3)	886.3	50.00	Н	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 17

Analytical ReportLab Order **2106F12**

Date Reported: 7/23/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Lab ID: 2106F12-001

Matrix: AQUEOUS

Collection Date: 6/28/2021 11:00:00 AM **Received Date:** 6/29/2021 8:00:00 AM

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

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		Н	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		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		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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 17

Analytical ReportLab 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					Analys	t: 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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 3 of 17



Pace Analytical ANALYTICAL REPORT

Тс

Ss

Cn

Sr

Qc GI

Sc

Hall Environmental Analysis Laboratory

Sample Delivery Group:

L1372907

Samples Received:

06/30/2021

Project Number:

Description:

Report To:

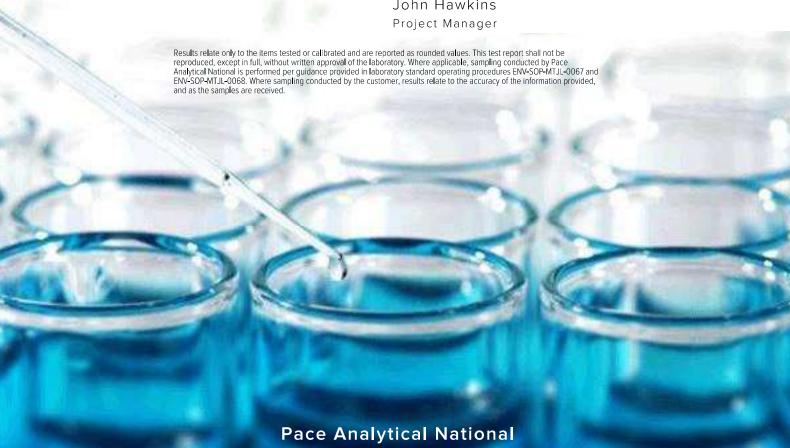
Jackie Bolte

4901 Hawkins NE

Albuquerque, NM 87109

Entire Report Reviewed By: John V Howkins

John Hawkins



12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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2106F12-001G S-18 (6/28/21) L1372907-02	6
2106F12-001H S-18 (6/28/21) L1372907-03	7
2106F12-001I S-18 (6/28/21) L1372907-04	8
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Wet Chemistry by Method 2580

SAMPLE SUMMARY

			Collected by	Collected date/time	Received da	te/time
2106F12-001F S-18 (6/28/21) L1372907-01 WW				06/28/21 11:00	06/30/21 09:	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
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
			Collected by	Collected date/time	Received da	te/time
2106F12-001G S-18 (6/28/21) L1372907-02 WW				06/28/21 11:00	06/30/21 09:	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Wet Chemistry by Method 4500 S2 D-2011	WG1700481	1	07/05/21 22:03	07/05/21 22:03	JIC	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
2106F12-001H S-18 (6/28/21) L1372907-03 WW				06/28/21 11:00	06/30/21 09:	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Wet Chemistry by Method 4500 CN E-2011	WG1708500	1	07/20/21 20:52	07/21/21 12:44	KEG	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
2106F12-001I S-18 (6/28/21) L1372907-04 GW				06/28/21 11:00	06/30/21 09:	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		

WG1700745

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.

SAMPLE RESULTS - 01

Wet Chemistry by Method 4500H+ B-2011

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

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



Sample Narrative:

L1372907-01 WG1700812: 5.9 at 21.3C



Wet Chemistry by Method D93/1010A

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











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

Page 54 of 331

SAMPLE RESULTS - 02

L1372907

Wet Chemistry by Method 4500 S2 D-2011

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



















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

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SAMPLE RESULTS - 03

L1372907

Wet Chemistry by Method 4500 CN E-2011

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



















SAMPLE RESULTS - 04

Wet Chemistry by Method 2580

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

	Result	Qualifier	Dilution	Analysis	Batch
Analyte	mV			date / time	
ORP	42.5	Т8	1	07/06/2021 15:52	WG1700745



















PAGE: 9 of 16

DATE/TIME: 07/23/21 07:23

SDG: L1372907

PROJECT:

ACCOUNT:
Hall Environmental Analysis Laboratory

WG1700745	5 ethod 2580			70 1	QUALITY (CONTROL SUMMARY	JL SUM	MARY			Rece
21.372907-04 Original Sample (OS) • Duplicate (DUP)	ginal Sample	(OS) • Dup	olicate (DUP)								ived (
UOS) L1372907-04 07/(06/2115:52 • (DUP)	R3676180-3	07/06/21 15:52			- 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1					by O
Original result. Dur kesult. Dilution. Dur in Analyte. mV mV mV mV	Original Result	DOP Result	Dilution DOP DIII		DUP Qualifier DUP	JUP DIII LIMITS					CD:
SORP	42.5	44.0	1 1.50		20						9/1
11/2											/ 202
aboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (rol Sample (LC	S) • Labor	ratory Contr	ol Sample	e Duplicate	(LCSD)					2 5:(
CS) R3676180-1 07/0	16/2115:52 • (LCSD)) R3676180-2	07/06/21 15:52								% :
10:	Spike Amount	LCS Result	Spike Amount LCS Result LCSD Result LCS Rec.	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	Rec. Limits LCS Qualifier Diff	JII.	Diff Limits	47
M nalyte	mV	μV	mV	%	%	%		Ш	mV	mV	PM SS
-23	106	106	106	100	100	86.0-105		0	0.000	20	1
AM											⁶ QC

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10 of 16 PAGE:

07/23/21 07:23 DATE/TIME:

L1372907 SDG:

PROJECT:

Hall Environmental Analysis Laboratory

ACCOUNT:

WG1708500				QUALITY CONTROL SUMMARY	Ro
Wet Chemistry by Me	thod 4500 Ch	N E-2011		L1372907-03	ece
per Method Blank (MB)	3)				ived (
(MB) R3682171-1 07/21/2112:36	112:36				by (
ma	MB Result	MB Qualifier	MB MDL	MB RDL	0 C .
and a second sec	l/gm		mg/l	mg/l	D:
Reactive Cyanide	n		0.00180	0.00500	9/1
11/					/2 6
21					22
2.1373848-03 Original Sample (OS) • Duplicate (DUP)	iinal Sample	Ind • (SO) e	olicate (DU	DUP)	5:
COS) L1373848-03 07/21/2112:46 • (DUP) R3682171-4 07/21/2112:49	/21 12:46 • (DUP) R3682171-4 C	17/21/21 12:49	49	96: 4
10:3	Original Resul	Original Result DUP Result Dilution DUP RPD	Dilution DU	DUP Qualifier DUP Qualifier Limits	17 P

PM S

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W. Seactive Cyanide

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/gm /gm Analyte

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

(OS) L1377992-01 07/21/2113:09 • (DUP) R3682171-7 07/21/2113:10

DUP RPD Limits

DUP Qualifier

Dilution DUP RPD

Original Result DUP Result

20 %

0.000

9

9

Reactive Cyanide

Laboratory Control Sample (LCS)

%

(LCS) R3682171-3 07/21/2112:37	1/2112:37				
	Spike Amount LCS Result	LCS Result	LCS Rec.	Rec. Limits	-CS Qualifier
Analyte	l/gm	l/gm	%	%	
Reactive Cyanide	0.100	0.0820	82.0	87.1-120	4

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

	RPD Limits	%	20
	MSD Qualifier RPD	%	6.57
	MS Qualifier MSD		
	ר Rec. Limits	%	90.0-110
	Dilution		~
13:08	MSD Rec.	%	98.0
1-6 07/21/21 13:08	MS Rec.	%	105
	MSD Result	l/gm	0.103
7/21/21 13:07 • (Spike Amount Original Result MS Result	mg/l	0.110
3682171-5 C	Original Res	∥/gm	Q.
1/21 13:06 • (MS) F	Spike Amount	l/gm	0.100
(OS) L1377792-01 07/21/2113:06 • (MS) R3682171-5 07/21/2113:07 • (MSD) R368217		Analyte	Reactive Cyanide

PAGE: 11 of 16

DATE/TIME: 07/23/21 07:23

SDG: L1372907

PROJECT:

ACCOUNT:
Hall Environmental Analysis Laboratory

WG1700481	thod 4500 S2 E	-2011		Ŋ	QUALITY CONTROL SUMMARY	Rece
per Method Blank (MB						ived
MB) R3675772-1 07/05/21 21:20 MB Result MB Qualifier	21 21:20 MB Result	MB Qualifier	MB MDL	MB RDL		by OCI
Analyte	mg/l		mg/I	mg/l).
S. Reactive Sulfide	D D		0.0250	0.0500		9/1/202
aboratory Control Sample (LCS)	I Sample (LC	S)				2 5:(
CLCS) R3675772-2 07/05	//21 21:29					% :-
10:	Spike Amount LCS Result	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	47
% Analyte	l/gm	mg/l	%	%		PM S
Reactive Sulfide	0.500	0.536	107	85.0-115		0 0 0 0

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PAGE: 12 of 16

DATE/TIME: 07/23/21 07:23

L1372907 SDG:

PROJECT:

Hall Environmental Analysis Laboratory ACCOUNT:

Received 1	by OCD: 9/1/26)22 5:06:47 R	M O O O	⁷ Gl	□ V S S S S S S S S S S S S S S S S S S

QUALITY CONTROL SUMMARY	10 2006251
QÜ,	

LCS Qualifier Rec. Limits 99.0-101 LCS Rec. 100 WG1700812

Parket Chemistry by Method 4500H+ B-2011

Spike Amount LCS Result

Su Su Su

Corrosivity by pH 10.0 10.0 Spike Amount LCS Result LCS: 10:04 at 21:2C LCS: 10:04 at 21:2C

PAGE: 13 of 16

DATE/TIME: 07/23/21 07:23

SDG: L1372907

QUALITY CONTROL SUMMARY

WG1703776
Wet Chemistry by Method D93/1010A

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WG170377	9			g	JALITY	CONTR	CONTROL SUMMARY	1MARY		
Net Chemistry by	Method D93/101	10A				L1372907-01	-01			
Salaboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (itrol Sample (L	_CS) • Labc	ratory Coni	trol Sampl	e Duplicate	(LCSD)				
CS) R3678532-1 07	7/13/21 02:04 • (LCS	SD) R3678532	.2 07/13/21 02:C)4						
Spike Amount LCS Result LCSD Result L	Spike Amount	t LCS Result	LCSD Result LCS Rec.	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier RPD	RPD Limits	, S.V.
Analyte	deg F	deg F	deg F	%	%	%		%	%	
11/21/2023	Q.	2	2	5	<u> </u>				2	7/2022 5:00
3 10:33: 2 3										
AM										Ö Ö

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PROJECT:

Hall Environmental Analysis Laboratory ACCOUNT:

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

Appreviations and	d 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 Analy	tical National	12065 Lehai	non Rd M	Mount Juliet	TN 37122
I ace Analy	y lical inalional	12000 LCD01	HOH KU IV	Tourit Jujiet,	111 3/122

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
ldaho	TN00003	Ohio-VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
owa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky ¹⁶	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
_ouisiana	Al30792	Tennessee 14	2006
ouisiana	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
42LA – 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
	·		



^{*} Not all certifications held by the laboratory are applicable to the results reported in the attached report.

TN00003

EPA-Crypto



















^{*} Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

ENVIRONMENTAL LABORATORY ANALYSIS HALL

Hall Environmental Analysis Laboratory CHAIN OF CUSTODY RECORD PAGE

Albuquerque, NM 87109 4901 Hawkins NE TEL: 505-345-3975

FAX: 505-345-4107 Website: clients.hallenvironmental.com

E183

705 3 5 ANALYTICAL COMMENTS (615) 758-5859 1372907 EMAIL FAX 6585-757 (008) 1 RCI 1 RCI 1 ORP 1 RCI # CONTAINER 500PL-NaOH Aqueous 6/28/2021 11:00:00 AM Aqueous 6/28/2021 11:00:00 AM Aqueous 6/28/2021 11:00:00 AM Aqueous 6/28/2021 11:00:00 AM ACCOUNT # COLLECTION MATRIX 500PLNAOH BOTTLE TYPE 500HDPE 125HDP ZVIAC PACE TN COMPANY CLIENT SAMPLE ID Mt. Juliet, TN 37122 12065 Lebanon Rd 2106F12-001G S-18 (6/28/21) 2106F12-001H S-18 (6/28/21) 5-18 (6/28/21) 2106F12-001F S-18 (6/28/21) SUB CONTRATOR Pace TN 2106F12-001I SAMPLE CITY, STATE, ZIP. ADDRESS ITEM 4

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

SPECIAL INSTRUCTIONS / COMMENTS:

ase return all coolers and blue ice. Thank you.	CHECK TATTA ANSWART TO THE CHECK TO THE CHEC
onmental.com. Please re	.01
Please e-mail results to lab@hallenvir	Date Tim
n all final reports.	Received By:
T SAMPLE ID or	Time
LAB ID and the CLIEN	Date
Please include the LAB ID	Relinquished By:

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 **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Result Fluoride ND 0.10 Bromide ND 0.10 Phosphorus, Orthophosphate (As P ND 0.50 Sulfate ND 0.50

Sample ID: LCS SampType: Ics TestCode: EPA Method 300.0: Anions Client ID: LCSW Batch ID: R79465 RunNo: 79465 Analysis Date: 6/29/2021 SeqNo: 2793675 Prep Date: Units: mg/L %RPD SPK value SPK Ref Val %REC **RPDLimit** Result POL LowLimit HighLimit Analyte Qua 0.5000 0 90 Fluoride 0.53 0.10 106 110 **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 n 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: SeqNo: 2803588 Analysis Date: 7/9/2021 Units: mg/L Analyte **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Chloride ND 0.50

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

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 SPK value SPK Ref Val %REC LowLimit %RPD **RPDLimit** Analyte Result PQL HighLimit 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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 4 of 17

Hall Environmental Analysis Laboratory, Inc.

WO#: **2106F12**

23-Jul-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Sample ID: LCS SampType: Ics 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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 5 of 17

Hall Environmental Analysis Laboratory, Inc.

Result

0.0041

0.0031

WO#: **2106F12**

23-Jul-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Sample ID: MB-61046	SampType	e: MBLK	TestCode: EPA Method			d 8081: Pesticides TCLP				
Client ID: PBW	Batch ID	: 61046	R	RunNo: 79529						
Prep Date: 6/30/2021	Analysis Date	e: 7/1/2021	S	eqNo: 2	796336	Units: mg/L				
Analyte	Result F	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	e: MBLK	Test	:Code: El	PA Method	8081: Pestici	des TCLP			
Client ID: PBW	Batch ID: 61046			tunNo: 7 9	9529					
Prep Date: 6/30/2021	Analysis Date	e: 7/1/2021	S	eqNo: 2	796337	Units: mg/L				
Analyte	Result F	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	e: LCS	Test	Code: El	PA Method	8081: Pestici	des TCLP			
Client ID: LCSW	Batch ID	: 61046	R	lunNo: 7 9	9529					
Prep Date: 6/30/2021	Analysis Date	: 7/1/2021	S	eqNo: 2	796338	Units: %Rec	í			
Analyte	Result F	PQL SPK va l ue	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	e: MS	Test	:Code: El	PA Method	8081: Pestici	des TCLP		·	
Client ID: S-18 (6/28/21)	Batch ID	e: 61046	R	tunNo: 7 9	9547					

Sample ID: 2106F12-001BM	Sample ID: 2106F12-001BMSD SampType: MSD					TestCode: EPA Method 8081: Pesticides TCLP					
Client ID: S-18 (6/28/21)	Batch	ID: 61	046	F	tunNo: 7 9	9547					
Prep Date: 6/30/2021	Ana l ysis D	ate: 7 /	/2/2021	S	eqNo: 2	797402	Units: %Red	;			
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	

SPK value SPK Ref Val

0.002500

0.002500

Qualifiers:

Analyte

Surr: Decachlorobiphenyl

Surr: Tetrachloro-m-xylene

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits

%REC

164

122

LowLimit

41.7

31.8

HighLimit

129

88.5

%RPD

RPDLimit

Qual

S

S

- P Sample pH Not In Range
- RL Reporting Limit

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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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

0.010

0.011

0.010

0.0098

0.01000

0.01000

0.01000

0.01000

WO#: **2106F12**

23-Jul-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Sample ID: 100ng lcs2	Samr	Type: LC	٥	Too	tCode: T	N D Volstil	ne by 8260P			
	·	• ·			TestCode: TCLP Volatiles by 8260B					
Client ID: LCSW	Batch ID: T79505			F	RunNo: 7 9	9505				
Prep Date:	Analysis	Date: 7 /	1/2021	8	SeqNo: 2	795327	Units: mg/L			
Analyte	Result	PQL	SPK va l ue	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	Samp	Туре: МЕ	BLK	Tes	tCode: T (CLP Volatile	es by 8260B			
Client ID: PBW	Bat	ch ID: T7 !	9505	F	RunNo: 7 9	2505				
				-	tuili 10. / 1	3303				
Prep Date:	Ana l ysis	Date: 7 /			SeqNo: 2		Units: mg/L			
Prep Date: Analyte	Analysis Result		1/2021				Units: mg/L HighLimit	%RPD	RPDLimit	Qual
·	•	Date: 7 /	1/2021	5	SeqNo: 2	795330	· ·	%RPD	RPDLimit	Qual
Analyte	Result	Date: 7 /	1/2021	5	SeqNo: 2	795330	· ·	%RPD	RPDLimit	Qual
Analyte Benzene	Result ND	Date: 7 / PQL 0.50	1/2021	5	SeqNo: 2	795330	· ·	%RPD	RPDLimit	Qual
Analyte Benzene 1,2-Dichloroethane (EDC)	Result ND ND	PQL 0.50 0.50	1/2021	5	SeqNo: 2	795330	· ·	%RPD	RPDLimit	Qual
Analyte Benzene 1,2-Dichloroethane (EDC) 2-Butanone	Result ND ND ND	PQL 0.50 0.50 200	1/2021	5	SeqNo: 2	795330	· ·	%RPD	RPDLimit	Qual
Analyte Benzene 1,2-Dichloroethane (EDC) 2-Butanone Carbon Tetrachloride	Result ND ND ND ND	PQL 0.50 0.50 200 0.50	1/2021	5	SeqNo: 2	795330	· ·	%RPD	RPDLimit	Qual
Analyte Benzene 1,2-Dichloroethane (EDC) 2-Butanone Carbon Tetrachloride Chloroform	Result ND ND ND ND ND	PQL 0.50 0.50 200 0.50 6.0	1/2021	5	SeqNo: 2	795330	· ·	%RPD	RPDLimit	Qual
Analyte Benzene 1,2-Dichloroethane (EDC) 2-Butanone Carbon Tetrachloride Chloroform 1,4-Dichlorobenzene	Result ND ND ND ND ND ND ND ND ND	PQL 0.50 0.50 200 0.50 6.0 7.5	1/2021	5	SeqNo: 2	795330	· ·	%RPD	RPDLimit	Qual
Analyte Benzene 1,2-Dichloroethane (EDC) 2-Butanone Carbon Tetrachloride Chloroform 1,4-Dichlorobenzene 1,1-Dichloroethene	Result ND	PQL 0.50 0.50 200 0.50 6.0 7.5	1/2021	5	SeqNo: 2	795330	· ·	%RPD	RPDLimit	Qual
Analyte Benzene 1,2-Dichloroethane (EDC) 2-Butanone Carbon Tetrachloride Chloroform 1,4-Dichlorobenzene 1,1-Dichloroethene Tetrachloroethene (PCE)	Result ND	PQL 0.50 0.50 200 0.50 6.0 7.5 0.70	1/2021	5	SeqNo: 2	795330	· ·	%RPD	RPDLimit	Qual

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Surr: 1,2-Dichloroethane-d4

Surr: 4-Bromofluorobenzene

Surr: Dibromofluoromethane

Surr: Toluene-d8

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

104

106

101

98.2

70

70

70

70

130

130

130

130

- 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, Inc.

WO#: **2106F12**

23-Jul-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Sample ID: MB-61067	SampT	SampType: MBLK Batch ID: 61067			TestCode: EPA Method 8270C TCLP					
Client ID: PBW	Batch				RunNo: 7 9	9674				
Prep Date: 7/1/2021	Analysis D	Date: 7 /	8/2021	S	SeqNo: 2	802563	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 Metho				PA Method	8270C TCLP			
Client ID: LCSW	Batch ID: 61067			RunNo: 79674					
Prep Date: 7/1/2021 Anal	sis Date: 7	//8/2021	S	SeqNo: 28	302564	Units: mg/L			
Analyte Re	ult PQL	SPK va l ue	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
2-Methylphenol 0.0	53 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 0.0	45 0.00010	0.1000	0	45.1	50.4	124			S
Hexachlorobenzene 0.0	60 0.00010	0.1000	0	60.5	50.1	120			
Hexachlorobutadiene 0.0	50 0.00010	0.1000	0	50.2	16.1	103			
Hexachloroethane 0.0	47 0.00010	0.1000	0	47.0	15	94.2			
Nitrobenzene 0.0	56 0.00010	0.1000	0	56.4	32.4	125			
Pentachlorophenol 0.0	55 0.00010	0.1000	0	54.8	44.6	114			
Pyridine 0.0	39 0.00010	0.1000	0	39.2	15	67			
2,4,5-Trichlorophenol 0.0	64 0.00010	0.1000	0	63.9	49.4	118			
2,4,6-Trichlorophenol 0.0	62 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 0.0	93	0.2000		46.6	15	91.8			
Surr: Phenol-d5 0.0	75	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

0.060

WO#: **2106F12**

23-Jul-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Surr: 2-Fluorobiphenyl

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 SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Surr: Nitrobenzene-d5 0.056 0.1000 56.4 15 109

59.7

15

96

Surr: 4-Terphenyl-d14	0.083	0.1000	82.6	15	133

0.1000

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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: LLLCS-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 11

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

49

1.0

50.00

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

 Magnesium
 ND
 1.0

 Potassium
 ND
 1.0

 Sodium
 ND
 1.0

TestCode: EPA Method 6010B: Dissolved Metals Sample ID: LCS SampType: LCS 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 48 1.0 50.00 0 97.0 80 Magnesium 120 Potassium 48 1.0 50.00 0 95.9 80 120

0

97.5

80

120

Qualifiers:

Sodium

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

0.098

0.0050

0.1000

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 0.050 ND Silver 0.0050 ND

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 SPK value SPK Ref Val Analyte Result PQL %REC LowLimit HighLimit %RPD **RPDLimit** Qual 97.5 Arsenic 0.49 0.030 0.5000 0 80 120 Barium 0.48 0.0020 0.5000 0 96.3 80 120 97.3 Cadmium 0.49 0.0020 0.5000 0 80 120 0.0060 0.5000 0 96.5 80 Chromium 0.48 120 0.50 0.020 0.5000 0 99.3 80 120 Lead Selenium 0.50 0.050 0.5000 0 99.2 80 120

98.4

80

120

Qualifiers:

Silver

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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: Ics-1 alk SampType: Ics 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: Ics-2 alk SampType: Ics 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: Ics-3 alk SampType: Ics 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
POL 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, 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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 17 of 17



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

	der, Miller and ociates	Work Order N	umber: 2106F12	RcptNo: 1			
Received By: Jua	an Rojas	6/29/2021 8:00:0	00 AM	Hours &			
Completed By: Sea	an Livingston	6/29/2021 10:40	:57 AM	Guara G			
Reviewed By:	1	Glzalz		Salt	John		
Chain of Custody							
1. Is Chain of Custody	complete?		Yes 🔽	No 🗌	Not Present		
2. How was the samp	le delivered?		Courier				
Log In							
Was an attempt ma	ide to cool the samp	oles?	Yes 🗸	No 🗌	NA 🗌		
4. Were all samples re	ceived at a tempera	ature of >0° C to 6.0°C	Yes 🗸	No 🗌	NA 🗆		
5. Sample(s) in proper	container(s)?		Yes 🔽	No 🗆			
6. Sufficient sample vo	lume for indicated t	est(s)?	Yes 🗸	No 🗌			
7. Are samples (except	t VOA and ONG) pr	operly preserved?	Yes 🗸	No 🗌	se chale		
8. Was preservative ac	ided to bottles?		Yes 🗹	No J	NA 🗆		
9. Received at least 1	vial with headspace	<1/4" for AQ VOA?	Yes 🗸	No 🗌	NA 🗌		
10. Were any sample co	ontainers received b	roken?	Yes	No 🗸	# of preserved		
11. Does paperwork ma (Note discrepancies)	Yes 🗸	No 🗆	bottles checked for pH: 3 Z 2 or >12 unless noted)		
12. Are matrices correct	ly identified on Cha	n of Custody?	Yes 🗸	No 🗆	Adjusted? Yes		
13. Is it clear what analy	ses were requested	?	Yes 🗸	No 🗌	,		
 Were all holding time (If no, notify custometic) 		£	Yes 🗸	No 🗌	Checked by: Sch G/29/21		
Special Handling (i	if applicable)						
15. Was client notified o	of all discrepancies	with this order?	Yes	No 🗌	NA 🗹		
Person Notifie	ed:	Da	te:	and of the family and any or or			
By Whom:		Via	a: eMail I	Phone Fax	In Person		
Regarding:		Control of the Contro					
Client Instruct	ions:				And the second s		
16. Additional remarks:	added -	4.0ml HNO3 -	to sample	001E, ada	ded - 0.4ml HAWS to San		
17. Cooler Information	OOID chec	ked for prof	emed pH CZ	poured of	ff-100% for ORP and		
	mp °C Condition	Seal Intact Seal No			Sur Glata		
1 0.6	Good						
2 1.5	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)).

EPA HW No.	Contaminant	SW-846 Methods	Regulatory Leve (mg/L)		
D004	Arsenic	1311	5.0		
D005	Barium	1311	100.0		
D018	Benzene	8021B	0.5		
D006	Cadmium	1311	1.0		
D019	Carbon tetrachloridu	3021B 8260B	0.5		
D020	Chlordane	8081A	0.03		
D021	Chlorobenzene	8021B 8260B	100.0		
D022	Chloroferm	8021B 8260B	6.0		
0007	Chromium	1311	5.0		
0023	o-Cresol	8270D	200,0		
D024	nn-Cresol	8270D	200.0		
0025	p-Cresol	3270D	200.0		
0026	Cresol	8270D	200,0		
0027	1,4-Dichlorobenzens	8021B 8121 8260B 8270D	7.5		
0628	1,2-Dichforoethane	8021B 8260B	0.5		
0029	1,1-Dichloroethylane	8021B 8260B	0.7		
0030	2,4-Dinitrotolueno	3091 3270D	0.13		
0032	Hexachlorobenzene	8121	0.13		
0033	Hexachlorobutadiene		0.5		
1034	Hexachloroethaue	8121	0.0		
0008	Lend	1311	5.0		
1009	Mercury	7470A 7471B	0.2		
1035	Methyl ethyl ketone	8015B 8260B	209.0		

Sunco Disposal #1 Quarterly Laboratory Analytical List Page 2

D036	Nitrobenzene	\$091 \$270D	2.0	
D037	Pentrachlorophenol	3041	100.0	
D038	Pyridine	8260B 8270D	5.0	

10010	Selenium	[31]	It o
D011	Silver		1.0
D039		3260B	5.0
D040	Trichloroethylene	8021B 8260B	0.7
D041	2,4,5-Trichlorophenol	\$270D	100.0
D042	2,4,6-Trichlorophenol	3041A 3270D	2.0
D043	Vinyl chloride	8021B 8260B	0.2

If n., 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:

BCI, 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, pll, 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

eather M. Woods

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	1			
Collection Date				
	.,	/2021		Toxicity
	Field	Laboratory		Characteristic
Analyte	Results	Results	Units	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 tertachloride		<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,

Andy Freeman

Laboratory Manager

andyl

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/d	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.

Value exceeds Maximum Contaminant Level. D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Е Value above quantitation range

J Analyte detected below quantitation limits

Sample pH Not In Range

RLReporting Limit Page 1 of 16

Qualifiers:

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
SM2320B: ALKALINITY						Analyst	LRN
Total Alkalinity (as CaCO3)	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			_	···· g / –	·	Analyst	
	0.40				4	•	
pH	6.40		Н	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		9/23/2021 8:33:00 AM	T81470
Vinyl chloride	ND	0.20		mg/L		9/23/2021 8:33:00 AM	T81470
Chlorobenzene	ND	100		mg/L		9/23/2021 8:33:00 AM	T81470
Surr: 1,2-Dichloroethane-d4	102	70-130		%Rec		9/23/2021 8:33:00 AM	T81470
Surr: 4-Bromofluorobenzene	102	70-130		%Rec		9/23/2021 8:33:00 AM	T81470
Surr: Dibromofluoromethane	100	70-130		%Rec		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
- ID Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

- 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 16



Pace Analytical ANALYTICAL REPORT

September 27, 2021





Ss











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

Entire Report Reviewed By: John V Howkins

John Hawkins

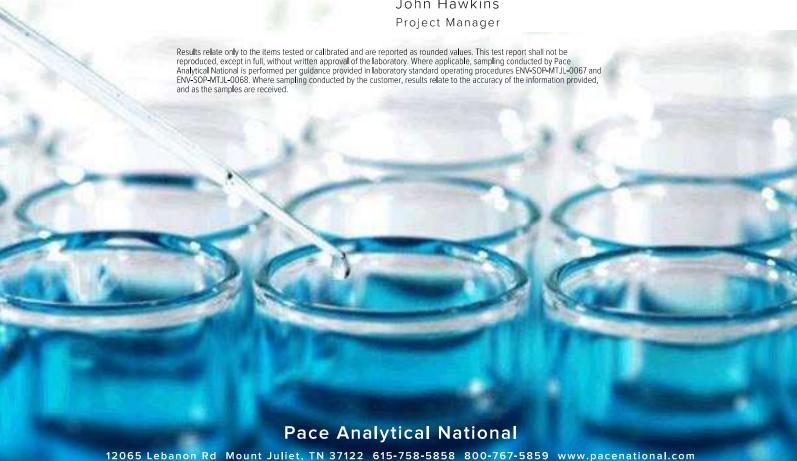


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Method

Wet Chemistry by Method 2580

Wet Chemistry by Method 4500 CN E-2011

Wet Chemistry by Method 4500 S2 D-2011

Wet Chemistry by Method 4500H+ B-2011

Wet Chemistry by Method D93/1010A

Location

Mt. Juliet, TN

SAMPLE SUMMARY

Dilution

1

Preparation

09/23/21 23:34

09/26/21 12:52

09/21/21 18:18

09/24/21 11:00

09/20/21 02:13

date/time

Batch

WG1743333

WG1746276

WG1743918

WG1745855

WG1742750

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

Analyst

 AMH

KEG

BFG

MRM

WOS

Analysis

date/time

09/23/21 23:34

09/27/21 12:02

09/21/21 18:18

09/24/21 11:00

09/20/21 02:13

¹ Cp



















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

John V Howkins

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

Sample Delivery Group (SDG) Narrative

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

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

 Lab Sample ID
 Project Sample ID
 Method

 L1405375-01
 2019847-001F/G/H/I S-19 (9/15/21)
 4500 CN E-2011

SAMPLE RESULTS - 01

Wet Chemistry by Method 2580

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

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



Wet Chemistry by Method 4500 CN E-2011

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



Wet Chemistry by Method 4500 S2 D-2011

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



Wet Chemistry by Method 4500H+ B-2011

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



Sample Narrative:

L1405375-01 WG1745855: 6.32 at 19.4C

Wet Chemistry by Method D93/1010A

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



PAGE: 6 of 13

DATE/TIME: 09/27/2115:49

SDG: L1405375

PROJECT:

ACCOUNT:
Hall Environmental Analysis Laboratory

WG1743333 Net Chemistry by Method 2580	thod 2580			70	QUALITY C	CONTROL SUMMARY	L SUM	MARY			Recei
21405375-01 Original Sample (OS) • Duplicate (DUP)	inal Sample (dnd • (SC	licate (DUP)								ived (
OS) L1405375-01 09/23/21 23:34 • (DUP) R3708148-3 09/23/21 23:34 Original Result DUP Result DIUtion DUP I MV mV mV	:/21 23:34 • (DUP) Original Result mV	R3708148-3 (DUP Result mV	23:34 • (DUP) R3708148-3 09/23/21 23:34 Original Result DUP Result Dilution DUP Diff mV mV	Jill	DUP Qualifier DUP I	OUP Diff Limits πV					by OCD:
au 19: 11/2	20.3	20.6	1 0.300		20						9/1/202
aboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)	ol Sample (LC	S) • Labor	atory Contr	ol Sample	Duplicate	(LCSD)					2 5:(
CLCS) R3708148-1 09/23	/21 23:34 • (LCSD)	R3708148-2	09/23/21 23:34								96: 4
10: 3	Spike Amount LCS Result	LCS Result		LCS Rec.	LCSD Rec.	ec. Limits	CS Qualifier	LCS Qualifier LCSD Qualifier Diff	Diff	Diff Limits	7 1
Manalyte	Λm	m/	/m/	%	%	%			Λm	Λm	SM
ರ್ಷ 23 AM	106	106	106	100	8.66	86.0-105			0.300	20	o O O

Sc.

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PAGE: 7 of 13

DATE/TIME: 09/27/2115:49

SDG: L1405375

PROJECT:

Hall Environmental Analysis Laboratory

ACCOUNT:

WG1746276	9			QUALITY CONTROL SUMMARY	Re
Net Chemistry by Method 4500 CN E-2011	Method 4500 CI	N E-2011			ece
parameter (MB)	/IB)				ived (
(MB) R3709045-1 09/27/21 11:41	27/21 11:41				by (
ma	MB Result	MB Qualifier	MB MDL	MB RDL	0 C .
Analyte	mg/l		l/gm	Ngm	D:
Reactive Cyanide			0.00180	0.00500	9/1/
11/2					/202
1405016-02 Original Sample (OS) • Duplicate (DUP)	iginal Sample	→ (OS) • Dup	olicate (DU	(0	2 5:
COS) L1405016-02 09/27/2111:50 • (DUP) R3709045-5 09/27/2111:53	/27/21 11:50 • (DUF) R3709045-5	09/27/21 11:53		96: 4

PM

DUP RPD Limits

DUP Qualifier

Dilution DUP RPD

Original Result DUP Result

Mg/l

ND/N

MW Reactive Cyanide

20

0.000

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

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

DUP RPD liffier Limits	%	20
DUP RPD <u>DUP Qualifi</u> e	%	0.000
Dilution		_
Original Result DUP Result	l/gm	QN
Original F	l/gm	Q
	Analyte	Reactive Cyanide

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Laboratory Control Sample (LCS)

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

(OS) L1403882-02 09/27/2111:46 • (MS) R3709045-3 09/27/2111:47 • (MSD) R3709C	27/21 11:46 • (MS) F	२३७०१५-३ ०:	9/27/21 11:47 •	(MSD) R37090 ^a	045-4 09/27/2111:48	111:48						
	Spike Amount	Spike Amount Original Result MS Result	MS Result	MSD Result	MS Rec. MSD Rec.	MSD Rec.	Dilution	Dilution Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/I	mg/l	mg/l	mg/l	%	%		%			%	%
Reactive Cvanide	0.100	GN	0.0932	0.0917	93.2	41.7	_	90 0-110			162	20

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

S5180-05 09/27/21 11:5 Spil		OS) L1405180-05 09/27/21 11:54 • (MS) R3709045-6 09/27/21 11:55 • (MSD) R3709045-7 09/27/21 11:56	Spike Amount Original Result MS Result MSD Result MSD Rec. MSD Rec. Dilution Rec. Limits MS Qualifier MSD Qualifier RPD RPD Limits	% % % l/bm l/bm l/bm l/bm l/sm l/sm l/sm l/sm l/sm l/sm l/sm l/s	00 ND 0.0470 0.0924 47.0 92.4 1 90.0-110 <u>J6</u> <u>J3</u> 65.1 20	
5180-05 09/27/21 11:54 · (MS) Spike Amour mg/l yanide 0.100) R3709045-6 09/2	nt Original Result N.		ND ON	
)5180-05	Grightan Sample	09/27/2111:54 • (MS)	Spike Amoun	l/gm	0.100	
(OS) L140 Analyte Reactive C		(OS) L1405180-05		Analyte	Reactive Cyanide	

PAGE: 8 of 13

DATE/TIME: 09/27/2115:49

SDG: L1405375

PROJECT:

ACCOUNT:
Hall Environmental Analysis Laboratory

3WG1743918 Solvet Chemistry by Method 4500 S2 D-2011	od 4500 S2 L	D-2011		QU	QUALITY C	CONTROI	CONTROL SUMMARY	RY				Rece
per Method Blank (MB)												eived (
(MB) R3707020-1 09/21/21	18:15											by (
ma	MB Result	MB Qualifier	MB MDL	MB RDL								0 €
Analyte mg/l	l/gm		mg/l	mg/l								D :
Reactive Sulfide	n		0.0250	0.0500								9/1
11/2												/20 2
Laboratory Control Sample (LCS)	Sample (LC	;S)										22 5:
C(LCS) R3707020-2 09/21/21 18:16	21 18:16											96 :
10.	Spike Amount LCS Result	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier							47
Malyte	l/gm	mg/l	%	%								PM
Reactive Sulfide	0.500	0.497	99.4	85.0-115								1
AM												° Qc
L1405730-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)	al Sample (OS) • Matr	ix Spike (N	1S) • Matrix	Spike Dupl	licate (MSD)						7
(OS) L1405730-01 09/21/2118:25 • (MS) R3707020-4 09/21/2118:26 • (MSD) R3707020-5 09/21/2118:27	118:25 • (MS) RE	3707020-4 09	1/21/21 18:26 • ((MSD) R370702	0-5 09/21/2118	3:27						Ū
	Spike Amount	Spike Amount Original Result MS Result	MS Result	MSD Result	MS Rec.	MSD Rec. D	Dilution Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	mg/I	mg/l	l/gm	mg/l	%	%	%			%	%	∞
Reactive Sulfide	1.00	QN	0.980	0.971	9.96	95.7	80.0-120			0.923	20	
												σ

9 of 13 PAGE:

09/27/2115:49 DATE/TIME:

SDG: L1405375

PROJECT:

Hall Environmental Analysis Laboratory ACCOUNT:

Received by OCD: 9/1/2022 5:06:47 PM	⁷ G	\overline{A}	°Sc

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		(
		(
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l		(

QUALITY CONTROL SUMMARY 11405375-01

Rec. Limits 99.0-101 LCS Rec. 101 WG1745855

Pawet Chemistry by Method 4500H+ B-2011

Page 2012

Page 3014

Spike Amount LCS Result

Spike Amount LCS Resul Spike Amount LCS Result

LCS Qualifier

CCS: 10:07 at 19:90 a

PAGE: 10 of 13

DATE/TIME: 09/27/2115:49

SDG: L1405375

PROJECT:

ACCOUNT:
Hall Environmental Analysis Laboratory

WG1742750 Twet Chemistry by Method D93/1010A	0 Method D93/10	10 A		l Q	QUALITY	CONTROL SUMMARY	OL SUM	MARY			Rece
2-1405375-01 Original Sample (OS) • Duplicate (DUP)	iginal Sample	e (OS) • Dul	plicate (DUF	<u>(</u>			l				vived (
OS) L1405375-01 09/20/21 02:13 • (DUP) R3706102-3 09/20/21 02:13	/20/21 02:13 • (DL	JP) R3706102-3	09/20/21 02:13								by (
mag	Original Resu	Original Result DUP Result	Dilution DUP RPD	RPD	DUP Qualifier Lir	DUP RPD Limits					OCD ~
Bui Shalyte	deg F	deg F	%		%						x 9
:11	DNF at 170	DNF at 170	1 0.000	00	10						/1/2/
/21/											922
2-1405730-01 Original Sample (OS) • Duplicate (DUP)	riginal Sampl	e (OS) • Du	plicate (DUF	(0							5:06
COS) L1405730-01 09/20/21 02:13 • (DUP) R3706102-4 09/20/21 02:13	/20/21 02:13 • (DL	JP) R3706102-4	09/20/21 02:13								:47
:33:	Original Resu	Original Result DUP Result	Dilution DUP RPD	RPD	DUP Qualifier Lir	DUP RPD Limits					PM S
23 Analyte	deg F	deg F	%		%						
	DNF at 170	DNF at 170	1 0.000	00	10						့ တွင
											7
Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)	trol Sample (LCS) • Labo	oratory Cont	rol Sample	e Duplicate	e (LCSD)					5
(LCS) R3706102-1 09/20/2102:13 • (LCSD) R3706102-2 09/20/2102:13	/20/21 02:13 • (LC	SD) R3706102-;	2 09/20/21 02:1	8							00
	Spike Amour	Spike Amount LCS Result	LCSD Result LCS Rec.	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier RPD	RPD Limits	its	⋖
Analyte	deg F	deg F	deg F	%	%	%		%	%		
Flashpoint	126	125	128	0.66	101	96.0-104		2.38	10		Sc

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

Appleviations and	a 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.



















D. A. L.O. LALLO	4000E	NA
Pace Analytical National	12065 Lebanon Rd	Mount Juliet. TN 3/122

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
lowa	364	Pennsy l vania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky 16	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	Al30792	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

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

TN00003

EPA-Crypto



















 $^{^*\,\}text{Not all certifications held by the laboratory are applicable to the results reported in the attached report.}$

 $^{^{*}}$ Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

ENVIRONMENTAL LABORATORY ANALYSIS

CHAIN OF CUSTODY RECORD PAGE: 1

OF:

4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: clients.hallenvironmental.com F077

Hall Environmental Analysis Laboratory

SUBC	SUB CONTRATOR: Pace TN	COMPANY	PACE TN		PHONE	(800) 767-5859 FAX: (615) 758-5859	
ADDRESS		12065 Lebanon Rd			ACCOUNT #:	EMAIL:	
CITY,	CITY, STATE, ZIP. Mt. J.	Mt. Juliet, TN 37122					
	E _{SIC.}		BOTTLE		COLLECTION	5LES9/17	l.
ITEM	1 SAMPLE	CLIENT SAMPLE ID	TYPE	MATRIX	DATE	ANALYTICAL COMMENTS	S
-	2109847-001F	2109847-001F S-19 (9/15/21)	500HDPE	Aqueous	Aqueous 9/15/2021 10:15:00 AM	1 RCI	3
2		2109847-001G S-19 (9/15/21)	500PLNAOH	Aqueous	500PLNAOH Aqueous 9/15/2021 10:15:00 AM 1 RCI	1 RCI	
m		2109847-001H S-19 (9/15/21)	500PL-NaOH	Aqueous	500PL-NaOH Aqueous 9/15/2021 10:15:00 AM 1 RCI	1 RCI	
4	2109847-0011	2109847-0011 S-19 (9/15/21)	125HDP	Aqueous	Aqueous 9/15/2021 10:15:00 AM 1 ORP	1 ORP	4

TKK # 2837 8304 5744

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.

ONLINE Attempt to Cool? REPORT TRANSMITTAL DESIRED EMAIL. FOR LAB USE ONLY ☐ FAX ☐ HARDCOPY (extra cost) Temp of samples 9/17/21 "Dave Time 3rd BD Date: Date: 2nd BD Next BD Received By: Received By 1:37 PM RUSH Time: Time: 9/16/2021 Standard V Date: Date: Date: TAT: Relinquished By: Relinquished By: Relinquished By

2,0 45-20

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109847**

14-Oct-21

Client: Souder, Miller and Associates

Project: Agua Moss Sunco 1

Sample ID: MB	SampT	Type: ml	olk	Tes						
Client ID: PBW	Batc	h I D: R8	1353	F	RunNo: 8	31353				
Prep Date:	Analysis [Date: 9 /	16/2021	5	SeqNo: 2	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	Samp1	Type: Ics	3	Tes	tCode: E	PA Method	300.0: Anions	;		
Client ID: LCSW	Batc	h I D: R8	1353	F	RunNo: 8	31353				
Prep Date:	Analysis [Date: 9/	16/2021	5	SeqNo: 2	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			

Prep Date:	Analysis D)ate: 9 /	16/2021	S	SeqNo: 2	873076	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	SampT	ype: m t	olk	Tes	tCode: El	PA Method	300.0: Anions	;		
Client ID: PBW	Batch	ID: R8	1507	F	RunNo: 8	1507				
Prep Date:	Analysis D	ate: 9 /	22/2021	S	SeqNo: 2	879514	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50		•		•				•

Sample ID: LCS	SampT	ype: Ics	,	Tes	tCode: El	PA Method	300.0: Anion	s		
Client ID: LCSW	Batch	ID: R8	1507	F	RunNo: 8	1507				
Prep Date:	Analysis D	ate: 9 /	22/2021	5	SeqNo: 2	879515	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 Quanitative Limit

- 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

Hall Environmental Analysis Laboratory, Inc.

SampType: MBLK

WO#: **2109847** *14-Oct-21*

Client: Souder, Miller and Associates

Sample ID: 2109847-001BMSD SampType: MSD

Sample ID: MB-62710

Project: Agua Moss Sunco 1

Sample ID: 2	109847-001BMS	SampTy	/pe: M \$	8	Test	tCode: El	PA Method	8081: Pestici	des TCLP		
Client ID: S-	-19 (9/15/21)	Batch	ID: 62	710	R	RunNo: 8	1863				
Prep Date:	9/21/2021	Analysis Da	ate: 9/	/23/2021	S	SeqNo: 2	896549	Units: %Red	:		
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Decachlor	robiphenyl	0.0022		0.002500		86.5	41.7	129			
Surr: Tetrachlor	ro-m-xylene	0.0016		0.002500		65.7	31.8	88.5			

Client ID: S-19 (9/15/21)	Batch	ID: 62	710	R	RunNo: 8	1863				
Prep Date: 9/21/2021	Analysis Da	ate: 9 /	23/2021	S	eqNo: 2	896550	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	

TestCode: EPA Method 8081: Pesticides TCLP

TestCode: EPA Method 8081: Pesticides TCLP

Client ID: PBW	Batch	ID: 62	710	R	RunNo: 8	1863				
Prep Date: 9/21/2021	Analysis D	ate: 9 /:	23/2021	S	SeqNo: 2	896556	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 10: WB-62/10	Samp	ype: WE	SLK	res	icode: Ei	PA Method	8081: Pestici	aes ICLP	,	
Client ID: PBW	Batc	Batch ID: 62710 RunNo: 81863								
Prep Date: 9/21/2021	Analysis [Date: 9/	23/2021	8	SeqNo: 2	896557	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-xvlene	0.0015		0.002500		60.0	31.8	88.5			

Sample ID: LCS-62710	Sampi	ype: LC	S	res	tCode: El	PA Method	8081: Pestici	des ICLP			
Client ID: LCSW	Batch	ID: 62	710	F	RunNo: 8	1863					
Prep Date: 9/21/2021	Analysis D	ate: 9/	23/2021	8	SeqNo: 2	896558	Units: %Red	:			
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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

SampType: LCS

WO#: **2109847**

14-Oct-21

Client: Souder, Miller and Associates

Project: Agua Moss Sunco 1

Sample ID: mb2	SampT	SampType: MBLK TestCode: TCLP Volatiles by 8260B								
Client ID: PBW	Batch	n I D: T8	1470	F	RunNo: 8	1470				
Prep Date:	Analysis D	oate: 9 /	23/2021	5	SeqNo: 2	879507	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			

, , , , , , , , , , , , , , , , , , ,										
Client ID: LCSW	Batch ID: T81470 Analysis Date: 9/23/2021			F	1470					
Prep Date:				8	SeqNo: 2	879508	Units: mg/L	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			

TestCode: TCLP Volatiles by 8260B

Qualifiers:

Sample ID: 100ng 8260 lcs

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^{*} Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109847**

14-Oct-21

Client: Souder, Miller and Associates

Project: Agua Moss Sunco 1

Sample ID: mb-62742	SampType: MBLK			Tes	tCode: El	PA Method	8270C TCLP					
Client ID: PBW	Batch	n I D: 62	742	F	RunNo: 8	1566						
Prep Date: 9/22/2021	Analysis D	ate: 9/ 2	25/2021	S	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: Ics-62742	Samp	SampType: LCS TestCode: EPA Method 8								
Client ID: LCSW	Bato	ch ID: 62	742	F	RunNo: 8	1566				
Prep Date: 9/22/2021	Analysis	Date: 9 /	25/2021	S	SeqNo: 2	882407	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2109847**

14-Oct-21

Client: Souder, Miller and Associates

Project: Agua Moss Sunco 1

Sample ID: Ics-62742	SampT	ype: LC	s	Tes	tCode: El	PA Method				
Client ID: LCSW	Batch	n I D: 62	742	F	RunNo: 8	1566				
Prep Date: 9/22/2021	Analysis D	ate: 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	Samp	SampType: MS TestCode: EPA Method 8270C TCLP									
Client ID: S-19 (9/15/21)	Bato	ch I D: 62 7	742	F	RunNo: 8	1566					
Prep Date: 9/22/2021	Analysis	Date: 9 /	25/2021	8	SeqNo: 28	882409	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)	Bato	Batch ID: 62742 RunNo: 81566								
Prep Date: 9/22/2021	Analysis I	Date: 9 /2	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2109847**

14-Oct-21

Client: Souder, Miller and Associates

Project: Agua Moss Sunco 1

Sample ID: 2109847-001bmsd	l Samp	Туре: МЅ	SD	Tes	TestCode: EPA Method 8270C TCLP					
Client ID: S-19 (9/15/21)	Bato	h ID: 62	742	F	RunNo: 81566					
Prep Date: 9/22/2021	Analysis l	Date: 9 /:	25/2021	S	SeqNo: 2	882410	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	
Pyridine	0.0059	0.0010	0.1000	0	5.86	15	82	23.4	20	RS
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 Quanitative Limit
 - S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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: LLLCS-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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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

%REC %RPD **RPDLimit** Analyte Result **PQL** SPK value SPK Ref Val LowLimit HighLimit Qual 48 1.0 50.00 0 96.5 80 120 Calcium Magnesium 49 1.0 50.00 0 97.6 80 120 49 0 80 120 Potassium 1.0 50.00 97.3 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 76 50.00 30.28 92.3 75 Potassium 1.0 125

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

RPDLimit %REC %RPD Analyte Result PQL SPK value SPK Ref Val LowLimit HighLimit Qual Magnesium 59 1.0 50.00 12.89 91.8 75 125 1.06 20 76 50.00 30.28 91.1 75 20 Potassium 1.0 125 0.813

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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

ND

0.10

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

0.0050

Prep Date: 9/16/2021 Analysis Date: 9/21/2021 SeqNo: 2877195 Units: mg/L

PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte Result Arsenic ND 0.030 ND 0.0020 Barium Cadmium ND 0.0020 Chromium ND 0.0060 Lead ND 0.020 Selenium ND 0.050

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

Qualifiers:

Silver

Silver

Page 14 of 16

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

Practical Quanitative Limit PQL

[%] Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

Ε Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Limit

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: Ics-1 alk SampType: Ics 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: Ics-2 alk SampType: Ics 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 Quanitative Limit S % Recovery outside of range due to dilution or matrix B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 15 of 16

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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

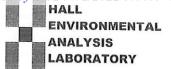
E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 16 of 16



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

Transit Barrier	websile: clients.hallenvironmente	l.com	
Client Name: Souder, Miller and Associates	Work Order Number: 2109847	RcptNo	1
Received By: Sean Livingston 9/	6/2021 8:10:00 AM	Salson	
Completed By: Sean Livingston 9/1	6/2021 11:59:05 AM	Salzota Salzota	
Reviewed By: JR 9/16/21		In Wyster	
Chain of Custody			
1. Is Chain of Custody complete?	Yes 🗸	No Not Present	
2. How was the sample delivered?	Courier		
Log In			
3. Was an attempt made to cool the samples?	Yes 🗸	No □ NA □	
4. Were all samples received at a temperature of >	0° C to 6.0°C Yes ✓	No 🗆 NA 🗔	
5. Sample(s) in proper container(s)?	Yes 🗸	No 🗌	
6. Sufficient sample volume for indicated test(s)?	Yes 🗸	No 🗆	ř.
7. Are samples (except VOA and ONG) properly pre	served? Yes 🗹	No 1 , 90 9/16/2	-1
8. Was preservative added to bottles?	Yes 🗹	No X NA	
9. Received at least 1 vial with headspace <1/4" for A	AQ VOA? Yes ✓	No 🗌 NA 🗌	
10. Were any sample containers received broken?	Yes	No 🗹 # of preserved	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes 🗸	No D bottles checked for pH:	2 2 unless noted)
2. Are matrices correctly identified on Chain of Custo	dy? Yes ✓	No Adjusted?	ves
3. Is it clear what analyses were requested?	Yes 🗸	No 🗌	, 22 - 1
4. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes 🗸	No Checked by:	KPG 9/16/
pecial Handling (if applicable)			
15. Was client notified of all discrepancies with this or	der? Yes	No ☐ NA ✓	
Person Notified:	Date:	Market acceptance or president of America.	
By Whom:	Via: eMail P	hone Fax In Person	
Regarding:		AND THE PROPERTY OF THE PROPER	
Client Instructions:	1 11 0 11 1		11011
16. Additional remarks: 00 1G Did no	of pm. Added 1	Uml to 001H 0	NOOT,
7. Cooler Information Acec Adea	0.5 to sample c	OIE of HNOz. Ac	ded 0.4 of
Cooler No Temp °C Condition Seal Int		Signed By to Sample	
1 -0.3 Good 2 3.7 Good		10 2011/bil	J COLD.
2 3.7 Good	and -10	NO.	KPG
	Poud of From	1 001 into a	
To a select remaining reason regard to a significant	125 ml 600	bottle	9/16/21
Page 1 of 1	upa a		1889

Received b	by OC	CD: 9	/1/20	22 5.	:06	:47 PM						Τ	Τ	T	T	Т	T	Τ			\neg	Page	117 of 3	331
HALL ENVIRONMENTAL	DRY	allenvironmental.com	- Albuquerque, NM 87109	505-345-3975 Fax 505-345-4107 Analysis Regulast		SMIS OS, 5Oc	(1.41) 1.5270 1.520N	als 03, 03,	lethoe y 83° sr, Net (AO)	EDB (M PAHs b RCRA 8 RCRA 8 RCRA (V RCRA (S	33										7	Bill to Agua Moss forces		This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.
			4901	<u>e</u>	-	CB,e O \ WKO				9081 P											,	C	C 05	Any su
			•			(1208) s													-	\perp	Remarks:	5		ssibility.
Time		Nama Moss Sunca #				Spage	Sampler: Heather Wools	olers: 2	(including CF): - 0.9 ±0= -0.7 (°C)	Container Preservative HEAL No. Type and # Type	7	(1)500ml Playe Na DH	(1)500ml-Playlic NAON	(2)500m-Plastic Non	(1)125 ML Plastic HWO,	1)125ml Planie H2.504	5)IL Amber Non	3)your von Hel			Received by: Via: Date Time R	JULY 9/15/2, 1700	Second by: Via: Date' Time	intracted to other accredited laboratories. This serves as notice of this po
Chain-of-Custody Record		Mailing Address: Lot M. Rood	E.	Phone #:(505) 325 -	email or Fax#: Hendhar Winds Osamrailler. Can Project Manager	QA/QC Package: Standard □ Level 4 (Full Validation)	Accreditation: Az Compliance Delta Del	(ad		Date Time Matrix Sample Name	1/5/21 1015 Ag S-19(9/15/21)/			<i>></i>							ite: Time: Relinquished by:	1/5/24 Mo Heath M. W.	7	If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories.

Sunco Disposal #1 Quarterly Laboratory Analytical Ust 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)).

		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
0025		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	1	2,4-Dinitrotolueno	8091 8270D	0.13
0032	·	Hexachlorobenzene	8121	0.13
0033		Texachlorobutadiene	8021B 8121 8260B	0.5
		Hexachioroethane	8121	3.0
9008	1	Lead	1311	5.0
0009		Mercury	7470A 7471B	0.2
0035		Methyl ethyl ketone	8015B 8260B	200.0

Sunco Disposal #1 Quarterly Laboratory Analytical List

D036		Nitrobenzene	8091 8270D	2.0	
D037	-	Pentrachlorophenol	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 0.5 8260B					
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).

ADDTIONALLY:

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

eather M. Woods

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		-20		
Collection Date	12/3	0/2021		
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 tertachloride		<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		<0.70	mg/L	0.7 mg/L
Hexachlorobenzene		<0.13		0.13 mg/L
Hexachlorobutadiene		+	mg/L	
Hexachloroethane		<0.50	mg/L	0.5 mg/L
		<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	IIIg/L	
·	6.9		mc/l	
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,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109



Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505 345 3075 EAV: 505 345 4107

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 ReportLab 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	Ε	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	Н	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 C	a 1	1/6/2022 11:49:37 AM	R85009
Carbonate (As CaCO3)	ND	2.000		mg/L C		1/6/2022 11:49:37 AM	R85009
Total Alkalinity (as CaCO3)	122.9	20.00		mg/L C		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.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- 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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Analytical ReportLab 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
рН	6.65		Н	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	
EPA METHOD 6010B: DISSOLVED METALS				J		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				···g/ =		Analyst:	
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:	
Benzene	ND	0.50		mg/L	200) 1/5/2022 12:16:00 AM	T84927
1,2-Dichloroethane (EDC)	ND	0.50		mg/L) 1/5/2022 12:16:00 AM	T84927
2-Butanone	ND	200		mg/L) 1/5/2022 12:16:00 AM	T84927
Carbon Tetrachloride	ND	0.50		mg/L) 1/5/2022 12:16:00 AM	T84927
Chloroform	ND	6.0		mg/L) 1/5/2022 12:16:00 AM	T84927
1,4-Dichlorobenzene	ND	7.5		mg/L) 1/5/2022 12:16:00 AM	T84927
1,1-Dichloroethene	ND	0.70		mg/L) 1/5/2022 12:16:00 AM	T84927
Tetrachloroethene (PCE)	ND	0.70		mg/L) 1/5/2022 12:16:00 AM	T84927
Trichloroethene (TCE)	ND	0.50		mg/L) 1/5/2022 12:16:00 AM	T84927
Vinyl chloride	ND	0.20		mg/L) 1/5/2022 12:16:00 AM	T84927
Chlorobenzene	ND	100		mg/L) 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.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- D Not Detected at the Reporting Limit
- PQL Practical Quanitative 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

Page 3 of 17



Pace Analytical ANALYTICAL REPORT

January 20, 2022

Тс

Ss

Cn Sr

Qc

GI

Sc

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1447902 Samples Received: 01/05/2022 Project Number: 2201050

Description:

001 Site:

Report To: Andy Freeman

4901 Hawkins NE

Albuquerque, NM 87109

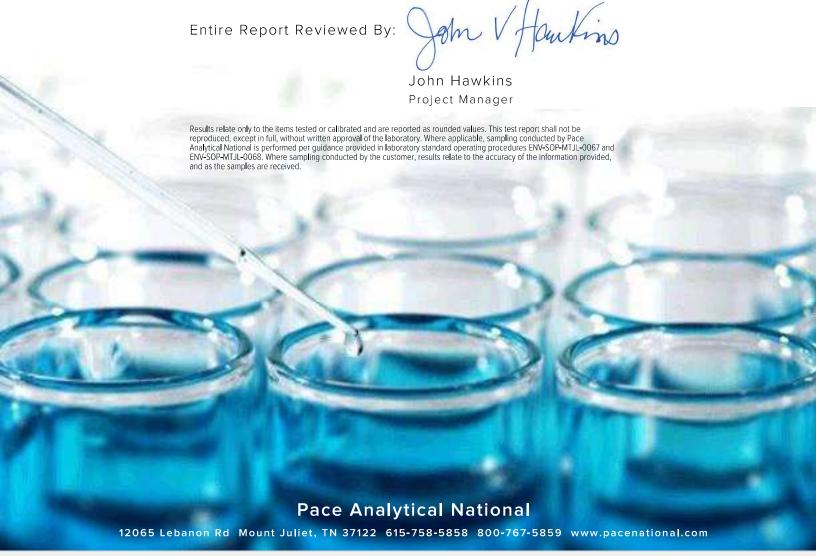


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SAMPLE SUMMARY

2201050-001F S-20(12/30/21) L1447902-01 GW			Collected by	Collected date/time 12/30/21 10:20	Received da 01/05/22 09	
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	Gl	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
2201050-001G S-20(12/30/21) L1447902-02 GW			Collected by	Collected date/time 12/30/21 10:20	Received da 01/05/22 09	
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
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	Gl	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
			Collected by	Collected date/time	Received da	te/time
2201050-001H S-20(12/30/21) L1447902-03 GW				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	Gl	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
2201050-001 S-20(12/30/21) L1447902-04 GW			Collected by	Collected date/time 12/30/21 10:20	Received da 01/05/22 09	

Batch

WG1798773

Dilution

Preparation

01/10/22 07:35

date/time

Analysis

date/time

01/10/22 07:35

Analyst

ARD

Location

Mt. Juliet, TN



















Method

Wet Chemistry by Method 2580

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

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SAMPLE RESULTS - 01

Wet Chemistry by Method 4500 CN E-2016

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



Wet Chemistry by Method 4500 S2 D-2011

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



Wet Chemistry by Method 9040C

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



Sample Narrative:

L1447902-01 WG1801697: 6.8 at 19.4C



Wet Chemistry by Method D93/1010A

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





Hall Environmental Analysis Laboratory

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

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SAMPLE RESULTS - 02

L1447902

Wet Chemistry by Method 4500 CN E-2016

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



Wet Chemistry by Method 4500 S2 D-2011

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



Cn

Wet Chemistry by Method 9040C

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



Sample Narrative:

L1447902-02 WG1801697: 12.24 at 25C



Gl

Wet Chemistry by Method D93/1010A

	,			
		<u>lifier</u> Dilution	Analysis	Batch
Analyte	deg F		date / time	
Flashpoint	DNF at 170	1	01/19/2022 00:07	WG1803616



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SAMPLE RESULTS - 03

1447902

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

Wet Chemistry by Method 4500 CN E-2016

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



Wet Chemistry by Method 4500 S2 D-2011

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



Cn

Wet Chemistry by Method 9040C

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



Sample Narrative:

L1447902-03 WG1801697: 12.37 at 25C



Gl

Wet Chemistry by Method D93/1010A

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



SAMPLE RESULTS - 04

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

Wet Chemistry by Method 2580

	Result	Qualifier	Dilution	Analysis	<u>Batch</u>	
Analyte	mV			date / time		
ORP	64 7	Т8	1	01/10/2022 07:35	WG1798773	



















PAGE: 9 of 17

DATE/TIME: 01/20/22 09:42

SDG: L1447902

PROJECT: 2201050

ACCOUNT:
Hall Environmental Analysis Laboratory

8 VG 1798773	0 8 1 7 1			g	QUALITY	CONTROL SUMMARY	OL SUN	MARY			Rec
o o o o o o o o o o o o o o o o o o o	5					100	5				ei
2-1447902-04 Original Sample (OS) • Duplicate (DUP)	jinal Sample (C	S) • Dup	licate (DUF								ved (
OS) L1447902-04 01/10,	/22 07:35 • (DUP) R3	3748325-3	01/10/22 07:35								by (
Original Result DUP Result Dilution DUP I	Original Result DU	JP Result	Dilution DUP Diff)iff	DUP Qualifier DU	DUP Diff Limits					0 C .
Analyte	mV m	>	Λm		Λm						D:
ig:	64.7 61	7.	1 3.00		20						9/1
11/2											/2.6 S
27.75 aboratory Contro	ol Sample (LCS) • Labor	atory Conti	ol Sample	e Duplicate	(LCSD)					22 5.
20 CS) R3748325-1 01/10/22 07:35 • (LCSD) R3748325-2 01/10/22 07:35	22 07:35 • (LCSD) R	3748325-2	01/10/22 07:35								<u>96</u> .
10	Spike Amount LCS Result	S Result	LCSD Result LCS Rec.	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier Diff	=	Diff Limits	47
Manalyte	Vm W	>	μV	%	%	%		Λm	/	mV	PM S
33 A	111 108		114	103	105	86.0-105		2.70	70	20	
4 <i>M</i>											ွတင
											D

2018 2893 Method 4500 CN E-2016	thod 4500 CN	E-2016		O L	QUALITY	CONTROL L1447902-01,02,03	~	SUMMARY	>					Rece
per (ME	3)													ived b
MB) R3750712-1 01/17/22 18:05 MB Res Manalyte mg/l	2 18:05 MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l										y OCD:
Reactive Cyanide	n		0.00180	0.00500										9/1/ c
0i.U 20-2002.07	iinal Samole	• (50)	olicate (Di	<u>a</u>										/2022 5
OS) L1447902-02 01/17/22 18:10 • (DUP) R3750712-3 01/17/22 18:11	.22 18:10 • (DUP)	R3750712-3 (1/17/22 18:11											: 66 :
10::	Original Result DUP Result	DUP Result	Dilution	Q	DUP Qualifier DU	DUP RPD Limits								47 I
3:53 Analyte	mg/l	/bm	%		%	2								PM SS
Weactive Cyanide	QN	QN	1 0	0.000	20									[®] QC
L1450181-04 Original Sample (OS) • Duplicate (DUP)	nal Sample (dnd • (SO)	licate (DU	IP)										<u>D</u>
(OS) L1450181-04 01/17/22 18:20 • (DUP) R3750712-6 01/17/22 18:21	.2 18:20 • (DUP)	33750712-6 C	1/17/22 18:21											
	Original Result DUP Result	DUP Result	Dilution DUP RPD		DUP Qualifier Lin	DUP RPD Limits								₽
Analyte	mg/l	l/gm	%		%									
Reactive Cyanide	QV	Q	1 0.	0.000	20									Sc
Laboratory Control Sample (LCS)	J Sample (L	(32)												
(LCS) R3750712-2 01/17/22 18:06	22 18:06													
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier									
Analyte	mg/l	l/gm	%	%										
Reactive Cyanide	0.100	0.0956	92.6	87.1-120										
L1450181-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)	nal Sample	(OS) • Matı	ix Spike (MS) • Matrix	Spike Du	olicate (MSI	<u></u>							
(OS) L1450181-02 01/17/22 18:17 • (MS) R3750712-4 01/17/22 18:18 • (MSD) R3750712-5 01/17/22	22 18:17 • (MS) R3	750712-4 01/	7/22 18:18 • (1	MSD) R3750712-	5 01/17/22 18:19			:	:	<u>:</u>		:		
Analyte	Spike Amount mg/l	Original Result MS Result mg/l mg/l	t MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualitier	MSD Qualitier	. RPD %	RPD Limits %		
Reactive Cyanide	0.100	QN	0.0962	0.0877	96.2	87.7	_	90.0-110		9[9.24	20		
L1450312-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)	inal Sample	(OS) • Mat	rix Spike	(MS) • Matri>	< Spike Du	plicate (MS	<u>Q</u>							
(OS) L1450312-02 01/17/22 18:27 • (MS) R3750712-7 01/17/22 18:30 • (MSD) R3750712-8 01/17/22 18:31	22 18:27 • (MS) R	3750712-7 01.	17/22 18:30	(MSD) R375071.	2-8 01/17/22 18	3:31								
Analyte	Spike Amount	Original Result MS Result	t MS Result	MSD Result	MS Rec.	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	. RPD	RPD Limits		Pag
Description Consider	- 000		25000	- GO O	0.47	27 12		000			0000	£ 00		e 1
Keactive Cyanide	0.100		7/60:0	6/60:0	7.76	c./9	-	011-0:06			0.308	70		136 of
	ACCOUNT:			PRC	PROJECT:		S	SDG:		DATI	DATE/TIME:		PAGE:	331
Hall Environm	Hall Environmental Analysis Laboratory	ratory		22(2201050		L14	L1447902		01/20/	01/20/22 09:42		10 of 17	

PAGE: 11 of 17

DATE/TIME: 01/20/22 09:42

SDG: L1447902

PROJECT: 2201050

ACCOUNT:
Hall Environmental Analysis Laboratory

WG1802236	thod 4500 S2 E)-2011		QU	QUALITY CONTROL SUMMARY	Recei
page (MB) (MB)	3)					ived (
(MB) R3750350-1 01/16/2	22 09:16					by (
ma	MB Result	MB Qualifier	MB MDL	MB RDL		0 C.
Analyte	l/gm		mg/l	mg/l		D:
Reactive Sulfide	ח		0.0250	0.0500		9/1/
11/2						/ 2.02
21/20 (LCS)	Sample (LC	(S:				2 5:
201/16, R3750350-2 01/16	/22 09:17					96:
10:	Spike Amount LCS Result	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	47
% dualyte	mg/l	mg/l	%	%		PM S
Reactive Sulfide	0.500	0.521	104	85.0-115		ſ
4 <i>M</i>						ာတ္ထ
						7
						<u></u> 5

PAGE: 12 of 17

01/20/22 09:42 DATE/TIME:

L1447902 SDG:

PROJECT: 2201050

Hall Environmental Analysis Laboratory

ACCOUNT:

WG1801697	ethod 9040C			Ŋ	QUALITY CONTROL SUMMARY	Rece
pa. 1447902-02 Original Sample (OS) • Duplicate (DUP)	ginal Sample	dnQ • (SO)	licate (DU	P)		eived (
OS) L1447902-02 01/14	./22 12:00 • (DUP)	२३७४००५-२	01/14/22 12:00			by (
Original Result DUP Result Dilution DUP	Original Result	DUP Result	Dilution DUP RPD	RPD	DUP Qualifier Limits	OCD ~
<i>Sui</i>	ns	su	%		%	: 9/
Corrosivity by pH	12.2	12.2	1 0.000	00		/ 1/2
77/ Sample Narrative:						922
05: 12.24 at 25C						4 2: Q
DUP: 12.24 at 25C						5:47
:33:						PM S
aboratory Control Sample (LCS)	ol Sample (LC	(S)				
CLCS) R3750029-1 01/14/22 12:00	/22 12:00					ာ တွင
	Spike Amount LCS Result	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	
Analyte	ns	ns	%	%		
Corrosivity by pH	10.0	10.1	101	99.0-101)
Sample Narrative:						₹

LCS: 10.06 at 18.5C

PAGE: 13 of 17

DATE/TIME: 01/20/22 09:42

SDG: L1447902

PROJECT: 2201050

ACCOUNT:
Hall Environmental Analysis Laboratory

3WG1803616	ethod D93/1010	۵		Q	QUALITY	CONTROL SUMMARY	OL SUM	IMARY			Rece
2.1447902-01 Original Sample (OS) • Duplicate (DUP)	jinal Sample	dn Q • (SO)	licate (DUP							,	ived
OS) L1447902-01 01/19/	/22 00:07 • (DUP)	R3751088-3	01/19/22 00:07								by (
Original Result DUP Result Dilution DUP	Original Result	DUP Result	Dilution DUP RPD	RPD	DUP Qualifier Lim	DUP RPD Limits					OCD ~
<i>gui</i> <i>S</i> Analyte	deg F	deg F	%		%); 9/
: 11/21	148	150	1 1.35		10						/1/2022
Salaboratory Control Sample (LCS) • Laboratory Control Sample Duplicat	ol Sample (L(S) • Labo	ratory Cont	rol Sampl	e Duplicate	e (LCSD)					5:06
LCS) R3751088-1 01/19/22 00:07 • (LCSD) R3751088-2 01/19/22 00:07	722 00:07 • (LCSD) R3751088-2	01/19/22 00:07	_							:47
):33	Spike Amount	LCS Result	Spike Amount LCS Result LCSD Result LCS Rec.	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	Rec. Limits LCS Qualifier RPD	RPD Limits		P
3.2.√nalyte	deg F	deg F	deg F	%	%	%		%	%		M
lashboint AM	126	128	130	101	103	96.0-104		1.55	10		GC

Sc

DATE/TIME: 01/20/22 09:42

SDG: L1447902

PROJECT: 2201050

ACCOUNT:
Hall Environmental Analysis Laboratory

3WG1804312 3Wet Chemistry by Method D93/1010A	2 Method D93/101	0.4		O	QUALITY C	CONTROL SUMMARY	L SUM	MARY		Rece
9 91.1452498-02 Original Sample (OS) • Duplicate (DUP)	riginal Sample	nQ • (SO) e	ıplicate ()UP)						vived (
OS) L1452498-02 01/20/22 03:48 • (DUP) R3751612-3 01/20/22 03:48	/20/22 03:48 • (DL	JP) R3751612-3	01/20/22 0	3:48						by (
mag	Original Resul	Original Result DUP Result	Dilution DUP RPD	DUP RPD	DUP Qualifier Limit	DUP RPD Limits				OCD ~
<i>S</i> uri Suri Suri Suri Suri Suri Suri Suri S	deg F	deg F		%	%					r 9/
Flashpoint	79.6	83.6	-	4.90	10					1/2 m
1/21/										022
2.1452498-03 Original Sample (OS) • Duplicate (DUP)	riginal Sample	o (SO) • Du	plicate (OUP)						5: 0 0
OS) L1452498-03 01/20/22 03:48 • (DUP) R3751612-4 01/20/22 03:48	/20/22 03:48 • (DL	JP) R3751612-4	01/20/22 0	3:48						:47
:33:	Original Resul	Original Result DUP Result	Dilution DUP RPD	DUP RPD	DUP Qualifier Limit	DUP RPD Limits				PM S
Synalyte Synalyte	deg F	deg F		%	%					
M-lashpoint	146	152	-	4.04	10					OC
Laboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)	trol Sample (L	.CS) • Labo	ratory Co	ontrol Sam	ple Duplicate	(LCSD)				
(LCS) R3751612-1 01/20/22 03:48 • (LCSD) R3751612-2 01/20/22 03:48	0/22 03:48 • (LCSI	D) R3751612-2	01/20/22 0	3:48						C
	Spike Amount	Spike Amount LCS Result	LCSD Result	It LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier RPD	RPD Limits	, Z
Analyte	deg F	deg F	deg F	%	%	%		%	%	
Flashpoint	126	122	122	96.5	96.5	96.0-104		0.000	10	500

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

Abbic viations and	
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.

















Т8

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

Pace Analy	vtical National	12065 Lebanon	Rd Mount Juliet	TN 37122
I december	y ticaj i vationaj	IZOOO ECDUNON	Na Mount Jujict	, 114 0/122

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
lowa	364	Pennsy l vania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky ^{1 6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	Al30792	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	1401.02	DOD	1101.01



 $^{^* \, \}text{Not all certifications held by the laboratory are applicable to the results reported in the attached report.} \\$

TN00003

EPA-Crypto



















 $^{^{*}}$ Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

ENVIRONMENTAL LABORATORY ANALYSIS

COBENTI 03 00 Hall Environmental Analysis Laboratory Ilbuquerque, NM 87109 4901 Hawkins NE TEL: 505-345-3975 FAX: 505-345-4107 0 Website: clients.hallenvironmental.com ANALYTICAL COMMENTS (615) 758-5859 EMAIL: H101 (800) 767-5859 OF: 12/30/2021 10:20:00 AM 1 ORP 2/30/2021 10:20:00 AM 1 RCI 12/30/2021 10:20:00 AM 1 RCI CHAIN OF CUSTODY RECORD PAGE ACCOUNT #: COLLECTION PHONE DATE MATRIX Aqueous 500PL-NaOH Aqueous Aqueous 500PLNAOH BOTTLE TYPE 500HDPE 125HDP ZVIAC PACE TN CLIENT SAMPLE ID CITY, STATE, ZIP. Mt. Juliet, TN 37122 12065 Lebanon Rd 5-20 (12/30/21) 2201050-001G | S-20 (12/30/21) 2201050-001H S-20 (12/30/21) 4 2201050-0011 | 5-20 (12/30/21) SUB CONTRATOR Pace TN 2201050-001F SAMPLE ADDRESS. ITEM

	ZZ	1
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	cabl pace heck)
	ppli eads	~
100	O H H	10
heck]	17 .	7.
Dt C	N VC	'V
Sec.	2 2 2	
9		1/1/1
Samp	a a a.	sent /hr.
	nt/ ura	ume ume F. mb
	res /Ac riv	3 2 2
	alm alman	ient reen
	COC Si COC Si Bottle	141 C
,	8826	Sur

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.

SPECIAL INSTRUCTIONS / COMMENTS:

7	1/4/2022 Time: 9:02 AM Re-	F. Cobertson	PHKIN2 THOOL	300	REPORT TRANSMITTAL DESIRED
Date.	Time:	Received By:	Date: Tm	Time	☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE
Date:	Time:	Received By:	Date: Time:	i i	FOR LAB USE ONLY
Standard 🔃	RUSH	Next BD	O CIRPIE		Temp of samples C Attempt to Cool ?

Hall Environmental Analysis Laboratory, Inc.

ND

ND

0.50

0.20

WO#: **2201050**

25-Jan-22

Client: Souder, Miller and Associates

Project: Agua Moss Sunco 1

Sulfate

Nitrate+Nitrite as N

Sample ID: MB SampType: mblk 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 ND 0.50 Phosphorus, Orthophosphate (As P

Sample ID: LCS	SampT	ype: Ics	3	Tes	tCode: El	PA Method	300.0: Anions	5		
Client ID: LCSW	Batch	n I D: R8	4963	F	RunNo: 8	4963				
Prep Date:	Analysis D	ate: 1/	4/2022	S	SeqNo: 2	989347	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.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix 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, Inc.

WO#: **2201050 25-Jan-22**

Client: Souder, Miller and Associates

Project: Agua Moss Sunco 1

1 Toject: Agua ivio	333 Sulico 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
.,	. , =	224,121 2230010	

Qualifiers:

Analyte

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

Surr: Decachlorobiphenyl

Surr: Tetrachloro-m-xylene

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

PQL

Result

0.0022

0.0017

B Analyte detected in the associated Method Blank

%REC

89.9

67.7

LowLimit

73

36.6

HighLimit

119

84.1

%RPD

E Estimated value

SPK value SPK Ref Val

0.002500

0.002500

- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 5 of 17

RPDLimit

Qual

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 SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.0026 0.002500 73 Surr: Decachlorobiphenyl 104 119 0 0 0 Surr: Tetrachloro-m-xylene 0.0020 0.002500 78.5 36.6 84.1 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 Quanitative 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, Inc.

WO#: **2201050**

25-Jan-22

Client: Souder, Miller and Associates

Project: Agua Moss Sunco 1

Sample ID: MB	SampT	ype: ME	BLK	Tes	tCode: T (CLP Volatile	es by 8260B			
Client ID: PBW	Batch	n I D: T8	4927	F	RunNo: 8	4927				
Prep Date:	Analysis D	oate: 1/	4/2022	S	SeqNo: 2	988720	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.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix 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, Inc.

WO#: **2201050**

25-Jan-22

Client: Souder, Miller and Associates

Project: Agua Moss Sunco 1

Sample ID: mb-64880	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8270C TCLP			
Client ID: PBW	Batch	n I D: 64 8	880	F	RunNo: 8	5243				
Prep Date: 1/6/2022	Analysis D	ate: 1 /	18/2022	5	SeqNo: 2 9	998783	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								Е
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: Ics-64880	Samp	Type: LC	S	Tes	tCode: El	PA Method	8270C TCLP			
Client ID: LCSW	Bat	ch I D: 64 8	880	F	RunNo: 8	5243				
Prep Date: 1/6/2022	Analysis	Date: 1/	18/2022	S	SeqNo: 2 9	998784	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			Е
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:

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^{*} Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix 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

Hall Environmental Analysis Laboratory, Inc.

WO#: **2201050 25-Jan-22**

Client: Souder, Miller and Associates

Project: Agua Moss Sunco 1

Sample ID: Ics-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 SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 0.1000 97.7 15 Surr: Nitrobenzene-d5 0.098 136 82.5 Surr: 2-Fluorobiphenyl 0.083 0.1000 15 134 0.1000 Surr: 4-Terphenyl-d14 0.13 130 15 168

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix 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, 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.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix 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, 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.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit
S % Recovery outside of range due to dilution or matrix 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

Page 11 of 17

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 ND Calcium 1.0 ND 1.0 Magnesium Potassium ND 1.0 Sodium ND 1.0

Sample ID: LCS	CS SampType: LCS TestCode: EPA Method 6010B: Dis						TestCode: EPA Method 6010B: Dissolved Metals							
Client ID: LCSW	Batch	1D: A8	4926	F	RunNo: 8	4926								
Prep Date:	Analysis D	ate: 1/	4/2022	S	SeqNo: 29	988962	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 Quanitative 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, Inc.

0.099

0.0050

0.1000

2201050 25-Jan-22

WO#:

Client: Souder, Miller and Associates

Project: Agua Moss Sunco 1

Sample ID: MB-64846	SampTyp	pe: MBLK	Tes	tCode: EF	PA 6010B: ⁻	Total Recove	rable Meta	ıls	
Client ID: PBW	Batch I	ID: 64846	F	RunNo: 85	5082				
Prep Date: 1/4/2022	Analysis Dat	ite: 1/11/2022	S	SeqNo: 29	993706	Units: mg/L			
Analyte	Result	PQL SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Barium	ND 0.	0.0020							
Cadmium	ND 0.	0.0020							
Chromium	ND 0.	0.0060							
Selenium	ND	0.050							
Silver	ND 0	0.0050							
Silver Sample ID: LCS-64846	ND 0.		Tes	tCode: EF	PA 6010B: ⁻	Total Recove	rable Meta	als	
	SampTyp			tCode: EF RunNo: 8		Total Recove	rable Meta	ıls	
Sample ID: LCS-64846	SampTyp Batch I	pe: LCS	F		5082	Total Recove		ıls	
Sample ID: LCS-64846 Client ID: LCSW	SampTyr Batch I Analysis Dat	pe: LCS ID: 64846 tte: 1/11/2022	F	RunNo: 85	5082			a ls RPDLimit	Qual
Sample ID: LCS-64846 Client ID: LCSW Prep Date: 1/4/2022	SampTyp Batch II Analysis Dat Result	pe: LCS ID: 64846 tte: 1/11/2022	F	RunNo: 85 SeqNo: 2 9	5082 993708	Units: mg/L			Qual
Sample ID: LCS-64846 Client ID: LCSW Prep Date: 1/4/2022 Analyte	SampTyp Batch II Analysis Dat Result 0.47 0.	pe: LCS ID: 64846 Ite: 1/11/2022 PQL SPK value	F S SPK Ref Val	RunNo: 85 SeqNo: 29 %REC	5082 993708 LowLimit	Units: mg/L HighLimit			Qual
Sample ID: LCS-64846 Client ID: LCSW Prep Date: 1/4/2022 Analyte Barium	SampTyp Batch II Analysis Dat Result 0.47 0. 0.45 0.	pe: LCS ID: 64846 Ite: 1/11/2022 PQL SPK value 0.0020 0.5000	SPK Ref Val	RunNo: 85 SeqNo: 29 %REC 94.7	5082 993708 LowLimit 80	Units: mg/L HighLimit			Qual

Sample ID: MB-64846	SampT	ype: ME	BLK	Tes	tCode: El	PA 6010B:	Total Recove	rable Meta	ıls	
Client ID: PBW	Batch	ID: 64	846	F	RunNo: 8	5207				
Prep Date: 1/4/2022	Analysis D	ate: 1 /	12/2022	9	SeqNo: 2	997514	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.020	•	•		•			•	

0

98.8

80

120

Sample ID: LCS-64846	SampT	ype: LC	S	Tes	tCode: El	PA 6010B: ⁻	Total Recove	rable Meta	als	
Client ID: LCSW	Batch	ID: 64 8	346	F	RunNo: 8	5207				
Prep Date: 1/4/2022	Analysis D	ate: 1 /	12/2022	S	SeqNo: 2 9	997516	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	SampT	ype: LC	s	Tes	tCode: El	PA 6010B: ⁻	Total Recove	rable Meta	als	
Client ID: LCSW	Batch	n I D: 64 8	846	F	RunNo: 8	5207				
Prep Date: 1/4/2022	Analysis D	ate: 1 /	12/2022	S	SeqNo: 2	997520	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:

Silver

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix 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

Page 13 of 17

Hall Environmental Analysis Laboratory, Inc.

WO#: 2201050

Qual

120

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

Analysis Date: 1/18/2022 Prep Date: SeqNo: 2998122 1/4/2022 Units: mg/L

Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual Analyte

Arsenic ND 0.030 ND 0.050 Selenium

Sample ID: LCS-64846 SampType: LCS TestCode: EPA 6010B: Total Recoverable Metals

Client ID: LCSW Batch ID: 64846 RunNo: 85212

0.050

0.49

Analysis Date: 1/18/2022 SeqNo: 2998123 Prep Date: 1/4/2022 Units: mg/L

0.5000

Analyte Result **PQL** SPK value SPK Ref Val %REC HighLimit %RPD **RPDLimit** LowLimit 80 0.49 0.030 0.5000 0 97.2 120 Arsenic 0 97.2 80

Qualifiers:

Selenium

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

Practical Quanitative Limit PQL

% Recovery outside of range due to dilution or matrix interference

Analyte detected in the associated Method Blank

Ε Estimated value

Analyte detected below quantitation limits

Sample pH Not In Range Reporting Limit

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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

Qualifiers:

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix 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

Page 15 of 17

Hall Environmental Analysis Laboratory, Inc.

WO#: 2201050

Qual

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: SeqNo: 2990786 Units: mg/L CaCO3 Analysis Date: 1/6/2022

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

Total Alkalinity (as CaCO3) ND 20.00

Sample ID: Ics-1 alk SampType: Ics TestCode: SM2320B: Alkalinity

Client ID: LCSW Batch ID: R85009 RunNo: 85009

PQL

Prep Date: Analysis Date: 1/6/2022 SeqNo: 2990787 Units: mg/L CaCO3

Analyte Result SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit**

Total Alkalinity (as CaCO3) 75.84 20.00 80.00 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

SPK value SPK Ref Val %REC LowLimit **RPDLimit** Analyte Result HighLimit %RPD Qual

Total Alkalinity (as CaCO3) 123.2 20.00

Qualifiers:

Page 16 of 17

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND

Practical Quanitative Limit PQL

[%] Recovery outside of range due to dilution or matrix interference

Analyte detected in the associated Method Blank

Ε Estimated value

Analyte detected below quantitation limits

Sample pH Not In Range

Reporting Limit

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:

Page 17 of 17

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

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

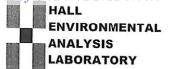
B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit



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 Nur	mber: 2201050		RcptNo: 1
Received By:	Isaiah Ortiz	1/4/2022 7:28:00	АМ	I_0	*
Completed By:	Sean Livingston	1/4/2022 8:31:39	АМ	5-6	·/
Reviewed By:	Con	1/4/62			
Chain of Cus	<u>tody</u>				
1. Is Chain of Cu	ustody complete?		Yes 🗸	No 🗌	Not Present
2. How was the	sample delivered?		Courier		
Log In					
3. Was an attem	pt made to cool the samp	oles?	Yes 🗸	No 🗌	NA 🗆
4. Were all samp	les received at a tempera	ature of >0° C to 6.0°C	Yes 🔽	No 🗌	NA 🗆
5. Sample(s) in p	proper container(s)?		Yes 🗸	No 🗌	
6. Sufficient samp	ple volume for indicated t	est(s)?	Yes 🗸	No 🗌	
7. Are samples (e	except VOA and ONG) pr	operly preserved?	Yes 🗹	No 🗌	
8. Was preservat	ive added to bottles?		Yes	No 🗹	NA 🗆
9. Received at lea	ast 1 vial with headspace	<1/4" for AQ VOA?	Yes 🗸	No 🗌	NA 🗌
10. Were any sam	ple containers received b	oroken?	Yes	No 🗸	# of preserved
	rk match bottle labels? ncies on chain of custody)	Yes 🗸		for pH: (<2 or (12) unless noted)
2. Are matrices co	orrectly identified on Chai	n of Custody?	Yes 🗸	No 🗆	Adjusted? 1/6
	analyses were requested	?	Yes 🗸	No 🗌	1 1 -
	g times able to be met? stomer for authorization.)		Yes 🗸	No 🗆	Checked by: Ju 1/4/22
Special Handli	ng (if applicable)				
15. Was client not	ified of all discrepancies	with this order?	Yes	No 🗌	NA 🗹
Person N	Notified:	Date	: [AND STREET STREET, STR	
By Whor	į.	Via:	eMail P	hone Fax	In Person
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	structions:				The second second second second second second
16. Additional rem	narks: Powed of	filson fro	in Samy	de ooi	B 5 of 5 onto 125mlpl
17. Cooler Inform	nation bottle for	ORP and	ysis, Ju	1/4/22	2
Cooler No	Temp °C Condition	Seal Intact Seal No	Seal Date	Signed By	
1	1.8 Good				

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Aron	🕱 Standard	Project Name:	a M	ct #:		st Ma	Hentha	er:	100	# of Coolers:	r Ter	Container Type and #	(1)250mLPlushic	il Pla	1) Sillow Plushe	1) Som piashi	(1) World Plastic	()125mc Plastic	5) ILAmber	(3) 40ml VOA					d by:	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	0	to othe
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Chain-of-Custody Record	Souder, Miller & Associates		Mailing Address: 401	34	Phone #: (545) 716-2787	email or Fax#:โภเลฟนา		☐ Az Compliance	□ Other_			Matrix	AG											1	Kelinquished by:	Relinquished by:	2	amples
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Sunco Disposal #1 Quarterly Laboratory Analytical Ust 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)).

EPA HW	on and an	SW-846 Methods	Regulatory Level (mg/L)
D004	- Arsenic	1311	5.0
D005	· Barium	1311	100.0
D018	- Benzene	B021B	0.5
D006	- Cadmium	1311	1.0
D019	Carbon tetrachloride	3021B 3260B	0.5
D020	Chlordane	3081A	0.03
D021	Chlorobenzene	8021B 3260B	100.0
D022	Chloroform	3021B 3260B	6.0
D007	Chromium	1311	5.0
0023	o-Cresol	8270D	200.0
0024	m-Cresol	8270D	200.0
0025	p-Cresol	8270D	200.0
0026	- Cresol	3270D	200.0
D027	1,4-Dichlorobenzene	8021B 8121 8260B 8270D	7.5
0028	1,2-Dichloroethane	8021B 8260B	0.5
0029	1,1-Dichlorosthylene	8021B 8260B	0.7
0030	2,4-Dinitrotolueno	8091 8270D	0.13
1032	Hexachlorobenzene	8121	0.13
0033	Hexachlorobutadiene	\$021B \$121 \$260B	0.5
034	Hexachloroethane	8121	3.0
800	- Lead	1311	5.0
009	Mercury	7470A 7471B	0.2
035	- Methyl ethyl ketone	8015H 8260B	200.0

Sunco Disposal#1 Quarterly Laboratory Analytical List

D036		Nitrobenzeno	8091 8270D	2.0
D037		Pentrachlorophenol	3041	100.0
D038	Transco means	Pyridine	8260B 8270D	5.0

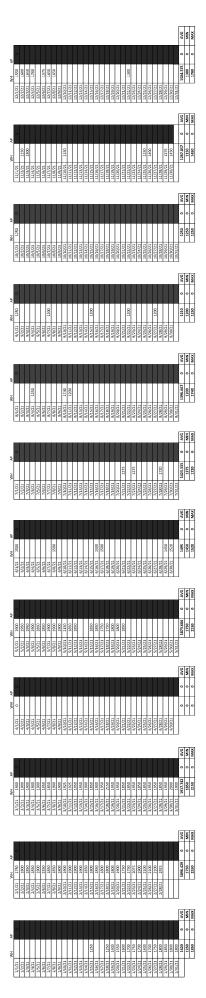
D010	•	Selenium	1311	
D011		Silver		1.0
D039	THE RESIDENCE OF THE PARTY OF T		1311	5.0
D040		i chacmorochiyiene	8260B	0.7
	•	Frichloroethylene	3021B 3260B	0.5
D041	~	2,4,5-Trichlorophenol	8270D	100.0
0042		2,4,6-Trichlorophenol		400.0
		2,4,0-11teniorophenor	8041A 8270D	2.0
0043	***	Vinyl chloride	8021B 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 260 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).

ADDTIONALLY:

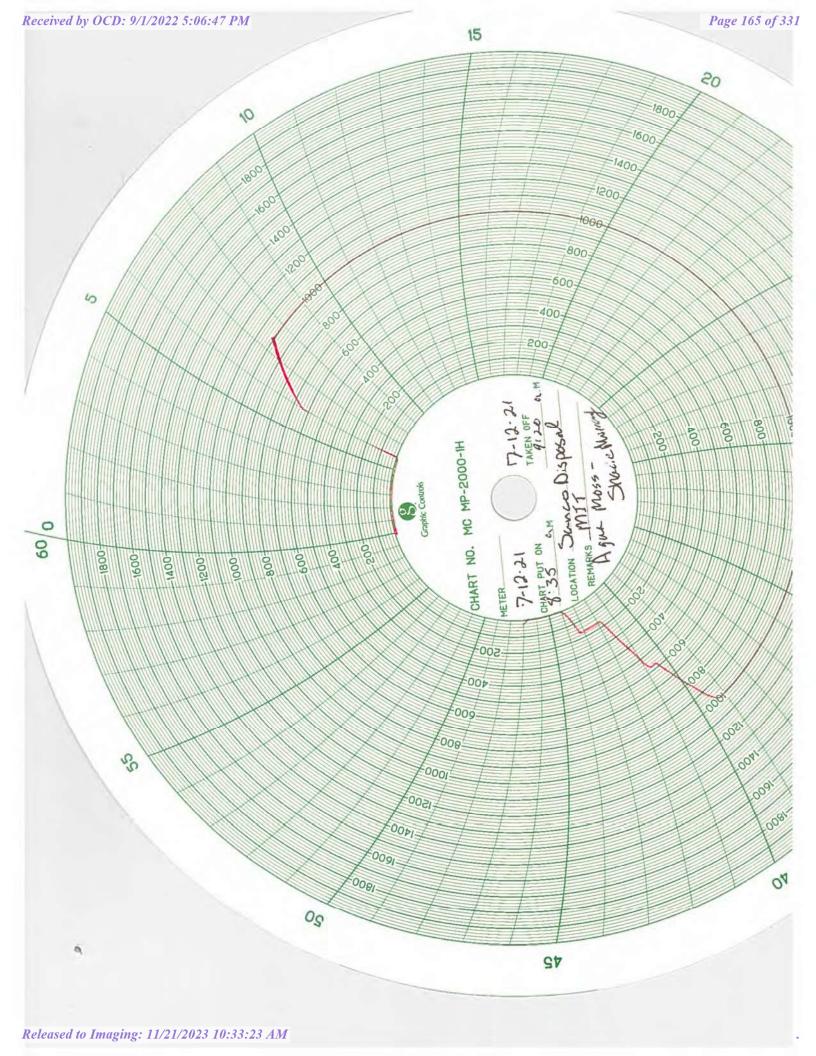
RCI, specific conductance, specific gravity, ORP, and general water quality parameters (general chemistry/cations and anions, including: fluoride, calcium, potassium, magnesium, sodium bicarbonate, carbonate, chloride, sulfate, total dissolved solids, cation/anion balance, pH, and bromide) using the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

		Total	Cumulative	Volume	(barrels)	15182756	15198765	15236365	15272049	15272049	15287324	15287324	15287340	15287340	15287886	15288743	15291012	15291012	15291955	15297143	15305179
				Volume	(bpd) (barrels)	Previous year	16009	37600	35684	Previous Quarter	15275	0	16	Previous Quarter	246	857	5769	Previous Quarter	943	5188	98036
			Minimum	Volume	(pdq)	Pr	407	260	303	Previc	261	0	16	Previc	546	355	390	Previc	943	461	193
			Maximum	Volume	(pdq)		2151	2352	2433		1670	0	16		546	505	1410		943	1419	1765
				Average	Volume (bpd)		1143.5	1392.592593	1189.466667		898.5294118	0	16		546	428.5	756.333333		943	864.6666667	1148
		Minimum	Annular	Pressure	(bsig)		0	0	0		0	0	0		0	0	0		0	0	0
2021	Quarterly Injection Report	Maximum	Annular	Pressure	(bsig)		0	0	0		0	0	0		0	0	0		0	0	0
20	Quarterly Injection Rep		Average	Annular	Flow (gpm) Pressure (psig)		0	0	0		0	0	0		0	0	0		0	0	0
				Minimum	Flow (gpm)		375 11.8708333	7.58333333	8.8375		7.6125	0	0.46666667		15.925	10.3541667	11.375		27.5041667	41.3875 13.4458333	5.62916667
				Maxium Flow	(md8)		62.7375	9.89	70.9625		48.70833333	0	0.466666667		15.925	14.64166667	41.125		27.50416667 27.5041667	41.3875	51.47916667 5.62916667
				Average Flow	(mdg)		33.35208333	40.61728395	34.69277778		26.20710784	0	0.466666667		15.925	12.49791667	22.05972222		27.50416667	25.21944444	33.48333333
			Minimum	Pressure	(bsig)		1250	1750	1850		0	1750	1450		1275	1200	1200		1250	1150	1300
	5-28653			Pressure	(bsig)		1850	2350	2150		0	2150	1520		1720	1740	1250		1250	1450	1700
J#	sal #1 30-04.		Average	Pressure	(bsig)		1620	1896.429	1917.742		0	1873.684	1495		1423.333	Aug-21 1396.667	1210		1250	Nov-2021 1267.857	Dec-2021 1584.375
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	2011 58.65416667 3/5/21	1558	45.44166667	4/5/2021	699 20.3875	5/5/2021			6/5/2021		_	1/2/2021		8/5/2021		9/5/2021		10/5/2023	21		11/5/2021		12/2/2021	
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43.575	5 3/8/21	1155	33.6875	4/8/2021	662 19.30833333	5/8/2021			6/8/2021		_	1/8/2021		8/8/2021		9/8/2021		10/8/202	21		11/8/2021		12/8/2021	193 5.629166667
1316 38.3833333	3/9/21	903	26.3375	4/9/2021	587 17.12083333	5/9/2021			6/9/2021			1/9/2021		8/9/2021		9/9/2021		10/9/2021	21		11/9/2021		12/9/2021	
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1497 43.6625	12/22/21	1524	44.45	4/25/2021		5/25/2021	0	0	6/25/2021		1/4	1/25/2021		8/25/2021		9/25/2021		10/25/2021	21		11/25/2021	772 22.51666667	12/25/2021	
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Released to Imaging: 11/21/2023 10:33:23 AM





NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES DEPARTMENT

DIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE
1000 RIO BRAZOS ROAD
AZTEC NM 87410
(505) 334-6178 FAX: (505) 334-6170
http://emond.state.nm.us/ocd/District IH/Jdistric.htm

BRADENHEAD TEST REPORT

(submit 1 copy to above address)

Testing BH TIME	PRESSU Bradenhead Int Csg	RE INTERM Int Csg	FLOW C BRADENHEA	CHARACTERISTICS AD INTERMEDIATE
5 min ()	650	1	Steady Flow	1
	650		Surges	+ \
15 min U	1 00	λ	Down to Nothing	- X-
25 min			Nothing	1
30 min	1/	-/ \	Gas & Water	
			Water	
f bradenhead	flowed water, che	k all of the descrip	tions that apply below:	
			SULFUR BLACK	
MINUTE SE	out-in pressur	e BRADEN	HEADINTERMEDI	ATE

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 repot 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:

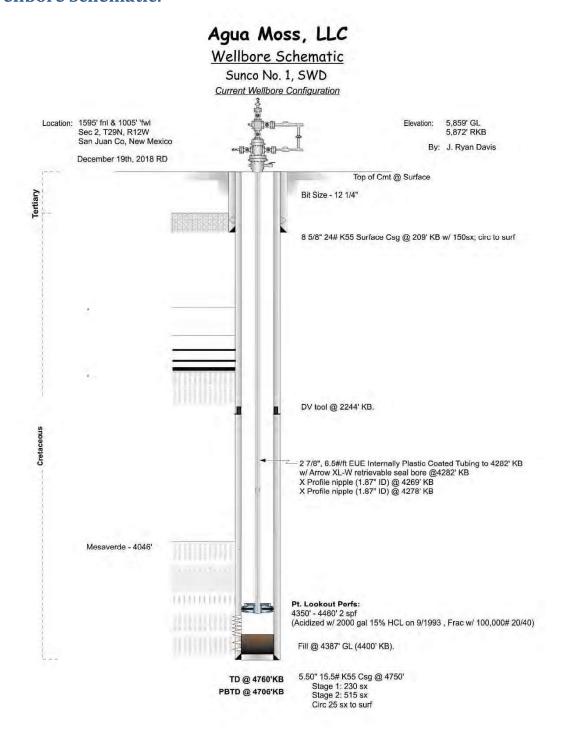
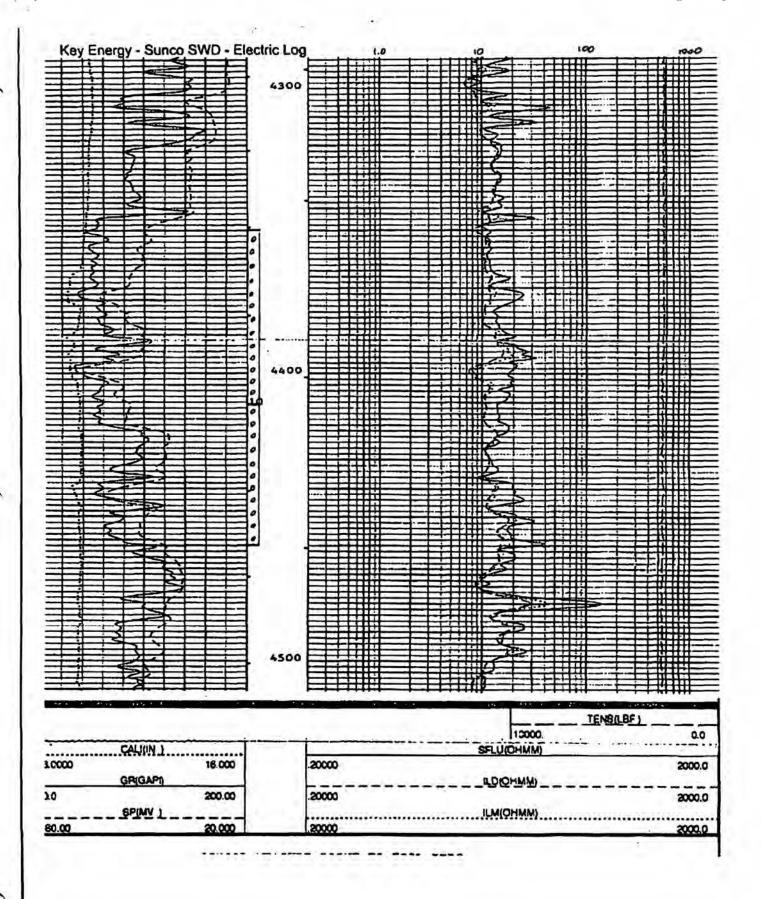
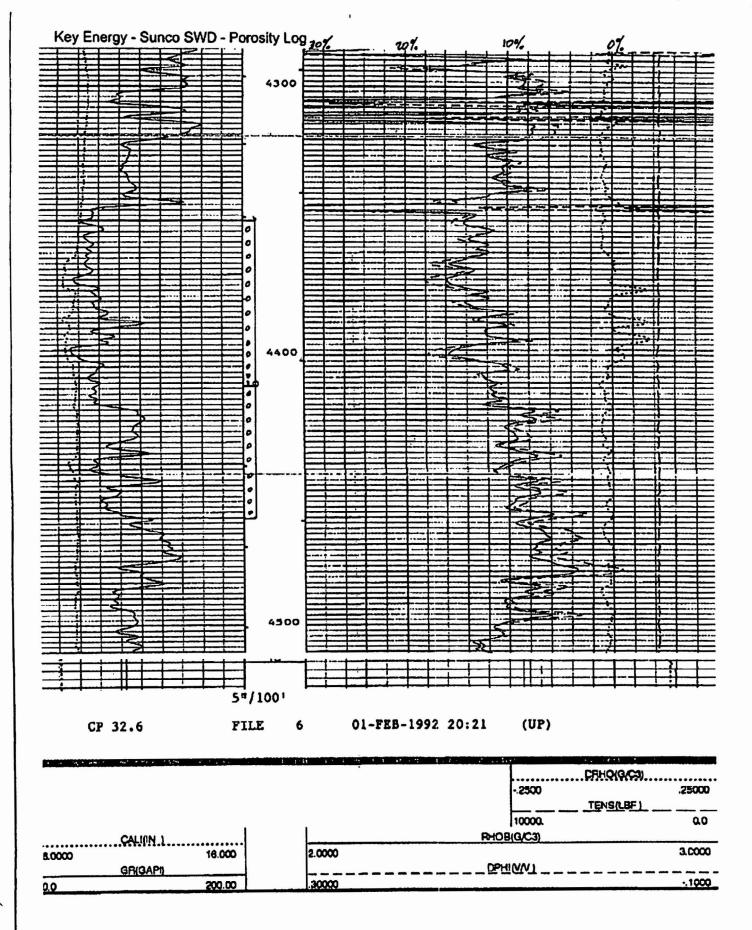
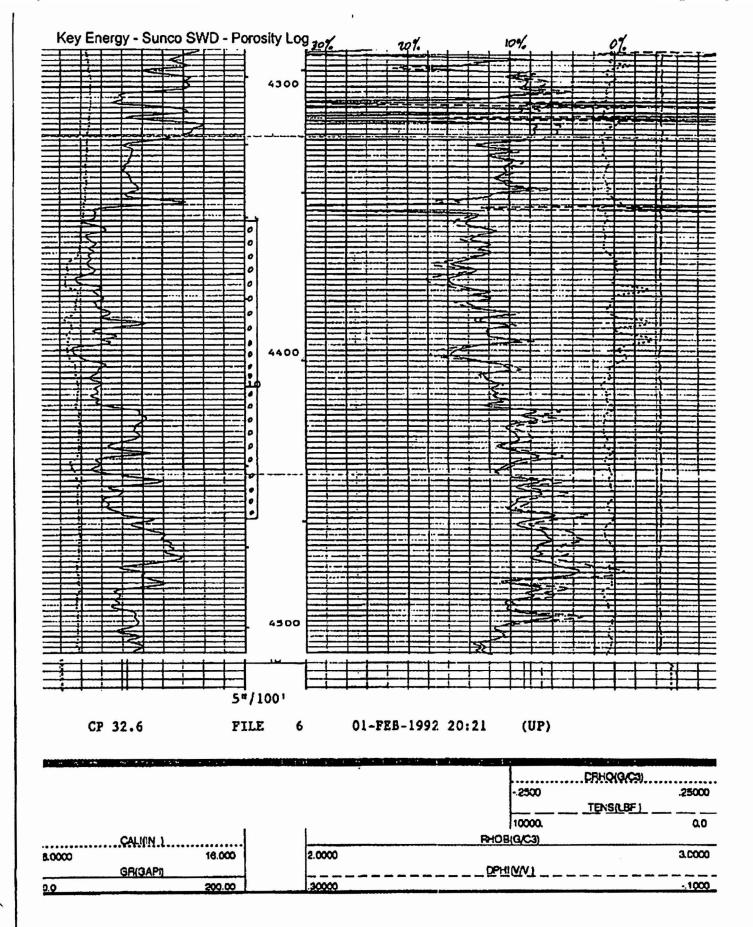


Figure 1: Wellbore Schematic



5







Shacie Murray <shacie@merrion.bz>

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

2 messages

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 (f#) 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>
To: Ryan Merrion <ryan@merrion.bz>

Thu, Jul 1, 2021 at 5:03 PM

Shacie Murray

Merrion Oil & Gas Production Engineer (505) 330-7605 shacie@merrion.bz [Quoted text hidden]

eceived by OCD: 9/1/2022 5:06:47	State of New Mexico	Form C-103
Office <u>District I</u> – (575) 393-6161	Energy, Minerals and Natural Reso	ources Revised July 18, 2013
1625 N. French Dr., Hobbs, NM 88240 <u>District II</u> – (575) 748-1283		WELL API NO. 30-045-28653
811 S. First St., Artesia, NM 88210	OIL CONSERVATION DIVIS	51ON 5. Indicate Type of Lease
<u>District III</u> – (505) 334-6178	1220 South St. Francis Dr.	STATE FEE S
1000 Rio Brazos Rd., Aztec, NM 87410 <u>District IV</u> – (505) 476-3460	Santa Fe, NM 87505	6. State Oil & Gas Lease No.
1220 S. St. Francis Dr., Santa Fe, NM 87505		
SUNDRY NO (DO NOT USE THIS FORM FOR PROF DIFFERENT RESERVOIR. USE "APPI	TICES AND REPORTS ON WELLS POSALS TO DRILL OR TO DEEPEN OR PLUG BACK LICATION FOR PERMIT" (FORM C-101) FOR SUCH	7. Lease Name or Unit Agreement Name Sunco Disposal
PROPOSALS.) 1. Type of Well: Oil Well	Gas Well Other SWD Class I	8. Well Number 1
2. Name of Operator		9. OGRID Number 247130
Agua Moss, LLC 3. Address of Operator		10. Pool name or Wildcat SWD-MV
PO Box 600 Farmington, NM 87	499	
4. Well Location	1505 Cod Consider North Consider	ud 1005 Seat Seem the West News
· · · · · · · · · · · · · · · · · · ·	: 1595 feet from the North line are with line are seven ship 29N Range 12W	nd1005feet from theWestline NMPM County San Juan
Section 2 10	ownship 29N Range 12W 11. Elevation (Show whether DR, RKB, R	
	11. Elevation (<i>snow whether DR</i> , RRB, R. 5859'	1, GK, etc.)
		-
12. Check	Appropriate Box to Indicate Nature of	f Notice, Report or Other Data
NOTICE OF I	NTENTION TO:	SUBSEQUENT REPORT OF:
PERFORM REMEDIAL WORK		DIAL WORK
TEMPORARILY ABANDON	☐ CHANGE PLANS ☐ COMM	IENCE DRILLING OPNS.☐ P AND A ☐
PULL OR ALTER CASING	☐ MULTIPLE COMPL ☐ CASIN	G/CEMENT JOB
DOWNHOLE COMMINGLE]	
CLOSED-LOOP SYSTEM] 	D 507
OTHER:	Alternative FOT OTHER	R: FOT details, and give pertinent dates, including estimated date
of starting any proposed of	work) SEE RULE 19 15 7 14 NMAC For M	fultiple Completions: Attach wellbore diagram of
proposed completion or re		wanpro compromonor ruman wandord unagrum or
Agua Moss IIC proposes to perf	orm the following reservoir pressure evaluation	n test in place of the FOT. Please see the attached
procedure.	of the ronowing reservoir pressure evaluation	it test in place of the POT. I lease see the attached
Spud Date:	Rig Release Date:	
I hereby certify that the informatio	on above is true and complete to the best of my	knowledge and belief.
SIGNATURE Dhil i	ana Thompson TITLE Regulator	y Compliance SpecDATE6/11/2021
OIONATOREP WW	TITLERegulatory	y Compilance SpecDATE0/11/2021
Type or print name Philana Th	ompson E-mail address: n	thompson@merrion.bz PHONE: _505-486-1171_
For State Use Only		1
APPROVED BY:	TITLE	DATE
APPKUVEDBY'	HILLE	DATE

Released to Imaging: 6/11/2021 3:05:20 PM



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	29391	3479	3273	3114	3283	3231	3242	3176	3258
K (md)		100	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

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.

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

Economics is and of continuing operatip economics. This cost understands the importands in the continuance Please let us know would need to plan accommodate. Economics is ano he eason for not performing the fall-off test. When evaluating the viability of continuing operatip s, 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

Released to Imaging: 6/11/2021 3:05:20 PM

Agua Moss, LLC

PLAN FOR RESERVOIR PRESSURE TEST

	1.0	Well	Information	
Well:	Sunco	Disposal 1	Field:	Mesaverde SWD
Lasations	THE ASSESSMENT AND DESCRIPTION AND	&1005' fwl	Elevations:	5859' GL 5872' RKB
Location:	S2, T29N San Juan	Co. New Mexico	Depths:	4706' KB PBTD 4760' KB TD
			Engineer:	Shacie Murray(505.330.7605)
API:	30-045-2	3653	Date:	June 4, 2021
Surface Casing:	8- 5/8" @ Circ to su	209' KB w/ 150sx; rface	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:		5# EUE (Epoxy 2) 4282' KB	Packer:	Arrow XL-W retrievable seal bore @ 4282' KB.
Perforation	s (MV)	4350-4460' KB 2	spf (2000 gals 1	5% HCL, Frac w/ 100,000# 20/40)
		Additio	nal Perforations	
Perforation	s (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 12th, 2021	Check conditions, check pressures and perform MIT	Check conditions, check tübing pressure 9 am
Friday, July 16th, 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

- 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.
- AGUA MOS

 V.7 Surface pressur

 FOT. If any abnormal sur

 aborted if deemed invalid

 V.8 The continuous

 IGP10S industrial pressur

 million measurements, 1

 accuracy of +/- 0.2%. Da

 +/-0.05% and operating 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.
 - In addition, a chart recorder will monitor the tubing and casing pressure during the test as a backup for the data logger

Reservoir Press ure Test Procedure:

Prepare Well for Fall Off Test

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

Conduct Pressure Monitoring

- Ensure surface gauges are configured properly
- Record surface tubing pressure data for 96 hrs, Pressure readings will be taken every minute.
 - 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

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

COMMENTS

Created By C	Comment	Comment Date
cchavez S	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

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:	OGRID:
AGUA MOSS, LLC	247130
P.O. Box 600	Action Number:
Farmington, NM 87499	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.

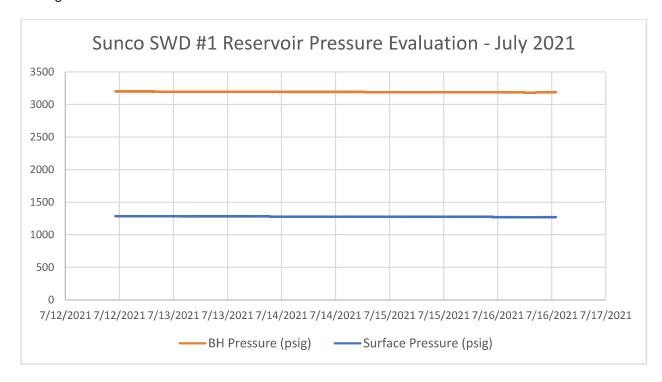


Figure 2 Calculated BH Pressure vs. Time

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.

	<u>2021</u>	2020	2019	2018	2017	<u>2016</u>	<u>2015</u>	<u>2010</u>	<u>2009</u>	<u>2008</u>	2007
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 <i>,</i> 1520	755	987	none

Table 1: Results Comparison

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.

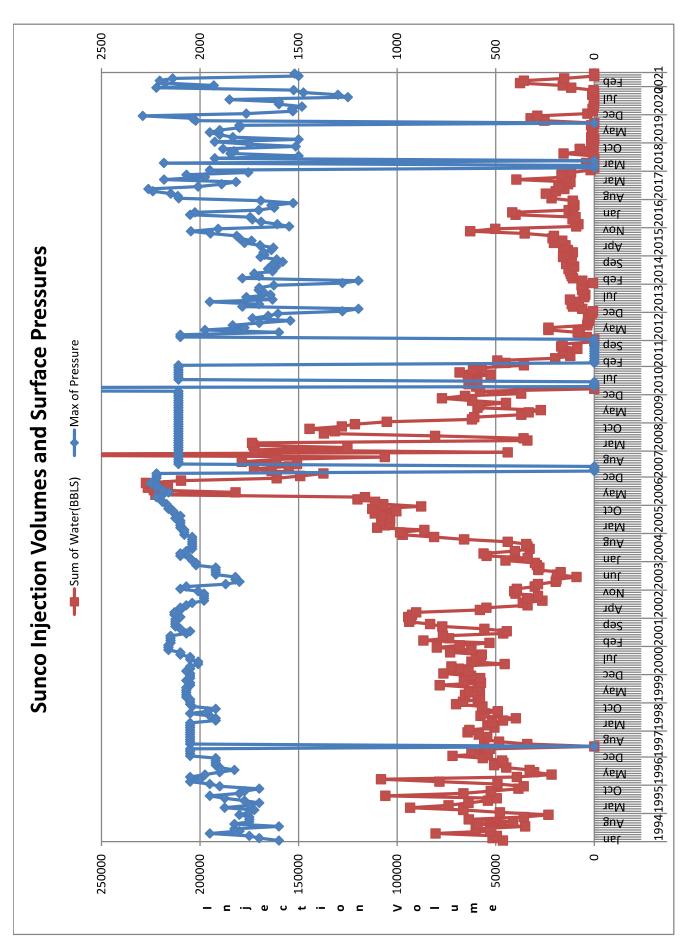
The raw test data obtain during the 2021 RPE test will be kept on file for a period of three (3) years and will be available upon request.

^{*} 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

TEL: 505-345-3975 FAX: 505-345-4107

Website: clients.hallenvironmental.com

4901 Hawkins NE

Albuquerque, NM 87109



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,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Analytical ReportLab Order **2106F12**

Date Reported: 7/23/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Lab ID: 2106F12-001

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

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

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	Н	mg/L Ca	2.5	7/15/2021 10:37:37 PM	R79813
Carbonate (As CaCO3)	ND	5.000	Н	mg/L Ca	2.5	7/15/2021 10:37:37 PM	R79813
Total Alkalinity (as CaCO3)	886.3	50.00	Н	mg/L Ca	2.5	7/15/2021 10:37:37 PM	R79813
D 0 1 000					_		

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

Matrix: AQUEOUS

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Analytical ReportLab Order **2106F12**

Date Reported: 7/23/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Lab ID: 2106F12-001

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

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

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
Н	5.83		Н	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				···g/=	•	Analyst	
Calcium	470	10		ma/l	10	6/30/2021 5:23:52 PM	A79508
Magnesium	470 80	10		mg/L 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		0/30/2021 5:52:29 PM	A79508
EPA 6010B: TOTAL RECOVERABLE METALS	0000	100		mg/L	100	Analyst	
	ND	5.0		/I	,		_
Arsenic	ND	5.0		mg/L	1	6/30/2021 4:58:00 PM	61023
Barium	110	100		mg/L		7/13/2021 1:12:40 PM	61023
Cadmium Chromium	ND ND	1.0 5.0		mg/L	1 1	6/30/2021 4:58:00 PM	61023
Lead	ND ND	5.0		mg/L	1	6/30/2021 4:58:00 PM 7/16/2021 3:32:09 PM	61023 61023
Se l enium	ND ND	1.0		mg/L 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
	ND	5.0		mg/L	'		
TCLP VOLATILES BY 8260B						Analyst	
Benzene	11	0.50		mg/L		7/1/2021 6:03:56 AM	T79505
1,2-Dichloroethane (EDC)	ND	0.50		mg/L		7/1/2021 6:03:56 AM	T79505
2-Butanone	ND	200		mg/L		7/1/2021 6:03:56 AM	T79505
Carbon Tetrachloride	ND	0.50		mg/L		7/1/2021 6:03:56 AM	T79505
Chloroform	ND	6.0		mg/L		7/1/2021 6:03:56 AM	T79505
1,4-Dichlorobenzene	ND	7.5		mg/L		7/1/2021 6:03:56 AM	T79505
1,1-Dichloroethene	ND	0.70		mg/L		7/1/2021 6:03:56 AM	T79505
Tetrachloroethene (PCE)	ND	0.70		mg/L		7/1/2021 6:03:56 AM	T79505
Trichloroethene (TCE)	ND	0.50		mg/L		7/1/2021 6:03:56 AM	T79505
Vinyl chloride	ND	0.20		mg/L		7/1/2021 6:03:56 AM	T79505
Chlorobenzene	ND	100		mg/L		7/1/2021 6:03:56 AM	T79505
Surr: 1,2-Dichloroethane-d4	110	70-130		%Rec		7/1/2021 6:03:56 AM	T79505
Surr: 4-Bromofluorobenzene	102	70-130		%Rec		7/1/2021 6:03:56 AM	T79505
Surr: Dibromofluoromethane	101	70-130		%Rec		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

Matrix: AQUEOUS

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 2 of 17

Analytical ReportLab Order **2106F12**

Date Reported: 7/23/2021

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Souder, Miller and Associates

Aqua Moss Sunco # 1

Lab ID: 2106F12-002

Project:

Client Sample ID: Trip Blank

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

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

Matrix: TRIP BLANK

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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Pace Analytical ANALYTICAL REPORT



Тс

Ss

Cn Sr

Qc

GI

Sc

Hall Environmental Analysis Laboratory

L1372907 Sample Delivery Group: Samples Received: 06/30/2021

Project Number:

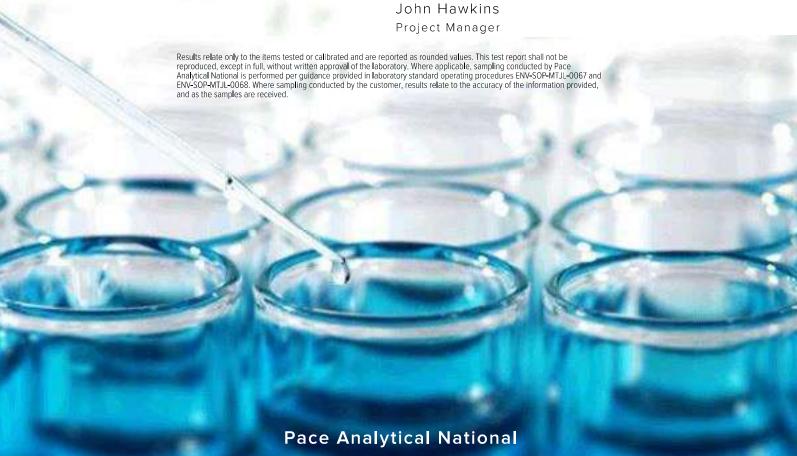
Description:

Report To: Jackie Bolte

4901 Hawkins NE

Albuquerque, NM 87109

Entire Report Reviewed By: John V Howkins



12065 Lebanon Rd Mount Juliet, TN 37122 615-758-5858 800-767-5859 www.pacenational.com

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2106F12-001F S-18 (6/28/21) L1372907-01	5
2106F12-001G S-18 (6/28/21) L1372907-02	6
2106F12-001H S-18 (6/28/21) L1372907-03	7
2106F12-001I S-18 (6/28/21) L1372907-04	8
Qc: Quality Control Summary	9
Wet Chemistry by Method 2580	9
Wet Chemistry by Method 4500 CN E-2011	10
Wet Chemistry by Method 4500 S2 D-2011	11
Wet Chemistry by Method 4500H+ B-2011	12
Wet Chemistry by Method D93/1010A	13
GI: Glossary of Terms	14
Al: Accreditations & Locations	15
Sc: Sample Chain of Custody	16



















Wet Chemistry by Method 2580

SAMPLE SUMMARY

			Collected by	Collected date/time	Received da	te/time
2106F12-001F S-18 (6/28/21) L1372907-01 WW				06/28/21 11:00	06/30/21 09	00
Method	Batch	Dilution	Preparation	Ana l ysis	Analyst	Location
			date/time	date/time		
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
			Collected by	Collected date/time	Received da	te/time
2106F12-001G S-18 (6/28/21) L1372907-02 WW				06/28/21 11:00	06/30/21 09:	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Wet Chemistry by Method 4500 S2 D-2011	WG1700481	1	07/05/21 22:03	07/05/21 22:03	JIC	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
2106F12-001H S-18 (6/28/21) L1372907-03 WW				06/28/21 11:00	06/30/21 09:	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		
Wet Chemistry by Method 4500 CN E-2011	WG1708500	1	07/20/21 20:52	07/21/21 12:44	KEG	Mt. Juliet, TN
			Collected by	Collected date/time	Received da	te/time
2106F12-001I S-18 (6/28/21) L1372907-04 GW				06/28/21 11:00	06/30/21 09	00
Method	Batch	Dilution	Preparation	Analysis	Analyst	Location
			date/time	date/time		

WG1700745

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

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.

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SAMPLE RESULTS - 01

Wet Chemistry by Method 4500H+ B-2011

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



Sample Narrative:

L1372907-01 WG1700812: 5.9 at 21.3C

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



Ss

Wet Chemistry by Method D93/1010A

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













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

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SAMPLE RESULTS - 02

L1372907

Wet Chemistry by Method 4500 S2 D-2011

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



















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

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SAMPLE RESULTS - 03

L1372907

Wet Chemistry by Method 4500 CN E-2011

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



















Page 197 of 331

SAMPLE RESULTS - 04

Wet Chemistry by Method 2580

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

	Result	Qualifier	Dilution	Analysis	<u>Batch</u>	
Analyte	mV			date / time		
ORP	42 5	T8	1	07/06/2021 15:52	WG1700745	



















PAGE: 9 of 16

DATE/TIME: 07/23/21 07:23

SDG: L1372907

PROJECT:

ACCOUNT:
Hall Environmental Analysis Laboratory

WG1700745	5 lethod 2580			J O	QUALITY (CONTROL SUMMARY	OL SUM	MARY		Recei
2.1372907-04 Original Sample (OS) • Duplicate (DUP)	iginal Sample	oS) • Dup	olicate (DUF	(°						ived _
OS) L1372907-04 07/06/2115:52 • (DUP) R3676180-3 07/06/2115:52	06/2115:52 • (DU Original Resul	P) R3676180-3 t DUP Result	15:52 • (DUP) R3676180-3 07/06/2115:52 Original Result DUP Diff	Diff	DUP Qualifier DUF	DUP Diff Limits				by OCI
Analyte	Λm	Λm	Λm		Λm					D:
ожо g: 11/2	42.5	44.0	1.50		20					9/1/202 ლ
aboratory Control Sample (LCS) • Laboratory Control Sample Duplicate (LCSD)	rol Sample (L	.CS) • Labo	ratory Conti	rol Sample	e Duplicate	(LCSD)				2 5:4
CS) R3676180-1 07/C)6/2115:52 • (LCS	D) R3676180-2	07/06/21 15:52							96: 4
10:	Spike Amount	LCS Result	LCSD Result	LCS Rec.	LCSD Rec.	Rec. Limits	LCS Qualifier	LCSD Qualifier Diff	Diff Limits	47.
% hnalyte	Λm	νm	m/\	%	%	%		Λm	νm	PM SS
ਦੂ 23 AM	106	106	106	100	100	86.0-105		0.000	20	O O

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10 of 16 PAGE:

07/23/21 07:23 DATE/TIME:

L1372907 SDG:

PROJECT:

Hall Environmental Analysis Laboratory

ACCOUNT:

Receiv	ed i	by (0 €.	D:	9/1/202	2 5:(96: 4	17 P.	M	[©] Qc
CONTROL SUMMARY								DUP RPD Limits	%	20
QUALITY								DUP Qualifier		
Ø			MB RDL	mg/l	0.00500					
			MB MDL		0.00180	te (DUP	21 12:49	Dilution DUP RPD	%	0.000
				/bm	0.0	Duplica	-4 07/21/2			-
N E-2011			MB Qualifier			e (OS) •	P) R3682171	Original Result DUP Result	/bm	Q
0 Aethod 4500 C	1B)	/2112:36	MB Result	l/gm	D	iginal Sampl	21/21 12:46 • (DU	Original Resu	l/gm	QN
WG1708500	Method Blank (MB)	(MB) R3682171-1 07/21/2112:36	ma	Analyte	Beactive Cyanide	21373848-03 Original Sample (OS) • Duplicate (DUP)	OS) L1373848-03 07/21/2112:46 • (DUP) R3682171-4 07/21/2112:49	10:3	%Analyte	Reactive Cyanide

Laboratory Control Sample (LCS)

(LC3) R30021/1-3 0//21/21/12.3/	0//2//2/ 12:3/				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	l/gm	l/gm	%	%	
eactive Cyanide	0.100	0.0820	82.0	87.1-120	47

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₹

DUP RPD Limits

DUP Qualifier

Dilution DUP RPD

Original Result DUP Result

/gm 9

/gm 9

Reactive Cyanide Analyte

L1377992-01 Original Sample (OS) • Duplicate (DUP) (OS) L1377992-01 07/21/2113:09 • (DUP) R3682171-7 07/21/2113:10 20

0.000

%

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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	:1/21 13:06 • (MS) RE	3682171-5 07/2	21/21 13:07 • (N	1SD) R3682171-	6 07/21/21 13:08	08						
	Spike Amount	Spike Amount Original Result MS Result		MSD Result	MS Rec.	MSD Rec.	Dilution	Dilution Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	l/gm	mg/l	l/bm	l/gm	%	%		%			%	%
Reactive Cyanide	0.100	QN	0.110	0.103	105	98.0	_	90.0-110			6.57	20

PAGE: 11 of 16

DATE/TIME: 07/23/21 07:23

SDG: L1372907

PROJECT:

ACCOUNT:
Hall Environmental Analysis Laboratory

WG1700481	od 4500 S2 D-2011		0 0	QUALITY CONTROL SUMMARY	Rece
per Method Blank (MB)					ived (
(MB) R3675772-1 07/05/21 21:20 MB Resul	<u> </u>	MB Qualifier MB MDL	MB RDL		by O
Bar Analyte		l/gm	mg/l		CD:
Reactive Sulfide	П	0.0250	0.0500		9/1
11/2					/ 202
22-aboratory Control \$	Sample (LCS)				2 5:
CCS) R3675772-2 07/05/2	121:29				96:
10:	Spike Amount LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier	47
	l/gm //gm	%	%		PM S
Reactive Sulfide	0.500 0.536	107	85.0-115		
AM					[©] QC
<i>T</i>					
					7

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PAGE: 12 of 16

DATE/TIME: 07/23/21 07:23

L1372907 SDG:

PROJECT:

Hall Environmental Analysis Laboratory ACCOUNT:

Received 1	by OCD: 9/	7/2022 5:00	6:47 PM	⁶ Qc	⁷ Gl	_∞ $\overline{\forall}$	oSc.

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QUALITY CONTROL SUMMARY L13723907-01

WG1700812

Parket Chemistry by Method 4500H+ B-2011

Parket Control Sample (LCS)

CLCS) R3676727-1 07/07/2114:00

Spike Amount LCS Result

Su su

Corrosivity by pH 10.0 10.0 Spike Amount LCS Result

LCS Qualifier

Rec. Limits

LCS Rec.

99.0-101

100

LCS: 10:04 at 21:2C LCS: 10:04 at 21:2C

PAGE: 13 of 16

DATE/TIME: 07/23/21 07:23

SDG: L1372907

PROJECT:

Hall Environmental Analysis Laboratory

ACCOUNT:

Received by OCD: 9/1/2022 Ū

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QUALITY CONTROL SUMMARY L13725907-01

		RPD Limits	%	0
MARY		Rec. Limits LCS Qualifier LCSD Qualifier RPD	%	0.000
OL SUM		LCS Qualifier		
QUALITY CONTROL SUMMARY	(LCSD)	Rec. Limits	%	96.0-104
JALITY (e Duplicate	LCSD Rec.	%	104
9	trol Sampl)4 LCS Rec.	%	104
	ratory Cont	2 07/13/21 02:0 LCSD Result	deg F	133
0 A	.CS) • Labo	5D) R3678532-2 : LCS Result	deg F	131
thod D93/101	ol Sample (L	/21 02:04 • (LCS Spike Amount	deg F	126
WG1703776 Wet Chemistry by Method D93/1010A	p-aboratory Contro	OLCS) R3678532-1 07/13/21 02:04 • (LCSD) R3678532-2 07/13/21 02:04 Spike Amount LCS Result LCSD Result LCS Rec. Limits	Analyte	յան անությաց: 11/21/2023 10:33:23 AM

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

Appleviations and	d 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.





















PAGE: 14 of 16

Daga Arabutian Notices	1200F Laborate D	l Marria Indian	TNI 27422
Pace Analytical Nationa	izuos Lebanon Ro	a iviount Jujiet	, TIN 3/122

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
lowa	364	Pennsy l vania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky 16	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	Al30792	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



 $^{^* \ \}text{Not all certifications held by the laboratory are applicable to the results reported in the attached report.} \\$

TN00003

EPA-Crypto



















^{*} Accreditation is only applicable to the test methods specified on each scope of accreditation held by Pace Analytical.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

CHAIN OF CUSTODY RECORD PAGE: 1 OF: 1

Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975

FAX: 505-345-4107

Website: clients.hallenvironmental.com

E183

3 705 8 ANALYTICAL COMMENTS (615) 758-5859 1372907 EMAIL. FAX 6585-757 (008) Aqueous 6/28/2021 11:00:00 AM 1 ORP 1 RCI 500PL-NaOH Aqueous 6/28/2021 11:00:00 AM 1 RCI 1 RCI # CONTAINER 500PLNAOH Aqueous 6/28/2021 11:00:00 AM Aqueous 6/28/2021 11:00:00 AM ACCOUNT #: COLLECTION MATRIX BOTTLE 500HDPE 125HDP ZVIAC PACE TN COMPANY CLIENT SAMPLE ID Mt. Juliet, TN 37122 12065 Lebanon Rd 2106F12-0011 S-18 (6/28/21) 2106F12-001F S-18 (6/28/21) 2106F12-001G S-18 (6/28/21) 2106F12-001H S-18 (6/28/21) SUB CONTRATOR Pace TN SAMPLE CITY, STATE, ZIP. ADDRESS ITEM 4

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SPECIAL INSTRUCTIONS / COMMENTS:

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84-C-94		Cara, Toy G	Š	1	100	Received By	Time:	Date:	Relinquished By:
a cost) FAX EMAIL ONLIN	☐ HARDCOPY (extra cost)	Time:	Date:	_	0	Received By:	Time:	Date	Relinquished By:
INAMESTAL LESINED		Time	Date:		4	Received By	6/29/2021 Time 10:47 AM	Date: 6/29/2021	Relinquished By: SE

Hall Environmental Analysis Laboratory, Inc.

WO#: **2106F12**

23-Jul-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Sample ID: MB	Sampl	Гуре: ml	olk	Tes	tCode: E	PA Method	300.0: Anions	3		
Client ID: PBW	Batc	h I D: R7	9465	F	RunNo: 7	9465				
Prep Date:	Analysis [Date: 6 /	29/2021	5	SeqNo: 2	793674	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	Samp	Type: Ics		Tes	tCode: E	PA Method	300.0: Anions	\$		
Client ID: LCSW	Batc	h I D: R7	9465	F	RunNo: 7	9465				
Prep Date:	Analysis [Date: 6 /	29/2021	\$	SeqNo: 2	793675	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	Samp	√ype: m l	olk	Tes	tCode: E	PA Method	300.0: Anions	5		
Client ID: PBW	Batc	h I D: R7	9711	F	RunNo: 7	9711				
				_						

Client ID: PBW	Batch	I D: R7	9711	F	RunNo: 7 9	9711				
Prep Date:	Analysis D	ate: 7 /	9/2021	5	SeqNo: 2	803588	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Chloride	ND	0.50								

Sample ID: LCS	SampT	ype: Ics	i	Tes	tCode: El	PA Method	300.0: Anion:	5		
Client ID: LCSW	Batch	ID: R7	9711	F	RunNo: 7	9711				
Prep Date:	Analysis D	ate: 7 /	9/2021	S	SeqNo: 2	803594	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	SampT	ype: m b	olk	Tes	tCode: El	PA Method	300.0: Anions	;		
Client ID: PBW	Batch	ID: A7	9773	F	RunNo: 7 9	9773				
Prep Date:	Ana l ysis D	ate: 7 /	13/2021	S	SeqNo: 28	806400	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2106F12**

23-Jul-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Sample ID: LCS SampType: Ics 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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Result

0.0041

0.0031

PQL

0.002500

0.002500

WO#: **2106F12**

23-Jul-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Sample ID: MB-61046	SampTy	/pe: ME	BLK	Tes	tCode: El	PA Method	8081: Pestici	des TCLP		
Client ID: PBW	Batch	ID: 61	046	F	RunNo: 7	9529				
Prep Date: 6/30/2021	Analysis Da	ate: 7 /	1/2021	S	SeqNo: 2	796336	Units: mg/L			
Analyte	Result	PQL	SPK va l ue	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	SampTy	/pe: ME	BLK	Tes	tCode: El	PA Method	8081: Pestici	des TCLP		
Client ID: PBW	Batch	ID: 61	046	F	RunNo: 7	9529				
Prep Date: 6/30/2021	Analysis Da	ate: 7/	1/2021	S	SeqNo: 2	796337	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	SampTy	/pe: LC	s	Tes	tCode: El	PA Method	8081: Pestici	des TCLP		
Client ID: LCSW	Batch	ID: 61	046	F	RunNo: 7 9	9529				
Prep Date: 6/30/2021	Analysis Da	ate: 7 /	1/2021	S	SeqNo: 2	796338	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	SampTy	/pe: MS	<u> </u>	Tes	tCode: El	PA Method	8081: Pestici	des TCLP		
Client ID: S-18 (6/28/21)	Batch	ID: 61	046	F	RunNo: 7	9547				
Prep Date: 6/30/2021	Analysis Da	ate: 7 /	2/2021	S	SeqNo: 2	797400	Units: %Rec			

Sample ID: 2106F12-001BMS) SampT	ype: MS	SD	Tes	tCode: El	PA Method	8081: Pestici	des TCLP		
Client ID: S-18 (6/28/21)	Batch	ID: 61	046	F	RunNo: 7 9	9547				
Prep Date: 6/30/2021	Analysis D	ate: 7 /	/2/2021	S	SeqNo: 2	797402	Units: %Red	;		
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

SPK value SPK Ref Val %REC

Qualifiers:

Analyte

Surr: Decachlorobiphenyl

Surr: Tetrachloro-m-xylene

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

LowLimit

41.7

31.8

164

122

HighLimit

129

88.5

%RPD

RPDLimit

Qual

S

S

- 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, 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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2106F12**

23-Jul-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Sample ID: 100ng lcs2	Samp	Type: LC	S	Tes	tCode: T C	CLP Volatile	es by 8260B			
Client ID: LCSW	Bat	ch I D: T7	9505	F	RunNo: 7 9	9505				
Prep Date:	Ana l ysis	Date: 7 /	1/2021	S	SeqNo: 27	95327	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	Samp	туре: МЕ	BLK	Tes	tCode: T	LP Volatile	es by 8260B			
Client ID: PBW	Bat	ch I D: T7 :	9505		RunNo: 7 9		•			
Prep Date:	Analysis	Date: 7/	1/2021	S	SegNo: 27	795330	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.50	Or it value	OF ICITOR VOI	7011120	LOWLITTIC	riigiiEiiiiit	701111111	TH DEIIII	Quai
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			

Qualifiers:

- * Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix

Surr: Dibromofluoromethane

Surr: Toluene-d8

0.010

0.0098

0.01000

0.01000

- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

101

98.2

70

70

130

130

- 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, Inc.

WO#: **2106F12**

23-Jul-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Sample ID: MB-61067	SampT	уре: МЕ	BLK	Tes	tCode: El	PA Method	8270C TCLP			
Client ID: PBW	Batcl	h I D: 61 0	067	F	RunNo: 7	9674				
Prep Date: 7/1/2021	Analysis D	Date: 7 /	8/2021	5	SeqNo: 2	802563	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	Samp	Type: LC	s	Test	tCode: EF	PA Method	8270C TCLP			
Client ID: LCSW	Bate	ch I D: 610)67	R	RunNo: 7 9	9674				
Prep Date: 7/1/2021	Analysis	Date: 7/8	8/2021	S	SeqNo: 28	302564	Units: mg/L			
Analyte	Result	PQL	SPK va l ue	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Result

WO#: 2106F12

Qual

23-Jul-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Analyte

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

%REC

LowLimit

%RPD

RPDLimit

SPK value SPK Ref Val

HighLimit Surr: Nitrobenzene-d5 0.056 0.1000 56.4 15 109 0.1000 59.7 Surr: 2-Fluorobiphenyl 0.060 15 96 0.083 0.1000 82.6 15 Surr: 4-Terphenyl-d14 133

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- Practical Quanitative Limit POL
- % Recovery outside of range due to dilution or matrix

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits J
- Sample pH Not In Range
- RL Reporting Limit

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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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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: LLLCS-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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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

TestCode: EPA Method 6010B: Dissolved Metals Sample ID: LCS SampType: LCS 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

48 1.0 50.00 0 97.0 80 Magnesium 120 Potassium 48 50.00 0 95.9 80 120 1.0 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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

ND

0.0050

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 0.030 Arsenic ND 0.0020 Barium ND Cadmium ND 0.0020 Chromium ND 0.0060 Lead ND 0.020 Selenium 0.050 ND

Sample ID: LCS-61023	Samp	SampType: LCS TestCode: EPA 6010B: Total Recoverable Metals							als	
Client ID: LCSW	Bato	ch ID: 61	023	F	RunNo: 7 9	9508				
Prep Date: 6/29/2021	Analysis	Date: 6/	30/2021	8	SeqNo: 2	795522	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:

Silver

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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-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: Ics-1 alk SampType: Ics 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: Ics-2 alk SampType: Ics 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: Ics-3 alk SampType: Ics 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 Quanitative Limit
S Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

1.014

WO#: **2106F12**

0.0592

20

23-Jul-21

Client: Souder, Miller and Associates

Project: Aqua Moss Sunco # 1

Specific Gravity

Sample ID: 2106F12-001C DUP SampType: DUP TestCode: Specific Gravity

0

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

Qualifiers:

* Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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

	ider, Miller and ociates	Work Order I	Number: 21	06F12		RcptNo: 1
Received By: Ju	an Rojas	6/29/2021 8:00	0:00 AM		Guarang Sand	
Completed By: Se	an Livingston	6/29/2021 10:4	0:57 AM		< /	
Reviewed By:	n	Glzalz				70
Chain of Custod	¥.					
1. Is Chain of Custoo	ly complete?		Ye	s 🗸	No 🗌	Not Present
2. How was the same	ple delivered?		Co	urier		
Log In						_
3. Was an attempt m	ade to cool the samp	les?	Ye	s 🗸	No 🗌	NA 🗌
4. Were all samples r	received at a tempera	ture of >0° C to 6.0°C	C Ye	s 🗸	No 🗌	NA 🗆
5. Sample(s) in prope	er container(s)?		Ye	s 🗸	No 🗌	
6. Sufficient sample v	volume for indicated t	est(s)?	Ye	s v	No 🗌	
7. Are samples (exce	pt VOA and ONG) pr	operly preserved?	Ye	s V	No 🗌	1 6/29/21
8. Was preservative a	added to bottles?		Ye	s 🗸	No 💆	GL G/29/21 NA
9. Received at least 1	vial with headspace	<1/4" for AQ VOA?	Ye	v	No 🗌	na 🗆
10. Were any sample	containers received t	proken?	Ye	s	No 🗸	# of preserved
11.Does paperwork m (Note discrepancie	atch bottle labels?	·)	Ye	s V	No 🗆	bottles checked for pH: Z Oor >12 unless noted)
12. Are matrices corre	ctly identified on Cha	in of Custody?	Ye	s V	No 🗌	Adjusted? Yes
13. Is it clear what ana	lyses were requested	1?	Ye	s 🗸	No 🗌	
14. Were all holding tir (If no, notify custor	mes able to be met? mer for authorization.	¥	Ye	s V	No 🗆	Checked by: SCL G/29/21
Special Handling	(if applicable)					
15. Was client notified	of all discrepancies	with this order?	Ye	s 🗌	No 🗌	NA 🗹
Person Notif	fied:	THE METERS OF THE PARTY OF THE	Date:	Maria Company	Marcon at the representation of the control and c	
By Whom:		CLOS A SELECTION TO SELECT A S	Via: e	Mail	Phone Fax	In Person
Regarding:		Y 20 (10 (10 (10 (10 (10 (10 (10 (10 (10 (1	and the second second			
Client Instru	ctions:		Partirina de la francisco			And the second s
16. Additional remark	s: added -	4.0. HNO3	+0 50	imple	001E, 00	off-100% for ORP an
17. Cooler Informati	ion OOD che	iked for pri	sperred p	4 6		
Cooler No T	emp °C Condition	Seal Intact Seal	No Seal	Date	Signed By	Ser Grata
1 0.6						
2 1.5	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)).

EPA HW No.	Contaminant	SW-846 Methods	Regulatory Leve (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	3021B 8260B	0.5
D020	Chlordane	3081A	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	n-Cresol	8270D	200.0
D025	p-Cresol	3270D	200.0
D026	Cresol	8270D	200.0
D027	l,4-Dichlorobanzena	8021B 8121 8260B 8270D	7.5
D028	1,2-Dichforoethane	8021B 8260B	0.5
10029	1,1-Dichloroethylane	8021B 8260B	0.7
D030	2,4-Dinitrotolueno	8091 8270D	0.13
D032	Hexachlorobenzene	8121	0.13
D033	Hexachlorobutadiene	8021B 8121 8260B	0.5
D034	Hexachloroethane	3121	3.0
DOOS	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

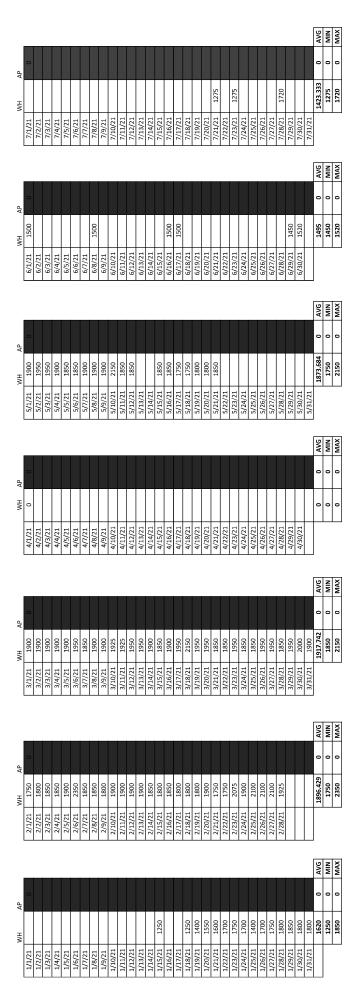
D036	Nitrobenzene	8091 8270D	2.0
D037	Pentrachlorophenol	8041	100.0
D038	Pyridine	\$260B \$270D	5.0

10010	Selenium	1311	[1.0
D011	Silver	1311	5.0
D039	Tetrachloroethyleno	3260B	0.7
D040	Trichloraethylone	8021B 8260B	0.5
D041	2,4,5-Trichlorophenol	\$270D	100.0
D042	2,4,6-Trichlorophenol	3041A 3270D	2.0
D043	Vinyl chloride	8021B 8260B	0.2

If a, 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.



Avg Flow																											15.925				15.925	15.925	15.9250000	
Avg Vol Av																											546				546	546	546 1	546
1	7/1/2021	7/2/2021	7/3/2021	7/4/2021	7/5/2021	7/6/2021	1/7/2021	7/8/2021	7/9/2021	7/10/2021	7/11/2021	7/12/2021	7/13/2021	7/14/2021	7/15/2021	7/16/2021	7/17/2021	1/18/2021	7/20/2021	7/21/2021	7/22/2021	7/23/2021	7/24/2021	7/25/2021	7/26/2021	7/27/2021	7/28/2021	1/29/2021	7/30/2021	7/31/2021				
Avg Flow																													16 0.466666667		16 0.466666667	16 0.466666667	16 0.4666667	16
Avg Vol																																``	``	
	6/1/2021	6/2/2021	6/3/2021	6/4/2021	6/5/2021	6/6/2021	6/7/2021	6/8/2021	6/9/2021	6/10/2021	6/11/2021	6/12/2021	6/13/2021	6/14/2021	6/15/2021	6/16/2021	6/17/2021	6/18/2021	6/20/2021	6/21/2021	6/22/2021	6/23/2021	6/24/2021	6/25/2021	6/26/2021	6/27/2021	6/28/2021	6/29/2021	6/30/2021					
Avg Flow																								0 0							0 0	0 0	0.00000000	0
Avg Vol	5/1/2021	5/2/2021	5/3/2021	5/4/2021	5/5/2021	5/6/2021	5/7/2021	5/8/2021	5/9/2021	5/10/2021	5/11/2021	5/12/2021	5/13/2021	5/14/2021	5/15/2021	5/16/2021	5/17/2021	5/18/2021	5/20/2021	5/21/2021	5/22/2021	5/23/2021	5/24/2021	5/25/2021	5/26/2021	5/27/2021	5/28/2021	5/29/2021	5/30/2021	5/31/2021				
W	_	48.70833333			_	29			<u>س</u> ا	[5]	1	7.6125 5/1	7/2	_	_	20.44583333 5/1	1.	79216207	295	17.35416667 5/2	2/5	5/5	2/5	2/5	2/5	5/2	2/5	2/5	5/3	5/3	26.20710784	48.70833333	7.6125000	
Avg Vol Avg Flow	1465 42.72916667	1670 48.70	913 26.62916667		699 20.		1242 36.			\rightarrow		261 7.6				701 20.44		793 23.12		595 17.35											898.5294118 26.20	1670 48.70	261 7.61	15275
Avę	4/1/2021	4/2/2021	4/3/2021	4/4/2021	4/5/2021	4/6/2021	4/7/2021	4/8/2021	4/9/2021	4/10/2021	4/11/2021	4/12/2021	4/13/2021	4/14/2021	4/15/2021	4/16/2021	4/17/2021	4/18/2021	4/20/2021	4/21/2021	4/22/2021	4/23/2021	1/24/2021	4/25/2021	4/26/2021	4/27/2021	4/28/2021	4/29/2021	4/30/2021		58			
Avg Flow	31.325	25.2	58.3625	.83333333	.44166667		25.8125	33.6875		· 		_		T	_	. 1	7.	70.3023		8.8375	23.3625		26.775	_	.39166667		•	27.06666667		40833333	4.69277778	70.9625	8375000	
	4	864	2001	47	1558 45.		885			1980		52		1		37	24		374 10						23		466 13.			1454 42.	1189.466667 34	2433	303 8.	35684
Avg Vol	3/1/21	3/2/21	3/3/21	3/4/21	3/5/21	3/6/21	3/7/21	3/8/21	3/9/21	3/10/21	3/11/21	3/12/21	3/13/21	3/14/21	3/15/21	3/16/21	3/17/21	3/18/21	3/20/21	3/21/21	3/22/21	3/23/21	3/24/21	3/25/21	3/26/21	3/27/21	3/28/21	3/29/21	3/30/21	3/31/21	11			
Avg Flow	33.425	62.8833333	40.89166667	65.1875	58.65416667	34.35833333	27.15416667	43.575	38.3833333	44.1	61.36666667	9.89	16.30416667	4	35.29166667	19.22083333	46.8125	42.0123	14.29166667		1003 29.25416667 3,	66.0333333	19.04583333	43.6625	57.37083333	54.1625	28.90416667	, a	6	Ř.	3 40.61728395	.2 68.6	0 7.5833333	0.
Avg Vol	1146	2156	1402	2235	2011	1178	931	1494	1316	1512	2104	2352	559	26	121	629	1605	1267	490		100	2264	653	1497	1967	1857	166				1392.592593	2352	260	37600
	2/1/21	2/2/21	2/3/21	2/4/21	2/5/21	2/6/21	2/7/21	2/8/21	2/9/21	2/10/21	2/11/21	2/12/21	2/13/21	2/14/21	2/15/21	2/16/21	_	2/18/21	\perp	2/21/21	2/22/21	2/23/21	2/24/21		2/26/21	2/27/21	2/28/21		_	_				
Avg Flow																	000000000000000000000000000000000000000	22 02082333	28.7875	48.06666667	62.7375	24.15	14.6125	22.25416667	35.67083333	35.90416667	62.50416667	36.2833333	34.53333333	15.63333333	33.35208333	62.7375	11.8708333	
											Ī		Ī			Ī		1163	987	1648	2151	828	501	763	1223	1231	2143	1244	1184	536	1143.5	2151	407	16009
Total Injected Avg Vol	1/1/21	1/2/21	1/3/21	1/4/21	1/5/21	1/6/21	1/7/21	1/8/21	1/9/21	1/10/21	1/11/21	1/12/21	1/13/21	1/14/21	1/15/21	1/16/21	1/17/21	1/10/21	1/20/21	1/21/21	1/22/21	1/23/21	1/24/21	1/25/21	1/26/21	1/27/21	1/28/21	1/29/21	1/30/21	1/31/21	AVG	MAX	MIN	Total for mont

																			15393016 Life Of well injected
		Total Cumulative Volume (barrels)	15182756	15198765	15236365	15272049	15272049	15287324	15287324	15287340	15287340	15287886	15287886	15287886	15287886	15287886	15287886	15287886	15393016 Lif
		Volume (barrels)	Previous year	16009	37600	35684	Previous Quarter	15275	0	16	Previous Quarter	546	0	0	Previous Quarter	0	0	0	105130
		Minimum Volume (bpd)	Pre	407	260	303	Previou	261	0	16	Previou	546	0	0	Previou	0	0	0	Total for year
		Maximum Volume (bpd)		2151	2352	2433		1670	0	16		546	0	0		0	0	0	Tot
		Average Volume (bpd)		1143.5	1392.592593	1189.466667		898.5294118	0	16		546	0	0		0	0	#DIV/0i	
		Minimum Annular Pressure (psig)		0	0	0		0	0	0		0	0	0		0	0	0	†
21	terly Report	Maximum Annular Pressure (psig)		0	0	0		0	0	0		0	0	0		0	0	0	
2021	Quarterly Injection Report	Average Minimum Annular Flow (gpm) Pressure (psig)		0	0	0		0	0	0		0	0	0		0	0	0	
		Minimum Flow (gpm)		11.8708333	68.6 7.5833333	8.8375		7.6125	0	0.46666667		15.925	0	0		0	0	0	
		Maxium Flow (gpm)		62.7375 11.	9.89	70.9625		48.7083333	0	0.46666667 0.46666667		15.925	0	0		0	0	0	
		Average Flow (gpm)		33.35208333	40.61728395	34.69277778		26.20710784	0	0.466666667		15.925	0	0		0	0	0	
		Minimum Pressure (psig)		1250	1750	1850		0	1750	1450		1275	0	0		0	0	0	
	5-28653			1850	2350	2150		0	2150	1520		1720	0	0		0	0	0	
277	sal #1 30-045	Average I Pressure (psig)		1620	1896.429	1917.742		0	1873.684	1495		1423.333	0	0		0	0	0	
WICI-5-0	odsiQ ooungased 1	Source Pressure Pressure (psig) (psig)	: 1	1/2	Feb-2020 1896.429	Mar-2020	023	4 Apr-2020	::0 May-2020	32 Jun-2020	·23	OZ-Inf	M Aug-20	Sep-20		Oct-2020	Nov-2020	Dec-2020	

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	0
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.

Received by O	CD:	PLUGGED	4350-4460 TA'd		70:4	/ P /	1	1/22/2009	4/28/1994		9/15/2005	7/13/2018		12/31/1901	11/16/1981	3/16/1948			1/23/2013	5/26/2012	1998	6/25/2010				
		II.		3/2				1/2	4/2	01	9/1	1/1		12/	11/	3/1			1/2	5/3		2/9				
		Packer	4282 10/15/07							3710																
		Perfs	4350-4460	6518-6718	6425-6602	6434-6587	6496-6629			3710-3718		1991-2041	2029-2059				1702-1926	1725-1921	1754-1939 1743-1924	1961-2007			1774-2077	1730-1951	1658-1878	1976-2010
		cks TOC	1010 surf	300 surf	820 surf	300 surf	180 surf			595 surf		434-741	434-741				310 surf	225 surf	279 surf	205 surf			262 surf	255 surf	258 surf	250 surf
	Production Casing	depth Sacks TOC	4760 10	6785 3(6622 8.	6707	6710 13			3820 5		2193 4	2215 43				2151 3:	2058 2:	2198 2	2050 20			2221 20	2195 2	2126 2	2106 2
	Produc	size	5.5	4.5	5.5	4.5	4.5			4.5		3.5	3.5				4.5	4.5	4.5	3.5			4.5	4.5	4.5	3.5
		Sacks TOC								7			7													
	INT Casing									\exists			\dashv						2210	1960					2126	1978
	INI	size																	6.25	5.5					6.25	5.5
	- Bu	Sacks TOC	150 surf	200 surf	225 surf	200 surf	250 surf			175 surf		45-53	45-53				90 surf	56 surf	34 surf	surf			34 surf	85 surf	44 surf	10 surf
	Surface Casing	depth	209	264	318	263	348			260		131	131				137	136	132	846			135	162	139	42
	Su	size	8.625	8.265	8.625	9.625	9.625			8.625		7	7				7	7	7	10			7	7	7	16
		₽	4760	6785	5825	6730	6722	138	66666	3840	1996	0	2225	2090	2203	2125	2152	0	2210	2069	2136	2235	2225	2200	2136	2107
		Spud Date	1/28/1992	3/12/1961	3/22/1985	11/15/1960	4/28/1980	10/22/2007	9/30/1955	7/10/1994	10/2/1955	10/7/1955	4/14/1998	7/9/2003	4/11/1998	3/16/1948	7/22/2004	7/27/1957	3/18/2006	1/26/1945	7/7/1973	3/23/2001	12/1/2004	8/17/2006	7/14/2003	7/29/1944
		5	/ E	0		0	9	В	ŋ	g ^	Σ	-	4	ш	0) E	Σ	0	ر ا	· ·	Ţ	- '	ŋ	٥	z	
		TWN RNG	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	9N 12W	29N 12W	29n 12w	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W
		Sec	2 2	1	1 2	1 2	1 2	1	н	1 2	1	1	1	1	1	1	1 2	1 2	2 2	2	2	2 2	2 2	2	2 2	2 2
		Status	Active	Plugged	Active	Active	Active	Plugged	Plugged	Active	Plugged	Plugged	Active	Plugged	Plugged	Plugged	Active	Active	Plugged	Plugged	Plugged	Plugged	Active	Active	Active	Active
		Lease	Private	Private	Federal	Federal	Federal	Federal	Federal	Federal	Federal	Federal	Federal	Private	Federal	Private	Federal	Federal	Private	Private	Private	Private	Private	Private	Federal	Federal
		Туре	Salt Water Disposal	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas
		Current Operator	Agua Moss	BP America	SIMCOE LLC	SIMCOE LLC	SIMCOE LLC	Burlington	Burlington	Dugan Production	Energen Resources	Epic Energy	HilCorp	Pre Ongard	Pre Ongard	Southern union	Southland Royalty	Southland Royalty	Surlington	Surlington	Burlington	Burlington	HilCorp	HilCorp	HilCorp	HilCorp
		Well#	#001	#001 B	#001E S	#001	#001E S	#100 B	5	1	2 E	3R	5R	#001	#003	8	#002R S	25 5	#500S	#001 B	#001 B	#001R B	#001R	#001S	#200	#000#
		Well Name	SUNCO DISPOSAL		ALLEN A	Dudley Cornell A			Cornell	Hike	Cornell	Cornell	Cornell	PRE-ONGARD WELL	PRE-ONGARD WELL	e-Ongard			ORNELL COM	KATTLER	McGrath SRC	MCGRATH SRC	BECK	BECK	CORNELL COM	
Released to In	nagi	ng:	11/20E	1/2 1/2 1/2		30.50 Dt	30.045-24129 Dudley Cornell A	30245-34348 AI	30-045-08782 Cc	30-045-29167 Hi	30-045-08656 Cc	30-045-29539 Cc	30-045-29538 Cc	30-045-08783 PF	30-045-08641 PF	30-045-08793 Pre-Ongard	30-045-32346 CORNELI	30-045-31612 Cornell	30-045-33573 CC	30-045-08844 KA	30-045-08713 M	30-045-30486 M	30-045-32241 BE	30-045-33811 BE	30-045-31580 CC	30-045-08714 CORNELL SRC

, in the second			2/23/1984	25: 1061/1271	3/1/2013	7/24/1998	10/12/2009					Tad	11/10/1964		5/8/2017					12/7/1995	2/9/2017			3/9/1989		9100/101/1
												1597 CIBP@1609														
	6489-6596	6446-6644						1692-1904	6432-6524	1621-1885	6546-6556	1659-1872						6356-6510								
	5 1065 surf	9 700 surf						2 289 surf	8 500 surf	7 238 surf	0 300 surf	0 219-399						0 250 surf								
	4.5 1865	4.5 6739						4.5 2112	4.5 6688	4.5 2117	4.5 6620	4.5 1940		\exists				4.5 6600	+				+		\dashv	
														\dashv					\dashv				\dashv			
	225 surf	275 surf						150 surf	250 surf	61 surf	150 surf	140-168						175 surf	\dashv				\dashv			
	318	307						218	307	144	232	126		\exists				236	1						1	
	8.625	10 8.625	25		01	74	00	32 7	39 8.625	7 02	8.625	2 281	01	00	06	90	22	30 8.625	88	0	56	02	75	0	01	
	0229	6740	3 2125		2040	1974	2050	7 2132	1 6689	2120	0 6620	1948	1940	1900	1890	1906	2002	0099	9 6538		1856	1 6470	1975		0 6510	
	11/19/1961	8/1/1961	4/14/1948		3/4/194	1/8/1945	2/25/1943	7/13/2007	3/14/1964	8/14/2005	4/12/1960	3/30/2001	6/25/1955	6/24/1994	6/28/1994	2/21/2005	3/20/2005	11/3/1960	6/23/1959	5/29/1981	5/29/1959	1/20/1964	11/25/1992	3/18/1988	12/28/1960	
	12W J	12W D	12w g	12W M	l W	12W D	12W G	12W B	12W I	12W F	12W E	12W L	12W K	12W A	12W N	12W C	12W P	12W J	12W K	12W A	12W F	12W H	12W A	12W B	12W D	_
	29N 12	29N 12	29n	29N 12	29N 12	29N 12	29N 12	29N 12	29N	29N 12	29N	29N 12	29N	29N 12	29N	29N 12	29N	29N 12	29N	29N	29N 12	29N	29N 12	29N	29N	_
	Active 2	Active 2	Plugged 2	Plugged 2	gged 3	Plugged 3	Plugged 3	Active 3	Active 3	Active 3	Active 3	9	Plugged 3	Active 4	Plugged 4	Active 4	Active 4	Active 4	Active 4	Plugged 4	Plugged 4	Active 9	Active 9	Plugged 9	Active 10	_
	Private Act	Private Ac	Private Plu	Federal Plu	rivate Plu	Private Plu	Private Plu	Private Act	Private Act	Private Act	Private Act	Private TA'd	Private Plu	Private Act	Private Plu	Private Act	Private Act	Federal Act	Federal Act	Federal Plu	Federal Plu	Federal Act	Private Act	Private Plu	Federal Act	_
					P P																					_
	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	s Gas	esources Gas	Enduring Resources Gas	Enduring Resources Gas	Enduring Resources Gas	Gas	il & Gas Gas	Gas	Gas Gas	Gas	Gas	Gas	Gas	_
	HilCorp	HilCorp	Southland		Burlington	Burlington	Burlington	HilCorp	HilCorp	HilCorp	HilCorp	HilCorp	Union Texas	Enduring Resources	Enduring R	Enduring R	Enduring R	HilCorp	Holcomb Oil & Gas	Pre Ongard	Riggs Oil & Gas	SIMCOE LLC	HilCorp	Pre Ongard	SIMCOE LLC	
	#001	#001		#200	#003	#005	1	#003S	#001	#100S	#001	#100		#001	#005	#003	#004	#001	#001	#001	#001	.B #001	#005	#001	#001	_
	ACGRATH B	OUNG.	re-Ongard	PRE-ONGARD WELL	ACGRATH	WALKER 2	Walker SRC	ACGRATH	ACGRATH A	WALKER	VALKER 1	WALKER 100	Pre-Ongard	IGGS	RIGGS	IGGS	IGGS	TANDARD	DEVONIAN FEDERAL	PRE-ONGARD WELL	FEDERAL	30-045-08586 FLORANCE GAS COM B #001	ROPCO FEE FC 9	30-045-26855 PRE-ONGARD WELL	ORNELL A	
sed to In	3000 N	30-045-08839 YOUNG	30015-08797 Pre-Ongard	d SE92Z-S₩ 1/2₩	23 € 23 € 23 € 23 € 23 € 23 € 23 € 23 €	30-5-60274 V	N E389-545-08	302245-33580 MCGRATH	30-045-08712 MCGRATH A	30-045-32931 V	30-045-08801 WALKER 1	30-045-30244 V	30-045-08711 P	30-045-29117 RIGGS	30-045-29118 R	30-045-32239 RIGGS	30-045-32312 RIGGS	30-045-08718 STANDARD	30-045-08720 E	30-045-24552 P	30-045-08804 F	30-045-08586 F	30-045-28824 R	30-045-26855 F	30-045-08601 CORNELL A	_

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		6277-6454		1543-1704 1744- 1800				6298-6483	1811-1839	1726-1764																
		765 surf		229 surf				300 surf	181 surf	270 surf																
		6514		1959				6604	2022	2000																
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		150 surf		55 surf				150 surf	70 surf	35 surf																
		240		147				250	106	140																
		8.625		7				8.625	8.625	7																
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	4/20/1956	1/5/1981	6/12/1962	1/7/2003	8/21/1946	12/19/1980	2/21/2008	12/6/1961	11/7/1955	10/7/2003	10/9/1980	10/27/1999	2/27/2005		1/1/1940	11/25/1932	5/5/1967	11/22/1953	7/31/1976	5/22/1980	5/12/1980	9/28/1962	5/25/1941	7/22/1976	6/12/1978	9/20/2005
	12W C	12W B	12W J	12W B	12W J	12W A	12W N	12W D	12W C	12W D	12W H	12W H	12W I	12W A	12W G	12W L	12W O	12W P	12W A	12W A	12W F	12W M	12W K	12W F	12W E	12W A
	N62	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	12 29N 12
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	Federal Plug	Federal Active	Private Active	Federal Active	Perm Private ntly	Federal Plug	Federal Active	Federal Active	Federal Active	Federal Active	Federal Active	Federal Active	Federal Active	Federal Plug	Federal Plug	Private Plug	Federal Plug	Federal Plug	Federal Plug	Federal Active	Federal Active	Federal Plug	Federal Plug	Federal Plug	Federal Active	Federal Active
	Fec	Fec	Pri	Fec		Fe	Fe	Fec	Fec	Fec	Fec	Fec	Fec	Fec	Fec	Pri	Fec	Fec	Fec	Fec	Fec	Fec	Fec	Fec	Fec	Fec
	Gas	Gas	Gas	Gas	Wate	Gas	Gas	Gas	Gas	Gas	Gas	y Gas	y Gas	Gas	Gas	Gas	Gas	Ities Gas	Ities Gas	Gas	Gas	Gas	Gas	y Gas	Gas	Gas
	Burlington	HilCorp	HilCorp	HilCorp	Pre Ongard	Southland	Synergy	SIMCOE LLC	Epic Energy	HilCorp	HilCorp	Mcelvain Energy	Mcelvain Energy	Pre Ongard	Pre Ongard	Pre Ongard	Pre Ongard	Producing Royalties Gas	Producing Royalties Gas	SIMCOE LLC	SIMCOE LLC	BP America	Burlington	Mcelvain Energy	RIM Operating	RIM Operating
	#007	#001E	#001	#100	#001		#108	#001	900#	#101	#001E	#001R	#003	#010	#001	#001	#001	#012	#001	#001E	#001E	#001	#004	#005	#0051	#0018
	CORNELL	ECK A	BECK A	CORNELL	PRE-ONGARD WELL	Pre-Ongard	ECK 29 12 10	CORNELL C	CORNELL	CORNELL	FEDERAL PRI	PAYNE	R	PRE-ONGARD WELL	PRE-ONGARD WELL	PRE-ONGARD WELL	PRE-ONGARD WELL	CARROLL CORNELL	PAYNE	ORNELL D	CORNELL E	CORNELL E	CORNELL SRC	PAYNE	PAYNE	RI
Released to In	20980-5#Ju	30-045-23889 B	8 212-08212	0 18808-5	30-045-08523	30-1945-23758 P	30-045-34452 BECK 29 12 10	30245-13092 C	30-045-08615 C	30-045-31581 C	30-045-24447 FI	30-045-29945 P.	30-045-32667 PRI	30-045-13218 P	30-045-08558 P	30-045-08515 P	30-045-20067 P	30-045-08475 C.	30-045-22118 P.	30-045-24086 CORNELL D	30-045-24283 C	30-042-08444 C	30-042-08528 C	30-045-22119 P.	30-045-22962 P.	30-045-33015 PRI

Received by O		<i>3/1</i>	5/26/1958	2).	70.4		8/10/2015	8/14/2015	12/31/1901	3/12/1954	3/17/1995			3/17/1959	5/30/1996							2/23/1994	6/4/1982	4/12/1999		
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	2/17/2005	2/8/2005	4/13/1953	3/19/1985	9/25/1999	6/2/2003	4/27/2003	9/13/196	6/21/1953		10/11/1961	1/15/2004	5/13/2004	3/30/1947	2/28/1962	4/1/2001	1/30/1964	9/20/1984	10/16/1998	1/27/2003	4/30/2008	9/15/1944	7/10/1946	4/1/1946	12/5/1993	3/8/2005
	1 12W E	1 12W M	12W M	12W M	1 12W N	1 12W E	12W P	1 12W L	1 12W G	12W 0	12W L	1 12W F		12W L	1 12W P	12W P	12W M	12W P	12W M	1 12W P	1 12W O	1 12W G	1 12W J	12W I	12W H	12W I
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	Active	l Active		Active	Active	Active	Plugged	Plugged	Plugged	Plugged				Plugged	Plugged	Active	Active	Active	Active	Active	Active	Plugged	Plugged	Plugged	Active	Active
	Federal	Federal	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private
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	RIM Operating	RIM Operating	ONGARD WELL OPERATOR	HilCorp	HilCorp	HilCorp	[14634] MERRICOLL & GAS COR	[14634] MERRIC OIL & GAS COR	ONGARD WELL OPERATOR	ONGARD WELL OPERATOR	[5073] CONOCO INC	HilCorp	HilCorp	ONGARD WELL OPERATOR	AMERICA PRODUCTION	HilCorp	HilCorp	HilCorp	HilCorp	HilCorp	Enduring Resources	MCGEE OIL & GAS ONSHORE LP	ONGARD WELL OPERATOR	PRODUCTION CORP	Enduring Resources	Enduring Resources
	#001	#005	#001	#001E	#001	#005	#005	#001	#001	#003	#001	#001		#001	#001	#003	#001	#001E	#005	#004	#005	#001	#005	#005	#005	#003
	PRI	PRI	PRE-ONGARD WELL	ROWLAND GAS COM	RUBY CORSCOT A	RUBY CORSCOT A	KATY COM	PAUL PALMER	PRE-ONGARD WELL	PRE-ONGARD WELL	PAUL PALMER D	PADILLA	PADILLA	PRE-ONGARD WELL	DUFF GAS COM B	DUFF GAS COM	DUFF GAS COM C	DUFF GAS COM C	DUFF GAS COM C	30-045-31284 DUFF GAS COM C	GILBREATH	HARGIS	PRE-ONGARD WELL	JULANDER	REDFERN	REDFERN
Released to In	3000 1	30-045-32666		1/208		30-545-31641 F	3:25:30456	3 77160-5	30-045-29414	30-045-09130	30-045-09165	30-045-30027		30-045-09200	30-045-13120	30-045-30544	30-045-09134	30-045-26076	30-045-29664	30-045-31284	30-045-34235	30-045-09037	30-045-08999	30-045-08998	30-045-29023	30-045-32236 REDFERN

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	392	961	984	945	945	946	963	984	362	305	900	903	996	096	984	9/7/1967 DH	990	996	302	961	086
	12/31/1992	9/21/1961	9/4/1984	9/11/1945	1/1/1945	/17/1946	2/7/1963	11/20/1984	1/30/1962	7/13/2005	3/7/2006	2/15/2003	7/22/1966	12/19/1960	6/15/1984	9/7/19	10/9/199	1/2/1966	8/29/2002	6/14/1961	8/10/1980
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	e Active	e Active						al TA'd	e Active			e Active	al TA'd	e Active	e Active		Plug	Active		Active	
	Private	Private	Federal	Federal	Private	Federal	Federal	Federal	Private	Private	Federal	Private	Federal	Private	Private	Federal	State	State	State	State	State
			Salt Water Disposal																		
	Gas	Gas		Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas
			ON S	WELL	WELL							OIL &		il & Gas	& Gas						
	Enduring Resources	HilCorp	BURLINGTON RESOURCES OIL 8	ONGARD WELL	ONGARD WELL	Burlington	Burlington	HilCorp	HilCorp	HilCorp	HilCorp	HOLCOMB OIL & GAS INC	HilCorp	Holcomb Oil & Gas	Merrion Oil & Gas	Southland	Surlington	HilCorp	HilCorp	HilCorp	HilCorp
						Bul										Sot					
	#002	#001	#004	#001	#001	2	#001	#001E	#001	#100	#100S	#001	#003	#001	#005		#024	M #001	#100	#030	#030E
				WELL	WELL			Σ	Σ			OM		MO	οM		5	COMP	COM	_	5
	IN.	ĕ	ATH	NGARD	NGARD	N.	АТН С	SAS CO	SAS CO	DER	DER	HAN C	- N	HANC	HAN C	gard	TE CO	/EXICO	/EXICO	COM A	COM A
	SHIOTANI	MADDOX	MCGRATH	PRE-ONGARD WELL	PRE-ONGARD WELL	HUDSON	MCGRATH C	DUFF GAS COM	DUFF GAS COM	JULANDER	JULANDER	CARNAHAN COM	HUDSON	CARNAHAN COM	CARNA	Pre-Ongard	FC STATE COM	NEW N	NEW MEXICO COM N	STATE COM AH	STATE COM AH
Released to In	8912	9001		1/2080-5\\	8939	8950	30-045-08945	6141						8946	30-045-25844 CARNAHAN COM			30-045-12188 NEW MEXICO COM N			
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	90	300	30	30	30	30	30	30	30	30	30	36	33	38	36	30	30	38	36	<u> </u>	3

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 aquiring data for RPE	
7/16/2021	12:53 PM	Finish aquiring data, remove transducers. Total time 168 hours	

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





The HOBO 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 HOBOware®, 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

ogger with	CABLE-	CABLE-2.5-	CABLE-	CABLE-	CABLE-
able Type	4-20mA	STEREO	ADAP5	ADAP10	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	±0.1 mV	±0.2 mV	±0.4 mV	±1.0 mV
	±0.2% of	±0.1% of	±0.3% of	±0.3% of	±0.3% of
	reading	reading	reading	reading	reading
Resolution	0.3 μΑ	40 μV	80 μV	160 μV	384 μV

Lo

gger	
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	$1\mbox{year}$, typical with logging rate of $1\mbox{minute}$ and sampling interval of $15\mbox{seconds}$ 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 HOBO U-Shuttle (U-DT-1) is not compatible with this logger.

HOBO 4-Channel Analog Data Logger

UX120-006M

Included Items:

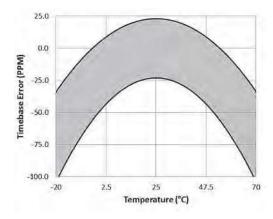
- Command[™] strip
- Double-sided tape
- Hook & loop strap
- Two AAA 1.5 V alkaline batteries

Required Items:

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

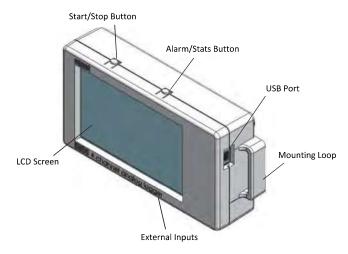
Sensors and cables available at www.onsetcomp.com.

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).

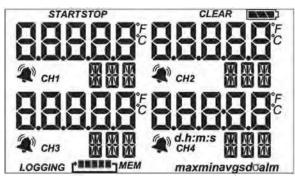
Alarm/Stats Button: Use this button to clear a tripped alarm (see *Setting up Alarms*) or to switch between statistics, alarm readings, and the current sensor reading.

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.		
862*	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.		
0538 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.		
EEE 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).		
↑ 医医尿素素 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 sdo	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.
- 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.
- 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.
- 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

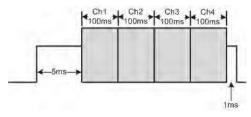
The logger's external inputs can accept the voltage input cable (CABLE-2.5-STEREO), which allows a voltage to be recorded. The input line must not be exposed to signals below 0 V or above 2.5 V. The voltage input cable connections are as follows:

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.

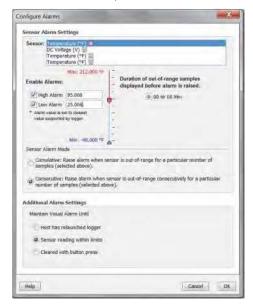
WARNING: Analog channel input cannot exceed 2.5 V DC. For sensor outputs up to 24 V DC, use the appropriate voltage adapter cable (CABLE-ADAPX).

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:

- 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.)
- In the Configure Alarms window, select a sensor from the list. In the example in this section, a temperature sensor was selected.

- 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.
- 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:

- 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.
- 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.
- 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:

- 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.
- 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.



- 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.
- 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.

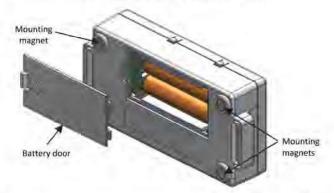
Battery Information

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.

CALIBRATION DATA SHEET

DWIGHT W PROUTY CO., INC.	Date 12 Jun 2017 Time 14:12:19
207497-43759	Cal. by AM Dept. 1329
504038	1445257 / 0010
1797672 17230543	Inst. type IGP10S-F
Range 0.0000 to 6000.0000 Psi	
Actual output in Psi	Digital error in % of Rdg*
-0.020	-0.001
1498.872	0.007
3003.441	0.007
4501.429	0.012
6001.271	0.023
	504038 1797672 17230543 Range

S5G3

Gauge(s): 210577E

Dmm: 209856-40 Tmp: 210331-8

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)

^{*} The error of the first test point is in % of 25% of the range.

FOXBORO BY SCHNEIDER-ELECTRIC

FOXBORO, MASS., U. S. A.

CALIBRATION DATA SHEET

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 Serial #	1711768 16410398	Inst. type IGP10S-1
	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
	4500.247	-0.003
4500.371	4300.247	-0.003

S5G3

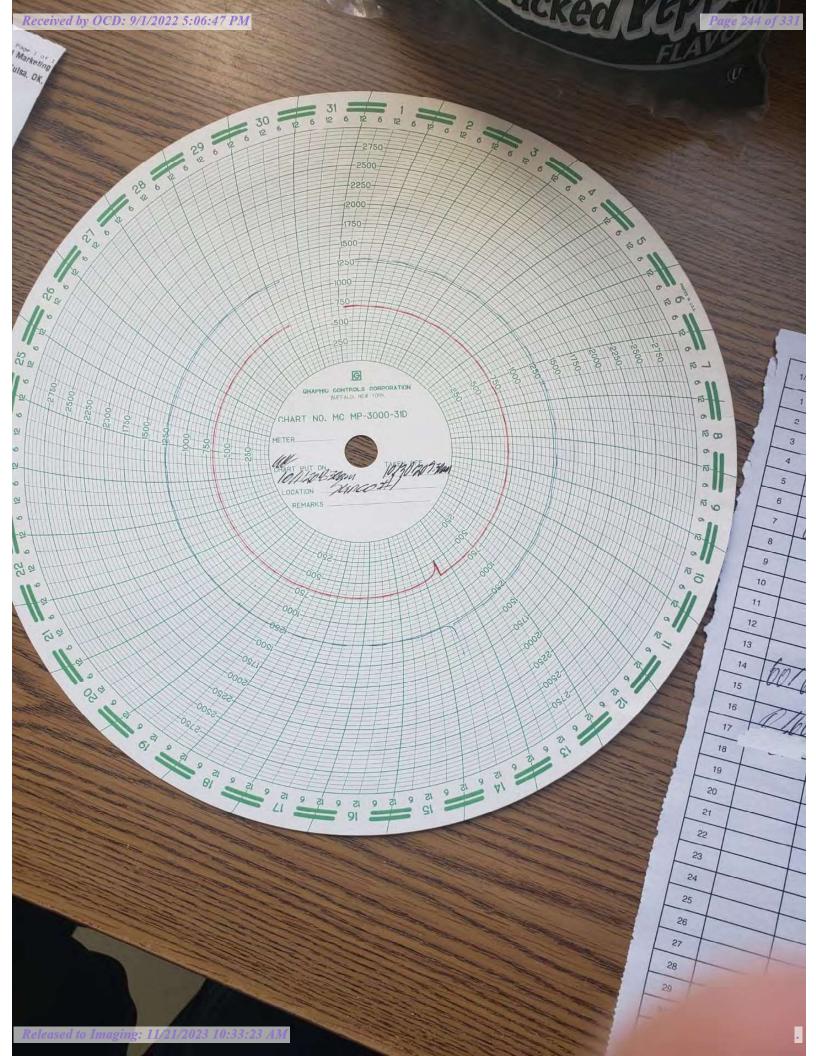
Gauge(s): 210577E

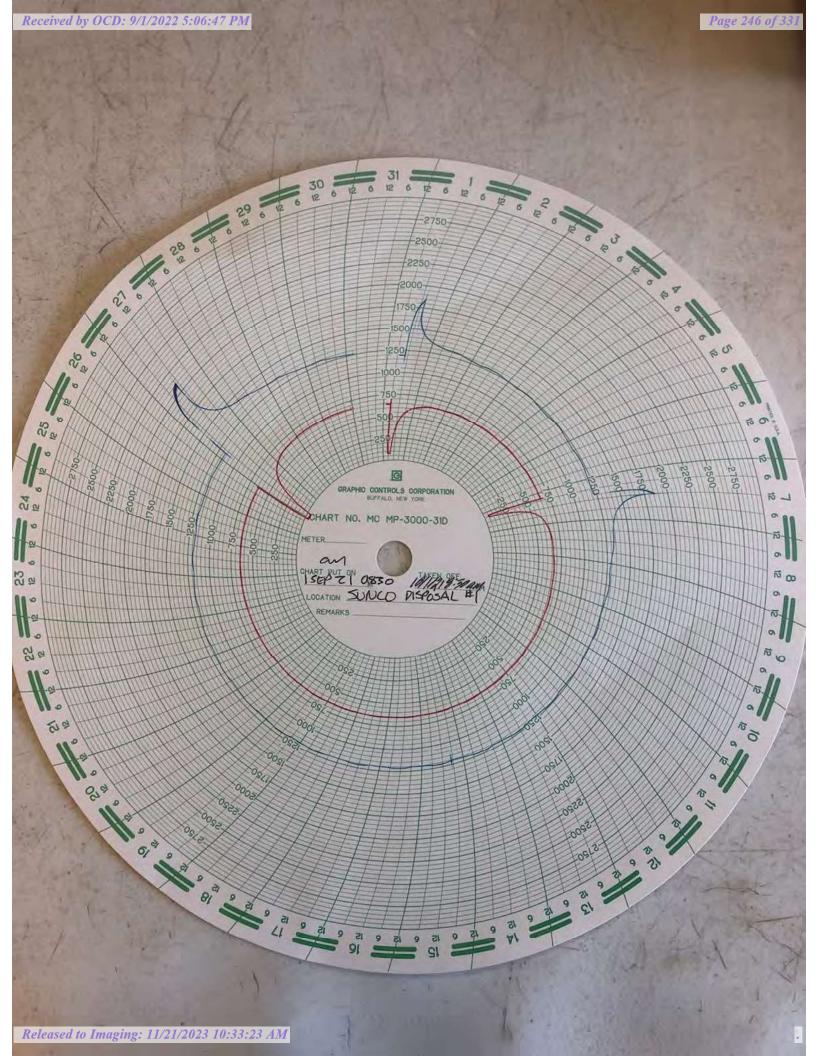
Dmm: 209856-40 Tmp: 210331-8

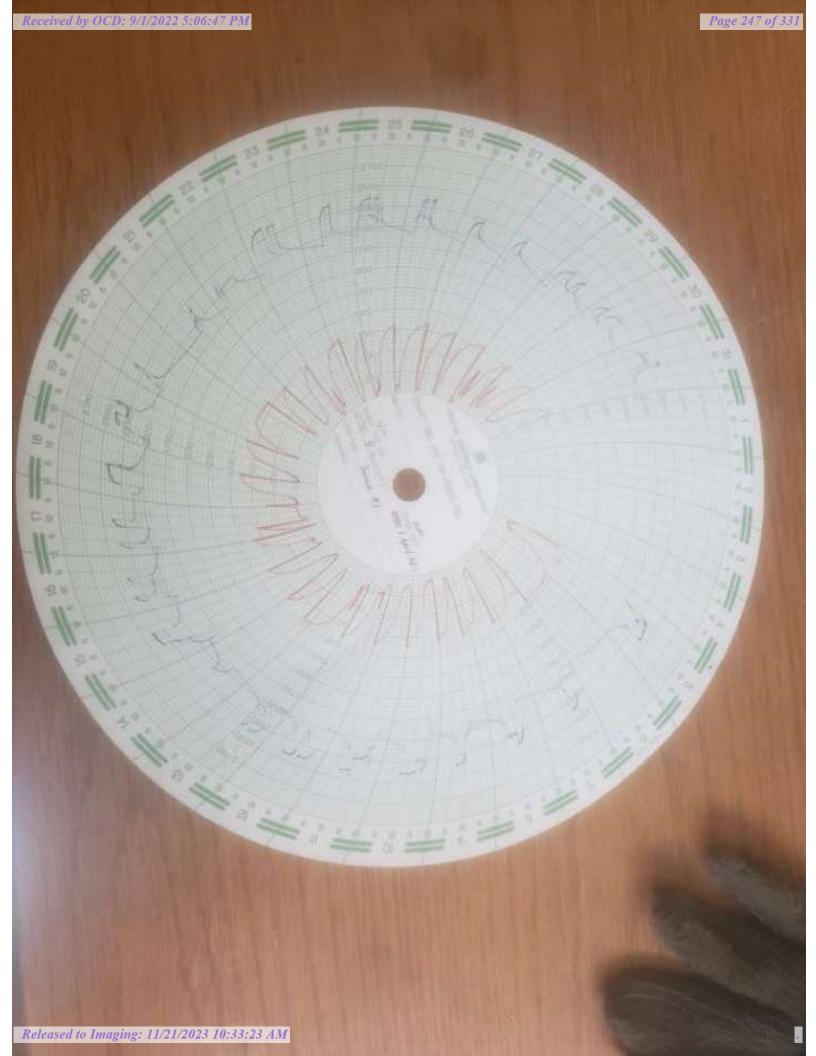
All measurement standards are calibrated at scheduled intervals against certified standards which are traceable to the National Institute of Standards and Technology.

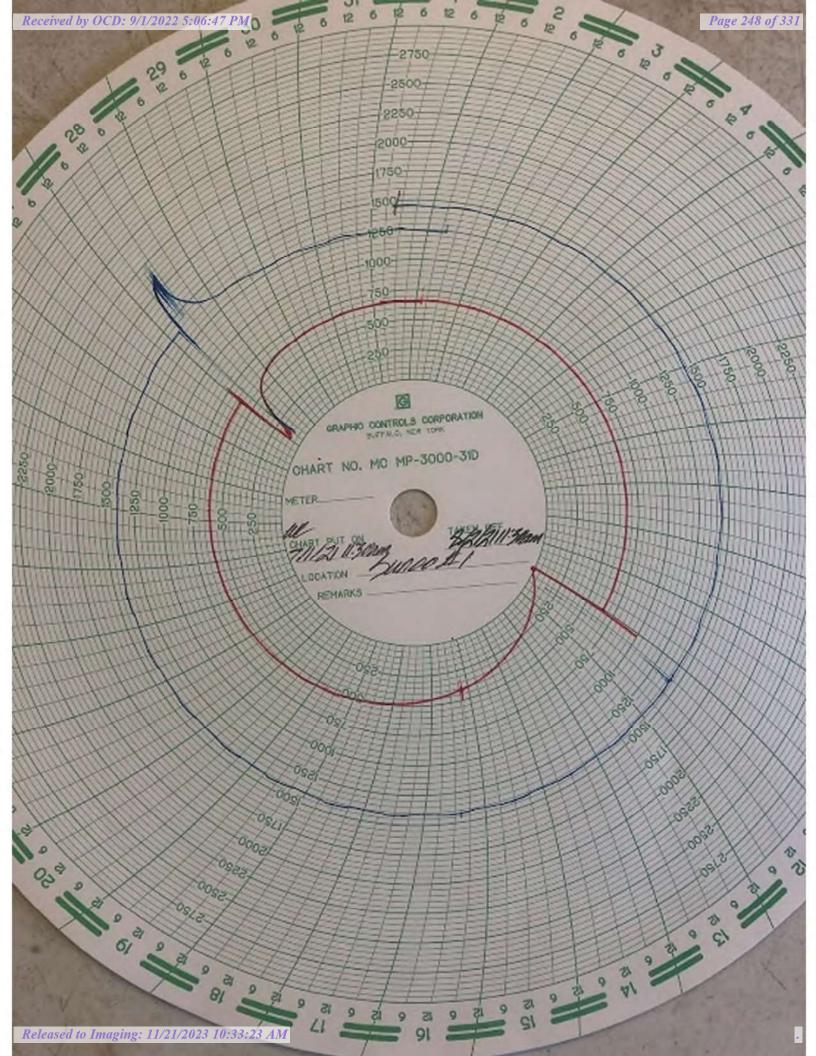
Form 2759A(1/93)

^{*} The error of the first test point is in % of 25% of the range.

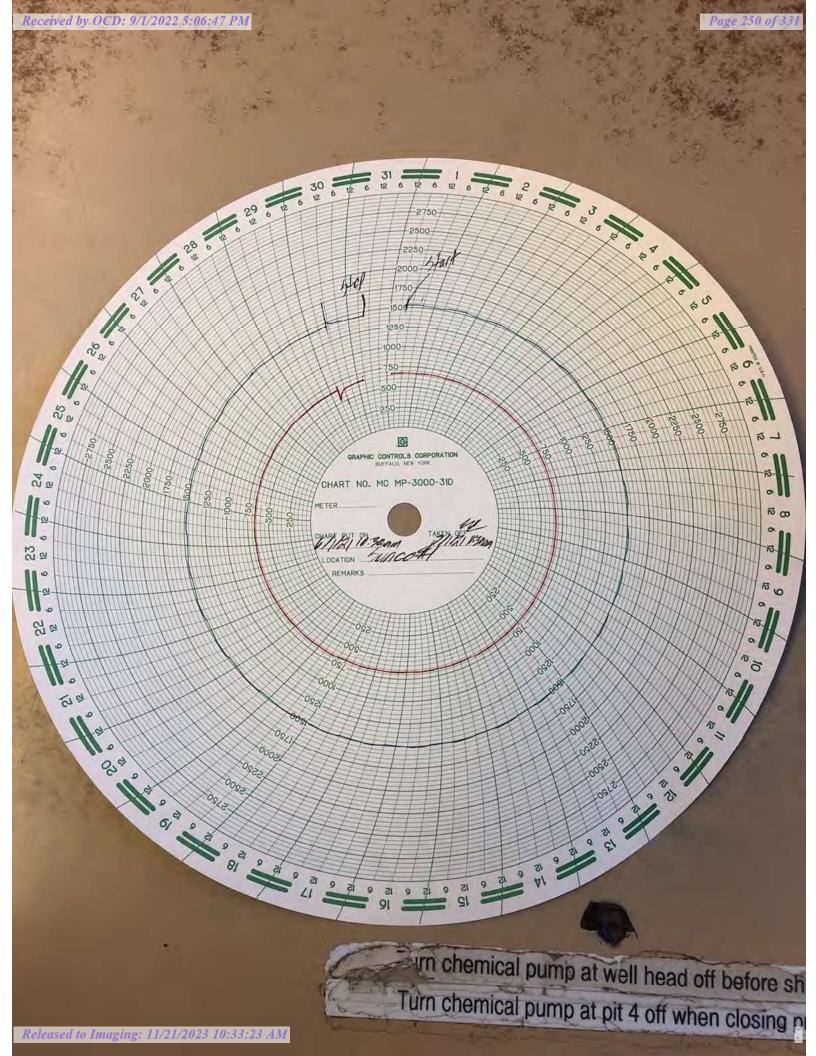


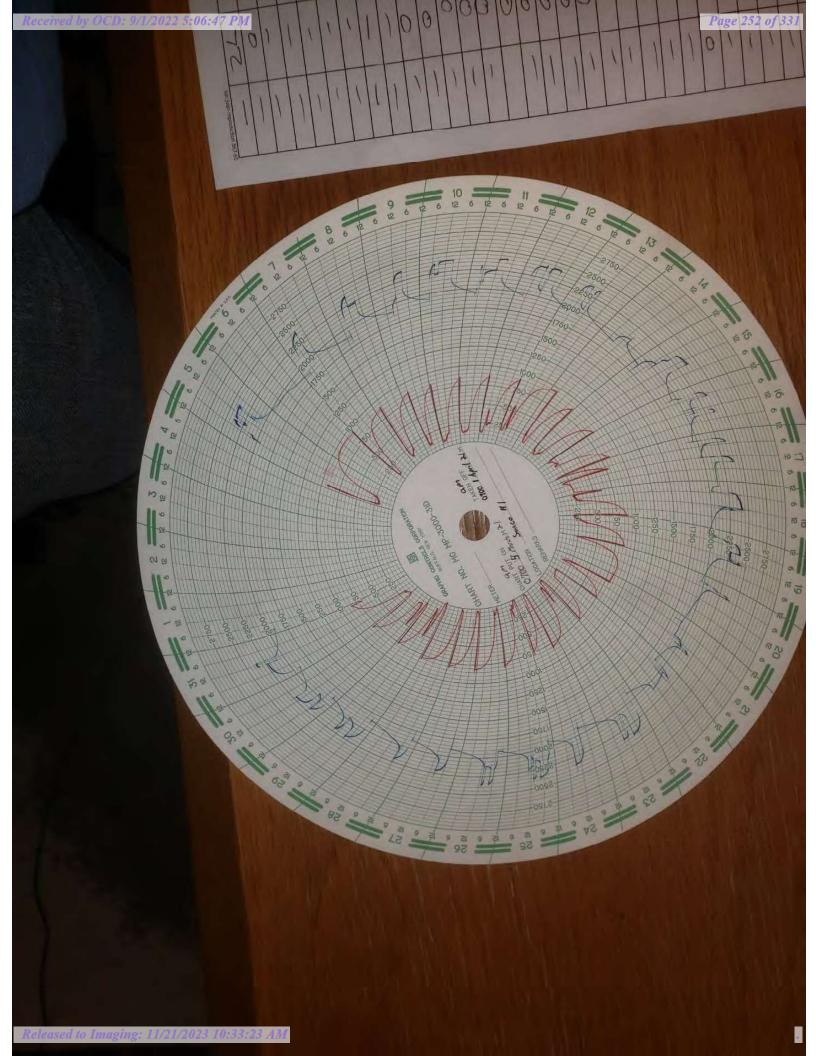












2022 AREA OF REVIEW UNIT LETTERS ENCOMPASSED BY THE 2-MILE AOR

Sec	TWN	RNG	UL
1	29N	12W	ALL
2	29N	12W	ALL
3	29N	12W	ALL
4	29N	12W	ACFJKNP
9	29N	12W	АВН
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	0
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.

Received by O	CD:	PLUGGED	3/27/2018	2 3.0	70:4	<i>y</i> P /	1/22/2009	4/28/1994		9/15/2005	7/13/2018		12/31/1901	11/16/1981	3/16/1948			4350-4460 TA'd	1/23/2013	5/26/2012	1998	6/25/2010				
		Packer							3710									4282 10/15/07								
		Perfs	6518-6718	6425-6602	6434-6587	6496-6629			3710-3718		1991-2041	2029-2059				1702-1926	1725-1921	4350-4460	1754-1939 1743-1924	1961-2007			1774-2077	1730-1951	1658-1878	1976-2010
	asing	depth Sacks TOC	300 surf	820 surf	300 surf	180 surf			595 surf		434-741	434-741				310 surf	225 surf	1010 surf	279 surf	205 surf			262 surf	255 surf	258 surf	250 surf
	Production Casing	depth	6785	6622	6707	6710			3820		2193	2215				2151	2058	4760	2198	2050			2221	2195	2126	2106
	Prod	size	4.5	5.5	4.5	4.5			4.5		3.5	3.5				4.5	4.5	5.5	4.5	3.5			4.5	4.5	4.5	3.5
		Sacks TOC																								
	INT Casing	depth																	2210	1960					2126	1978
	<	size																	6.25	5.5					6.25	5.5
	ing	Sacks TOC	200 surf	225 surf	200 surf	250 surf			175 surf		45-53	45-53				90 surf	56 surf	150 surf	34 surf	surf			34 surf	85 surf	44 surf	10 surf
	Surface Casing	depth	264	318	263	348			260		131	131				137	136	209	132	846			135	162	139	42
	Su	size	8.265	8.625	9.625	9.625			8.625		7	7				7	7	8.625	7	10			7	7	7	16
		Р	6785	5855	6730	6722	138	66666	3840	1996	0	2225	2090	2203	2125	2152	0	4760	2210	2069	2136	2235	2225	2200	2136	2107
		Spud Date	3/12/1961	3/22/1985	11/15/1960	4/28/1980	10/22/2007	9/30/1955	7/10/1994	10/2/1955	10/7/1955	4/14/1998	7/9/2003	4/11/1998	3/16/1948	7/22/2004	7/27/1957	1/28/1992	3/18/2006	1/26/1945	7/7/1973	3/23/2001	12/1/2004	8/17/2006	7/14/2003	7/29/1944
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		TWN RNG	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W	29n 12w	29N 12W	29N 12W	29N 12W	29N 12W	29N 12W
		s Sec	d 1	1	П	Т	1	d 1	1	н Б	1	1	1	1		П	1	2	d 2	d 2	d 2	2	2	2	2	2
		Status	Plugged	Active	Active	Active	Plugged	Plugged	Active	Plugged	Plugged	Active	Plugged	Plugged	Plugged	Active	Active	Active	Plugge	Plugge	Plugged	Plugged	Active	Active	Active	Active
		Lease	Private	Federal	Federal	Federal	Federal	Federal	Federal	Federal	Federal	Federal	Private	Federal	Private	Federal	Federal	Private	Private	Private	Private	Private	Private	Private	Federal	Federal
		Туре	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Salt Water Disposal	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas
		Current Operator	BP America	SIMCOE LLC	SIMCOE LLC	SIMCOE LLC	Burlington	Burlington	Dugan Production	nergen Resources	Epic Energy	HilCorp	Pre Ongard	Pre Ongard	Southern union	Southland Royalty	Southland Royalty	Agua Moss	Surlington	Surlington	Burlington	Burlington	HilCorp	HilCorp	HilCorp	HilCorp
		Well#	#001	#001E	#001	#001E	#100	5 6	1	2	38	5R	#001	#003		#002R	25	#001	#5005	#001	#001	#001R	#001R	#001S	#200	#002#
		Well Name	ALLEN A	ALLEN A	Oudley Cornell A	Dudley Cornell A			like	Cornell	Cornell	Cornell	PRE-ONGARD WELL	30-045-08641 PRE-ONGARD WELL	Pre-Ongard				CORNELL COM	(ATTLER	McGrath SRC	MCGRATH SRC	BECK			
Released to In	nagi	ng:	8 12 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	V 71/208	23°042-08661	30.5-24129 D	30-045-34348 Allen Com	28280 C	30-045-29167 Hike	30-045-08656 C	30-045-29539 C	30-045-29538 C	30-045-08783 P	30-045-08641 F	30-045-08793 P	30-045-32346 CORNELL	30-045-31612 Cornell	30-045-28653 SUNCO DISPOSAL	30-045-33573 C	30-045-08844 k	30-045-08713 N	30-045-30486 N	30-045-32241 B	30-045-33811 BECK	30-045-31580 CORNELL COM	30-045-08714 CORNELL SRC

Received by O			2/23/1984	12/31/1901	3/1/2013	7/24/1998	10/12/2009	TA'd 10/23/2009				Tad	11/10/1964		5/8/2017					12/7/1995	2/9/2017			3/9/1989		1/24/2018
												1597 CIBP@1609														
	6489-6596	6446-6644						1692-1904	6432-6524	1621-1885	6546-6556	1659-1872						6356-6510								
	1065 surf	700 surf						289 surf	500 surf	238 surf	300 surf	219-399						250 surf								
	1865	6239						2112	8899	2117	6620	1940						0099								
	4.5	4.5						4.5	4.5	4.5	4.5	4.5						4.5	_				-		-	
	225 surf	275 surf						150 surf	250 surf	61 surf	150 surf	140-168						175 surf					\dashv		\dashv	
	318	307						218	307	144	232	126						236								
	8.625	8.625						7	8.625	7	8.625	7						8.625								
	6720	6740	2125		2040	1974	2050	2132	6899	2120	6620	1948	1940	1900	1890	1906	2002	0099	6538	0	1856	6470	1975	0	6510	6350
	11/19/1961	8/1/1961	4/14/1948		3/4/1945	1/8/1945	2/25/1943	7/13/2007	3/14/1964	8/14/2005	4/12/1960	3/30/2001	6/25/1955	6/24/1994	6/28/1994	2/21/2005	3/20/2005	11/3/1960	6/23/1959	5/29/1981	5/29/1959	1/20/1964	11/25/1992	3/18/1988	12/28/1960	4/4/1980
	ر س	W	W	W	W J	W	<u>ق</u>		-	А.	W	W L	W	۸	z	12W C	12W P	- N	×	N A	N F	I ×	A	N B	Ω /	12W N
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	2	2	3d 2	3 d 2	ed 3	3	e g	3	ю	ю	ю	3	3	4	4	4	4	4	4	4	4	6	6	6	10	10 29N
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	Private	Private	Private	Federal	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Federal	Federal	Federal	Federal	Federal	Private	Private	Federal	Federal
	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	s Gas	s Gas	s Gas	s Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas
	HilCorp	HilCorp	Southland		urlington	Burlington	Burlington	HilCorp	HilCorp	HilCorp	HilCorp	HilCorp	Union Texas	Enduring Resources	Enduring Resources Gas	Enduring Resources Gas	Enduring Resources Gas	HilCorp	Holcomb Oil & Gas	Pre Ongard	Riggs Oil & Gas	SIMCOE LLC	HilCorp	Pre Ongard	SIMCOE LLC	BP America
	#001	#001	S	#500	#003 B	#002 B	1 8	#0038 н	#001	#100S H	#001	#100 H	<u> </u>	#001 E	#002 E	#003 E	#004 E	#001	#001	#001 P	#001 R		#005	#001 P	#001 SI	#001E B
			Pre-Ongard	PRE-ONGARD WELL	GRATH	WALKER 2	ilker SRC			WALKER		WALKER 100	Pre-Ongard	RIGGS							FEDERAL	FLORANCE GAS COM B #001	ROPCO FEE FC 9	PRE-ONGARD WELL	CORNELL A	
Released to In	300 HO STO4 MC	30-045-08839 YOUNG	30015-08797 Pre	1/2008	DM 60280-5∜0%€	30-54-5-60274 WA	30-045-08823 Walker SRC	30545-33580 MC	30-045-08712 MCGRATH A	30-045-32931 WA	30-045-08801 WALKER 1	30-045-30244 WA	30-045-08711 Pre	30-045-29117 RIG	30-045-29118 RIGGS	30-045-32239 RIGGS	30-045-32312 RIGGS	30-045-08718 STANDARD	30-045-08720 DEVONIAN FEDERAL	30-045-24552 PRE-ONGARD WELL	30-045-08804 FED	30-045-08586 FLC	30-045-28824 ROI	30-045-26855 PRE	30-045-08601 COF	30-045-24132 CORNELL A

Received by O	7/18/1996	9/1 /	202	2 3 3	7/61/18/01	2/10/1984	4/27/2020							12/31/1901	4/16/1976	12/13/1982	4/18/1986	6/13/1979	2/13/2002			6/27/2017	3/29/2017	10/30/2010		
		6277-6454		1543-1704 1744- 1800				6298-6483	1811-1839	1726-1764																
		765 surf		229 surf				300 surf	181 surf	270 surf																
		6514		1959				6604	2022	2000																
		4.5		4.5				4.5	3.5	4.5																
									1811																	
									5.5																	
		150 surf		55 surf				150 surf	70 surf	35 surf																
		240		147				250	106	140																
		8.625		7				8.625	8.625	7																
	1807	6514	6410	1968	1871	1870	1865		1839	2008	6581	2050	1960	0	0	0	0	1895	2060	96935	6099	6562	1970	2062	2026	2057
	4/20/1956	1/5/1981	6/12/1962	1/7/2003	8/21/1946	12/19/1980	2/21/2008	12/6/1961	11/7/1955	10/7/2003	10/9/1980	10/27/1999	2/27/2005		1/1/1940	11/25/1932	5/5/1967	11/22/1953	7/31/1976	5/22/1980	5/12/1980	9/28/1962	5/25/1941	7/22/1976	6/12/1978	9/20/2005
	12W C	12W B	12W J	12W B	12W J	12W A	12W N	12W D	12W C	12W D	12W H	12W H	12W I	12W A	12W G	12W L	12W O	12W P	12W A	12W A	12W F	12W M	12W K	12W F	12W E	12W A
	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	11 29N 1	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	29N	12 29N 1
	Plugged 10	ve 10		ve 10	Permane ntly 10	Plugged 10	Plugged 10	ve 11	ve 11	11 11	ve 11	ve 11		Plugged 11	Plugged 11	Plugged 11	Plugged 11	Plugged 11	Plugged 11	ve 12	ve 12	Plugged 12	Plugged 12	Plugged 12	ve 12	
	Federal Plu	Federal Active	Private Active	Federal Active	Per Private ntly	Federal Plu	Federal Plu	Federal Active	Federal Active	Federal Active	Federal Active	Federal Active	Federal Active	Federal Plu	Federal Plu	Private Plu	Federal Plu	Federal Plu	Federal Plu	Federal Active	Federal Active	Federal Plu	Federal Plu	Federal Plu	Federal Active	Federal Active
	Gas	Gas	Gas	Gas	Wate	Gas	Gas	Gas	Gas	Gas	Gas	gy Gas	gy Gas	Gas	Gas	Gas	Gas	alties Gas	alties Gas	Gas	Gas	Gas	Gas	gy Gas	Gas	Gas
	Burlington	HilCorp	HilCorp	HilCorp	Pre Ongard	Southland	Synergy	SIMCOE LLC	Epic Energy	HilCorp	HilCorp	Mcelvain Energy	Mcelvain Energy	Pre Ongard	Pre Ongard	Pre Ongard	Pre Ongard	Producing Royalties Gas	Producing Royalties Gas	SIMCOE LLC	SIMCOE LLC	BP America	Burlington	Mcelvain Energy	RIM Operating	RIM Operating
	#007	#001E	#001	#100	#001		#108	#001	900#	#101	#001E	#001R	#003	#010	#001	#001	#001	#012	#001	#001E	#001E	#001	#004	#005	#0051	#0018
	CORNELL	CK A	CK A	RNELL	PRE-ONGARD WELL	Pre-Ongard	CK 29 12 10	CORNELL C	RNELL	CORNELL	DERAL PRI	PAYNE		PRE-ONGARD WELL	PRE-ONGARD WELL	E-ONGARD WELL	PRE-ONGARD WELL	CARROLL CORNELL	PAYNE	RNELL D	CORNELL E	CORNELL E	CORNELL SRC	PAYNE	PAYNE	=
Released to In	03 3080-5444 30245-08605	०० ३०्-045-23889 BECK A	30045-08517 BECK A	302/1 302/5-30381 CORNELL	30-05-08523	30005-23758 Pre	30-045-34452 BECK 29 12 10	300 CO	30-045-08615 CORNELL	30-045-31581 CO	30-045-24447 FEDERAL PRI	30-045-29945 PA	30-045-32667 PRI	30-045-13218 PR	30-045-08558 PR	30-045-08515 PRE-ONGARD WELL	30-045-20067 PR	30-045-08475 CA	30-045-22118 PA	30-045-24086 CORNELL D	30-045-24283 CO	30-045-08444 CO	30-045-08528 CO	30-045-22119 PA	30-045-22962 PA	30-045-33015 PRI

Received by O		<i>3/1</i>	5/26/1958	2).	70.4		8/10/2015	8/14/2015	12/31/1901	3/12/1954	3/17/1995			3/17/1959	5/30/1996							2/23/1994	6/4/1982	4/12/1999		
							_																			
	2090	2010	0	0959	2007	2076	2028	3509	0	0	66	1953	2153	0	1950	5167	6365	6500	1856	1996	2170	1808	0	1936	1950	1993
	2/17/2005	2/8/2005			9/25/1999	6/2/2003	4/27/2001 20	9/13/1961	6/21/1953		10/11/1961 99999			3/30/1947		4/1/2001	1/30/1964 63	9/20/1984 65	10/16/1998	1/27/2003			7/10/1946	4/1/1946		3/8/2005 15
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	12 29N 12W	12 29N 12W	25 30N 12W	25 30N 12W	25 30N 12W	25 30N 12W	26 30N 12W	26 30N 12W	26 30N 12W	26 30N 12W	26 30N 12W	26 30N 12W	NOE	27 30N 12W	27 30N 12W	27 30N 12W	27 30N 12W	27 30N 12W	27 30N 12W	27 30N 12W	28 30N 12W	33 30N 12W	33 30N 12W	33 30N 12W	33 30N 12W	33 30N 12W
	Active	Active	Plugged	Active	Active	Active	Plugged	Plugged	Plugged	Plugged				Plugged	Plugged	Active	Active	Active	Active	Active	Active	Plugged	Plugged	Plugged	Active	Active
	Federal	Federal	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private	Private
	g Gas	g Gas	т.	Gas	Gas	Gas	RRION ORP Gas	RRION Gas	ELL Gas	ELL Gas	oco Gas	Gas	Gas	ELL Gas	N Gas	Gas	Gas	Gas	Gas	Gas	Gas	g. RE LP Gas	ELL Gas	N Gas	Gas	Gas
	RIM Operating	RIM Operating	ONGARD WELL	HilCorp	HilCorp	HilCorp	[14634] MEF OIL & GAS C	[14634] MEF OIL & GAS C	ONGARD WELL OPERATOR	ONGARD WELL OPERATOR	[5073] CONOCO INC	HilCorp	HilCorp	ONGARD WELL OPERATOR	AMERICA PRODUCTION	HilCorp	HilCorp	HilCorp	HilCorp	HilCorp	Enduring Resources	MCGEE OIL & GAS ONSHORE LP	ONGARD WELL	PRODUCTION CORP	Enduring Resources	Enduring Resources
	#001	#005	#001	#001E	#001	#005	#005	#001	#001	#003	#001	#001	#005	#001	#001	#003	#001	#001E	#005	#004	#005	#001	#005	#005	#005	#003
	PRI	PRI	PRE-ONGARD WELL	ROWLAND GAS COM	RUBY CORSCOT A	RUBY CORSCOT A	KATY COM	PAUL PALMER	PRE-ONGARD WELL	PRE-ONGARD WELL	PAUL PALMER D	PADILLA	PADILLA	PRE-ONGARD WELL	DUFF GAS COM B	DUFF GAS COM	DUFF GAS COM C	DUFF GAS COM C	DUFF GAS COM C	30-045-31284 DUFF GAS COM C	GILBREATH	HARGIS	PRE-ONGARD WELL	JULANDER	REDFERN	REDFERN
Released to In	3 66 5-32665	30-045-32666 F		1/208		30=045-31641 F	3:25:30456	3 72 2-09177	30-045-29414	30-045-09130	30-045-09165	30-045-30027		30-045-09200	30-045-13120	30-045-30544	30-045-09134	30-045-26076	30-045-29664	30-045-31284	30-045-34235	30-045-09037	30-045-08999	30-045-08998	30-045-29023	30-045-32236 REDFERN

Received by O	CD:	9/1/	/202	2 5:	06:4	7 P	И														
			7/25/2013	1/22/1964	6/4/1982	9/26/2008	4/29/2009	TA'd 3/5/14								6/9/1982	3/26/2013				4/28/2016
			7/25	1/22	6/4/	9/56	4/29	TA'd								/6/9	3/26				4/28
								c C					to	C C	\dashv						
								6396-6576 04'RC to FC 1492-1870					6460-6680 01' RC to FC 1784-1994	708 94 R 824-203	6529-6714						
								6396-69 to FC 1					6460-668 FC 17	6521-6708 94 RC to FC 1824-2037	6529						
								1000 surf					750 surf	445 surf	1425 surf						
								100													
								8099					6750	6760	6777						
								4.5					4.5	4.5	4.5						
															_						
								Į.					+	4-	-						
								295 surf					250 surf	200 surf	170 surf						
								316					306	301	230						
								8.625					8.625	8.625	8.625						
	1782	6400	4700	0	0	2137	6637	8 8099	6425	1895	2075	2150	6750 8	8 8229	6780 8		8099	6562	2135	6645	9620
	"		4			2	9	9	9		2	2	9	9	9	품	9		2	9	
	12/31/1992	9/21/1961	9/4/1984	9/11/1945	1/1/1945	/17/1946	2/7/1963	11/20/1984	1/30/1962	7/13/2005	3/7/2006	2/15/2003	7/22/1966	12/19/1960	6/15/1984	9/7/1967 DH	10/9/1990	1/2/1966	8/29/2002	6/14/1961	8/10/1980
	12/3:	9/2:	7/6	9/1:	1/:	7/13	2/2	11/20	1/30	7/1	3/	2/1:	7/2:	12/19	6/1:	2/6	10/9	1/;	8/28	6/1,	8/10
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	33 30N	33 30N		34 30N	34 30N	34 30N	34 30n	34 30N	34 30N	34 30N	34 30N	35 30N	35 30N	35 30N	35 30N	35 30N	36 30N	36 30N	36 30N	36 30N	36 30N
			-		†	Plugged											ged				
	Active	Active		l Plugged				TA'd	Active	Shut In	l Shut In	Active	I TA'd	Active	Active	l Plugged	Plug	Active	Shut In	Active	Plugged
	Private	Private	Federal	Federal	Private	Federal	Federal	Federal	Private	Private	Federal	Private	Federal	Private	Private	Federal	State	State	State	State	State
			Salt Water Disposal																		
	Gas	Gas		Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas	s Gas	Gas	Gas	Gas	Gas	Gas	Gas	Gas
	s. s		TON CES OIL	WELL OR	WELL JR	_	_					IB OIL 8		Oil & Ga	oil & Gas	_	_				
	Enduring Resources	HilCorp	BURLINGTON RESOURCES OIL 8	ONGARD WELL	ONGARD WELL	Burlington	Burlington	HilCorp	HilCorp	HilCorp	HilCorp	HOLCOMB OIL & GAS INC	HilCorp	Holcomb Oil & Gas	Merrion Oil & Gas	Southland	3urlingto	HilCorp	HilCorp	HilCorp	HilCorp
	#007	#001		#001		2 E	#001 E	#001E	#001	#100	#100S	#001Y (c	#003	#001	#005 N	0,	#024 E	#001	#100	#030	#030E
			Ļ	ARD WI	ARD WI		10	COM	COM	~	~	N COM		N COM	N COM	5	COM	0) 0)	0)	M AH	M AH
	SHIOTANI	MADDOX	MCGRATH	PRE-ONGARD WELL	PRE-ONGARD WELL	HUDSON	MCGRATH C	DUFF GAS COM	DUFF GAS COM	JULANDER	JULANDER	CARNAHAN COM	HUDSON	CARNAHAN COM	RNAHA	Pre-Ongard	FC STATE COM	W MEX	NEW MEXICO COM N	STATE COM AH	STATE COM AH
	312 SH)01 M/)52 PR	139 PR	350 HL	345 MC	141 DU						346 CA	30-045-25844 CARNAHAN COM			30-045-12188 NEW MEXICO COM N			
Released to In	045-289	30-045-09001	11/2	1/2080-5\\	23°62	30:00	30-045-08945	302045-26141	30-045-09071	30-045-31756	30-045-33411	30-045-31355	30-045-11770	30-045-08946	045-258	30-045-20140	30-045-28177	045-121	30-045-31074	30-045-08986	30-045-24037
Acteuseu to In	ugg	5 0	1/2	1/48 8	4 J 3	V.E	- 4 DE	VITI (A)	30-	30-	30-1	30-	30-	30⁻	30-	30-	30-	30-⊦	30-	30-	90-

Submit 1 Copy To Appropriate District Office	State of New N		Form C-103
District 1 - (575) 393-6161	Energy, Minerals and Na	atural Resources	Revised July 18, 2013
1625 N. French Dr., Hobbs, NM 88240 District II - (575) 748-1283	1911 521.75		WELL API NO. 30-045-08851
811 S. First St., Artesia, NM 88210	OIL CONSERVATIO		5. Indicate Type of Lease
District III - (505) 334-6178 1000 Rio Brazos Rd., Aztec, NM 87410	1220 South St. Fr	The state of the s	STATE FEE
District IV - (505) 476-3460	Santa Fe, NM	87505	6. State Oil & Gas Lease No.
1220 S. St. Francis Dr., Santa Fe, NM 87505			
SUNDRY NOTIC	CES AND REPORTS ON WELL	LS	7. Lease Name or Unit Agreement Name
(DO NOT USE THIS FORM FOR PROPOSA DIFFERENT RESERVOIR. USE "APPLICA"	ALS TO DRILL OR TO DEEPEN OR F	PLUG BACK TO A	
PROPOSALS.)	TION FOR PERMIT (FORM C-101)	FOR SUCH	Allen A
1. Type of Well: Oil Well	Gas Well 🛛 Other		8. Well Number
2. Name of Operator			9. OGRID Number
BP America Production Company- I	.48		000778
3. Address of Operator			10. Pool name or Wildcat
1515 Arapahoe St, Tower 1. Suite 70 Denver, CO 80202	90		2 . 2 .
4. Well Location			Basin Dakota
	feet from the North line	and 700 C	5
Section 01			from theWest line
Section 01	Township 29N Ran 11. Elevation (Show whether Di		MPM San Juan County
		06'	
PULL OR ALTER CASING DOWNHOLE COMMINGLE CLOSED-LOOP SYSTEM OTHER:	CHANGE PLANS MULTIPLE COMPL	COMMENCE DR CASING/CEMEN OTHER:	т ЈОВ
Describe proposed or complete	ed operations. (Clearly state all	pertinent details, an	d give pertinent dates including estimated date
of starting any proposed work proposed completion or recon	:). SEE RULE 19.15.7.14 NMA	C. For Multiple Con	mpletions: Attach wellbore diagram of
Please see the attached P&A operat	ions performed March 2018		
App	proved for plugging of wellborn or	nls: Al	PR 2 6 2013
Kec	bility under bond is retained pend cipt of C-103 (Subsequent Report	of Well	TRICT 111
03/13/1061 1998	gging) which may be found @ OC e under forms	D web	
Spud Date: 03/12/1961 WW	w.emnrd.state.us/ocd		
2013	Con		
I bosoby goet for that the information I	1 Only		
I hereby certify that the information ab	ove is true and complete to the b	est of my knowledge	and belief.
SIGNATURE JOYA (OL	TITLE Rep	gulatory Analyst	DATE 4/24/2018
Type or print nameToya Colvin For State Use Only	E-mail address: _7	Toya.Colvin@bp.com	nPHONE:281-892-5369
APPROVED BY Brand De	well TITLE Dep	uty Oil & Gas	
Conditions of Approval (if any):		District #	DATE 2/3/10
**************************************	N		

Printed on 3/29/2018

BP AMERICA PRODUCTION COMPANY

Name: Allen A #1

API:30-045-08851, 03/29/2018

Well Plugging Report

Activity

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,
24.1	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
nu tr	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. Romena	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-O 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 the 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.

		D
	x	Printed on 3/29/2018
	^	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	Sive, drain up, secure location, SDFD.
	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 & 5 equipment. Check well PSI no Tbg, O PSI Csg, O 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	
L Netterager - 2	P	HSM on JSA. S & S equipment. Check well PSI no Tbg, O PSI Csg, O PSI BH. RU
THE ST SPECT OF	TET RESEL EL LINE -	relief -open to pit. TIH & Tag TOC at 5285' RU to tbg pump and est. circ. w/ 4
	Mat 1000 FM TOO	Branch and contract of a port of thin of 2000 St. 10011. LO Stilliget.
White an dealer in	- X	
	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.
	The County of County	The state of the s
desir udtutte.L	assettow. 20, ass	PPG) from 4833' to 4458' w/ 35sxs outside/2sxs below/ 20sxs above.
BY CHAIR AND AND	P	POOH w/ tbg. WOC overnight. SIW drain pump and lines secure location SDFD.
	03/23/2018	
	Р .	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.
	Р	chlor, for 20 sxs.
	r	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
	.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)
	P	from 3150' to 2999' w/ 40sxs outside/ 4sxs below/ 8sxs above 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.
		4 DDG 8 13111 8L 400 P31.

		Printed on 3/29/2018
	×	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.
	Р	SIW drain pump and Equipment. SDFD.
	03/26/2018	Sive drain pump and Equipment. SOFD.
	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.
		NMOCD (John Durham) Requested Tag Plug #6.
	Р	TiH tag Plug #6 @1937' tag good, LD, TOOH.
	P	
	(E	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, (NMOCD
		request balanced plug WOC and tag) RD W/L.
	P	PU plugging sub TiH to 1937', RU pump to the load and est circ. w/ 1 BBL.
	Р	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.
	Р	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.
THE CONTRACT OF	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.
tin is bune says	CiPas G Emilion	Pumped Plug #9 – (Csg Shoe) Mix & pump 54sxs Class G cmt (65.1 cu/ft, 15.6#)
Names Haza Negotes		from 314' to 68' w/ 42sxs outside/ 4sxs below/ 8sxs above.
	P	TOH LD setting tool, SIW, secure location, SDFD.
	03/27/2018	. Or an acting tool or of account toolston, and b.
A Francisco	P	S & S rig and equip., fill out JSA, held safety mtg.
N 4 1 2 Tapes 4 N		Check PSI on Well, no tbg-0 PSI, 4 1/2" csg-0 PSI, BH-0 PSI, open Well,
MAC & Pert 3 hole		Tag TOC at 68', RIH w/ 3 1/8" HSC & Perf 3 holes at 60'. Approved by NMOCD
41 -ma 13-11 sm A	437 7444	(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

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 (NMOCD 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 NMOCD rep.), clean up location. RD. MOL

COORDINATES - LONG. -108.056240 LAT.+36.760000

On Site Reps:

Name	Association	Notes
John Durham	NMOCD	on location
Monica Kuehling	NMOCD	on location

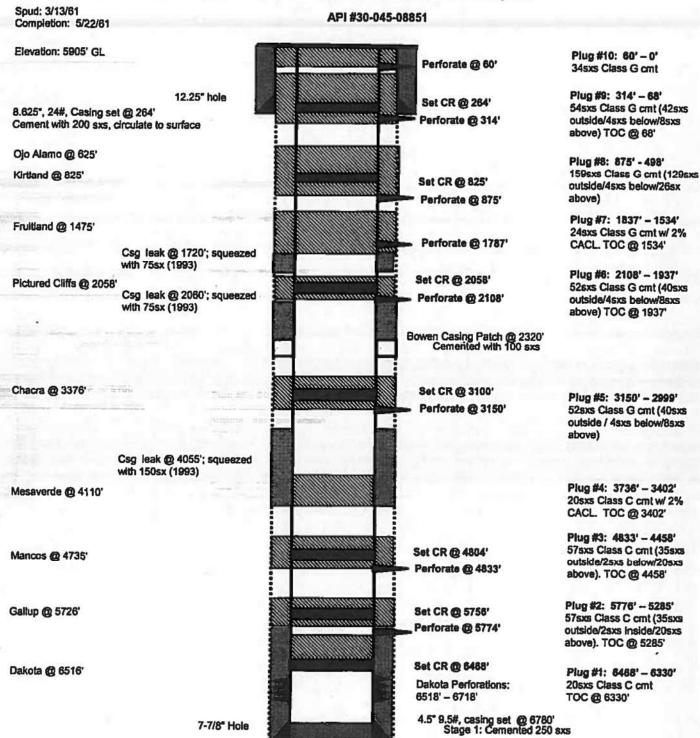
^{*} P - Procedure Planned; U - Unplanned A+ issue; X - COA, Well Conditions

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



TD 6788' PBTD 6750'

	UNITED STATE PARTMENT OF THE I	NTERIOR		FORM APPROVED OMB No. 1004-0135 Expires Journal of Section 1004-0135 5. Lease Serial No.
SUNDRY	NOTICES AND REPOR	RTS ON WELLS	UL 23 71;	1 THE CONTRACT OF STREET AND STREET
Do not use thi	s form for proposals Use Form 3160-3 (AP	to drill or reenter	an	6. If Indian, Allottee or Tribe Name
SUBMIT IN TRIP	LICATE – Other inst	Burgau tructions on rever	se side	7. If Unit or CA/Agreement, Name and/or N
1. Type of Well Gas Well	Other	1092		8 Well Name and No.
2. Name of Operator				Cornell #3R
Epic Energy, LLC				9 API Well No.
3a. Address		3b Phone No. finel	ude area code)	30-045-29539
7415 East Main, Farmington, I	VM 87402	505-327-4892		10. Field and Pool, or Exploratory Area
4 Location of Well (Footage, Sec.	The state of the s		4041111	Fulcher Kutz, Pictured Cliffs
1450' FSL & 1190' FEL, Se	ction 1, T29N, R12W			.11. County or Parish_State
				San Juan County, NM
12. CHECK APPR	OPRIATE BOX(ES) TO I	NDICATE NATURE (OF NOTICE, RE	PORT, OR OTHER DATA
TYPE OF SUBMISSION		ТҮР	E OF ACTION	
Notice of Intent Subsequent Report Final Abandonment Notice 3. Describe Proposed or Completed Ope If the proposal is to deepen direction Attach the Bond under which the we	Acidize Alter Casing Casing Repair Change Plans Convert to Injection attors (clearly state all pertunentally or recomplete horizontally, rk will be performed or provide	Deepen Fracture Treat New Construction Plug and Abandor Plug Back I details, including estimated give subsurface locations and the Bond No. on file with	Reclamation Recomplet Temporari Water Disp	te Other
Removed rods/pump and tubin After pumping the 1st bbl of e	ly plugged and abandoned ing from wellbore. Establis ement, dropped 36 ca. 1.3 i. Bled off pressure and ca ker and placed additional 3	the Cornell #3R on Jul shed injection rate w/ 20 SG ball sealers with the at off well head. Topped	y 13, 2018 as for both the state of water. The state of t	
			FARMINGER	WEELD OFFICE
4. Thereby certify that the foregoing	is true and correct	T. Marie	By:	/ -
Name (Printed Typed) John C. T	homoson	Title	77	
	Tioripson		VP of Engine	ering & Operations
Signature Sol C.	The	Date	May	29, 2018
	THIS SPACE	FOR FEDERAL OR ST		
Approved by		Title		Date
Conditions of approval, if any, are attached error, that the applicant holds legal or equi	Approval of this notice does not	Office Office		
	e it a crime for any person	knowingly and willfull	y to make to any	department or agency of the United



Submit 1 Copy To Appropriate District Office	State of New Mexico	Form C-103
District J - (575) 393-6161 1625 N. French Dr., Hobbs, NM 88240	Energy, Minerals and Natural Resources	Revised August 1, 2011 WELL API NO.
District 11 - (575) 748-1283	OIL CONSERVATION DIVISION	30-045-29118
B11 S. First St., Artesia, NM 88210 District III - (\$05) 334-6178	1220 South St. Francis Dr.	5. Indicate Type of Lease
1000 Rio Brazos Rd , Aztec, NM 87410		STATE FEE
<u>District IV</u> = (505) 476-3460 1220 S. St. Francis Dr., Santa Fe, NM 87505	Santa Fe, NM 87505	6. State Oil & Gas Lease No.
	ICES AND REPORTS ON WELLS	7. Lease Name or Unit Agreement Name
	OSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A CATION FOR PERMIT* (FORM C-101) FOR SUCH	Riggs
1. Type of Well: Oil Well	Gas Well Other	8. Well Number 2
2. Name of Operator Four Star G	as & Oil Company	9. OGRID Number 131994
3. Address of Operator		10. Pool name or Wildcat
ATTN: Regulatory Specialist	332 Road 3100 Aztec, New Mexico 87410	Blanco Fruitland Coal
4. Well Location		
Property Recognitive Automatic party and a control of the control	feet from theS_ line and _16401 feet from the	W line
	wnship 29N Range 12W NMPM	County San Juan
	11. Elevation (Show whether DR, RKB, RT, GR, etc.	
Land the same and the	5732'	Arianthian,
12. Check Appropriate Box t	o Indicate Nature of Notice, Report or Other I	Data
NOTICE OF IN	TENTION TO: SUB	SEQUENT REPORT OF:
PERFORM REMEDIAL WORK	PLUG AND ABANDON REMEDIAL WOR	
TEMPORARILY ABANDON	CHANGE PLANS COMMENCE DR	ILLING OPNS. P AND A
PULL OR ALTER CASING	MULTIPLE COMPL CASING/CEMEN	T JOB
DOWNHOLE COMMINGLE		
OTHER:	OTHER:	
13. Describe proposed or comp	oleted operations. (Clearly state all pertinent details, an ork). SEE RULE 19.15.7.14 NMAC. For Multiple Co.	d give pertinent dates, including estimated date
proposed completion or rec	completion.	mpletions: Attach wellbore diagram of
5/4/2017		
Check well pressures: 2 3/8in tbg-0 p	si, 5.5in csg-10 psi, 8H-0 psi. Open well. RD tbg equip. RU ro	od equip. Unseat rod pump; LD polish rod.
TOOH, LD 68 3/4in rods, 2in sinker ba	rs, 4ft guided pony- rod pump. SWIFN.	
5/5/2017	ub, PT 2 3/8in pipe rams to 800#, test good.	
	ab, P1 2 376m pipe rams to 800#, test good. Got a pair of clippers for bands; company rep request to cu	at in 10ft sections I D
	g w 6ft sub, 5N and MA. Round trip 5.5in string mill to 1708ft	
PU 5 1/2in CR and TIH; set CR at 1695	ft. Load thg w 6 BBLs, PT thg to 1000#; test good. Release, s	sting out of CR. Est circ w 35 BBLs: pumped
45 BBLs total. PT csg to 800#; test goo	d.	
	ift mix, pump 29 sxs, (34.22 cu/ft, 15.7#), Class B cement 16	95ft to 1439ft TOC.
LD tbg to 584ft, est circ w 2 BBLs.		OIL CONS. DIV DIST. 3
LD remaining tbg. SWIFN.	o Alamo tops, spot 47 sxs, (55.46 cu/ft, 15.6#), Class B ceme	nt 584ft to 169ft TOC.
5/8/2017		MAY 2 3 2017
	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.	PNR	· mlua
Spud Date:	Rig Release Date:	1
I harshy cartify that the information	above is true and complete to the best of my knowledg	11 0 2
I hereby certify that the information	above is true and complete to the best of my knowledg	e and belief.
SIGNATURE SOLLE	TITLE Permitting Specialist	DATE 5/23/2017
Type or print name April E. Poh	I E-mail address:April.Pohl@chevror	n.com PHONE: 505-333-1941
For State Use Only		
APPROVED RANGE	Deputy Oil & Gas Inspecto	r, 9//
Conditions of Approval (if any):		DATE 9/15/17
Conditions of Approval (II ally):	12	

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

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

> Plug #2: 584' - 169' Class B cement, 47 sxs

Plug #1: 1695' - 1439' Class B coment, 29 sxs

12 25" hole

Ojo Alamo @ 410'

Today's Date: 1/20/17 Spud: 6/28/94

Completed: 6/30/94

Elevation 5732' GL

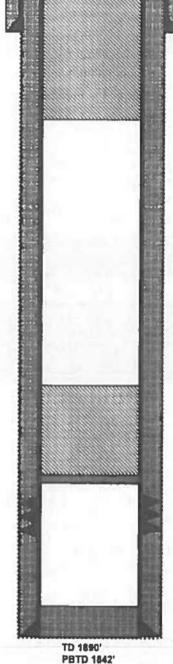
5747' KB

Kirlland @ 530

Fruitland @ 1544

Pictured Cliffs @ 1794'

7.875" hole



Fruitland Coal Perforations

Set cament retainer @ 1695'

1745' - 1780'

5 5°, 15.5%, J-55 Casing set @ 1882' Cement with 265 sxs

Released to Imaging: 11/21/2023 10:33:23 AM

RECEIVED

Form 3160-5 (August 2007)

UNITED STATES DEPARTMENT OF THE INTERIOR

MAR 28 2017

FORM APPROVED OMB No. 1004-0137 Expires, July 31, 2010

	PARIMENT OF THE			And the second second second second	xpires: July 31, 2010
BUI	REAU OF LAND MAN	IAGEMENT		5. Lease Serial No. NM014375	
Do not use this	form for proposals	ORTS ON WHITEISION to drill of VIDAL SHAP (APD) for such propos	Mananeme	6. If Indian, Allotter of	or Tribe Name
SUBM	IT IN TRIPLICATE - Other	Instructions on page 2		7. If Unit of CA/Agree	ement, Name and/or No.
1. Type of Well	THE CHILD		NS. DIV D	ST. 3	
Oil Well Gas V	Well Other			8. Well Name and No. Federal #1	
2. Name of Operator Riggs Oil and Gas Corp.		AF	R 03 201	9. API Well No. 30-045-08804	
		3b. Phone No. (include area	andal		
3a, Address 1690 N. Buller Ave, Farmington, NM 87401	505-324-9881	coaej	10. Field and Pool or I Fulcher Kutz PC/F		
A-JARCHARDENEWERNSTW T.	R.M., or Survey Description			11. Country or Parish, San Juan County, I	
12. CHE	CK THE APPROPRIATE BO	X(ES) TO INDICATE NATU	JRE OF NOTIC	E, REPORT OR OTHI	ER DATA
TYPE OF SUBMISSION			TYPE OF ACT		
Писте	Acidize	☐ Deepen		uction (Start/Resume)	Water Shut-Off
Notice of Intent	Alter Casing	Fracture Treat		mution	Well Integrity
Subsequent Report	Casing Repair	New Construction	Reco	mplete	Other
Management (6)	Change Plans	✓ Plug and Abandon	☐ Temp	orarily Abandon	
Final Abandonment Notice	Convert to Injection	Plug Back	☐ Wate	r Disposal	
Riggs Oil & Gas has plugged this w	ell per the attached sheet		ACCEP!	R 25/2017	
14. I hereby certify that the foregoing is t Name (Printed/Typed)	rue and correct.		-		
Thomas J. Smith		Title Agent			
Signature Shonles	J. Smith	Date 03/28/	2017		
	THIS SPACE	FOR FEDERAL OR S	TATE OFF	ICE USE	
Approved by					
		Title			atc
Conditions of approval, if any, are attached that the applicant holds legal or equitable tentitle the applicant to conduct operations	itle to those rights in the subjec	not warrant or certify		Į.	GL
Title 18 U.S.C. Section 1001 and Title 43 fectitious or fraudulent statements or repre	U.S.C. Section 1212, make it a sentations as to any matter with	crime for any person knowingly hin its jurisdiction.	and willfully to	make to any department	or agency of the United States any false,

(Instructions on page 2)

NMOCDA

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.
- 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 EPARTMENT OF THE IN DUREAU OF LAND MANAG	TERIOR	OMB	M APPROVED NO 1004-0137 January 31, 2018	
SUNDRY	5. Lease Serial No.				
Do not use the abandoned we	110000000000000000000000000000000000000	6. If Indian, Allottee or Tribe Name			
SUBMIT IN	7. If Unit or CA/Ag 14080018221	7. If Unit or CA/Agreement, Name and/or No. 14080018221			
Type of Well Oil Well	her	8. Well Name and N	8. Well Name and No. CORNELL A 1E		
2 Name of Operator BP AMERICA PRODUCTION	9. API Well No. 30-045-24132				
3a. Address 501 WESTLAKE PARK BLVD HOUSTON, TX 77079	THREE ELDRIGE PLACE	Bb. Phone No. (include area code) Ph: 281 892.5369	PERSONAL PROPERTY.	r Exploratory Area	
4 Location of Well (Footage, Sec., 7	. R., M. ar Survey Description)		11. County or Parish	State	
Sec 10 T29N R12W SESW 09 36.736191 N Lat, 108.088867	910FSL 1760FWL W Lon		SAN JUAN CO		
12. CHECK THE AL	PROPRIATE BOX(ES) TO	D INDICATE NATURE O	F NOTICE, REPORT, OR OT	HER DATA	
TYPE OF SUBMISSION			ACTION		
☐ Notice of Intent Subsequent Report	☐ Acidize ☐ Alter Casing ☐ Casing Repair	☐ Deepen ☐ Hydraulic Fracturing ☐ New Construction	☐ Production (Start/Resume) ☐ Reclamation ☐ Recomplete	□ Water Shut-Off □ Well Integrity □ Other	
Final Abandonment Notice	☐ Change Plans ☐ Convert to Injection	□ Plug and Abandon □ Plug Back	and Abandon		
3 Describe Proposed or Completed Ope If the proposal is to deepen directions Attach the Bond under which the wor following completion of the involved testing has been completed. Final Ab determined that the site is ready for fi Please see the attached P&A of 14080018221	k will be performed or provide the operations. If the operation result andonment Notices must be filed on nal inspection.	e substrace to continuo and measur Bond No on file with BLM/BIA s in a multiple completion or reco only after all requirements, including	rea and true vertical depths of all pertic Required subsequent reports must be impletion in a new interval, a Form 316 ing reclamation, have been completed	nent markers and zones	
		0	IL CO:IS. DIV DIST. 3		
			_ =		
		-	EB 1 3 2018		
Thereby certify that the foregoing is t	rue and correct. Electronic Submission #402: For BP AMERICA PROD nmitted to AFMSS for proces	756 verified by the BLM Well UCTION COMPANY, sent to	Information System the Farmington		
Name (Printed Typed) TOYA COL	VIN		TORY ANALYST		
Signature (Electronic Su	bmission)	Date 01/31/20	18		
	THIS SPACE FOR	FEDERAL OR STATE O	FFICE USE		
pproved By ACCEPT	ED	JACK SAVA		Date 03/07/20	
nditions of approval, if any, are attached tify that the applicant holds legal or equit ich would entitle the applicant to conduct	Approval of this notice does not vable title to those rights in the subj			Date 02/07/20	

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 **

Office Farmington

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.
- 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. Shutin 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

Formation

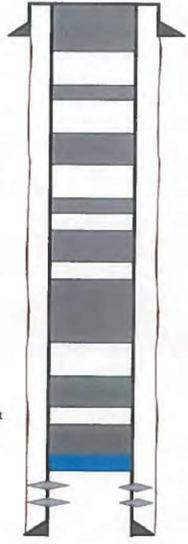
Surface Casing

8.625" 24# @ 300 ft

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 6/25/2020

Form	3160-5
(June	2015)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED	
OMB NO. 1004-0137	
Expires: January 31, 201	
THE RESERVE THE PERSON NAMED IN COLUMN TWO IS NOT THE OWNER.	۰

SUNDRY NOTICES AND REPORTS ON WELLS			5. Lease Seria	
Do not use th	is form for proposals to	drill or to re-enter an	NMNM01	43/5 llottee or Tribe Name
abandoned we	ell. Use form 3160-3 (API	o) for such proposals.	o. II aidiali, A	notice of Tibe Name
SUBMIT IN	7. If Unit or C. NMNM12	A/Agreement, Name and/or No. 1816		
1. Type of Well Oil Well Gas Well Other: COAL BED METHANE 2. Name of Operator Contact: GLEN PAPP			8. Well Name a BECK 29-1	
			9. API Well N	0.
SYNERGY OPERATING, LLC E-Mail: gpapp@synergyoperating 3a. Address			30-045-34	452-00-S1
		3b. Phone No. (include area code Ph: 505-599-4908 Ext: 158 Fx: 505-599-4900	2 10. Field and P BASIN FR	ool or Exploratory Area RUITLAND COAL
4 Location of Well (Footage, Sec., T.	R., M., or Survey Description)		11. County or I	Parish, State
Sec 10 T29N R12W SESW 11 36.737107 N Lat, 108.090304	65FSL 1510FWL W Lon		SAN JUAN	N COUNTY, NM
12. CHECK THE AP	PROPRIATE BOX(ES)	TO INDICATE NATURE O	F NOTICE, REPORT, OR	OTHER DATA
TYPE OF SUBMISSION		TYPE OF	ACTION	
☐ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resun	ne)
	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
Subsequent Report	☐ Casing Repair	☐ New Construction	☐ Recomplete	Other
☐ Final Abandonment Notice	☐ Change Plans	☑ Plug and Abandon	☐ Temporarily Abandon	. 375
80	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	
Synergy Operating LLC has concentrated in a separate file are of the downhold 2) An as plugged wellbore scheet as walting on Enterprise Production facilities is walting on Enterprise Production operations.	the follow documents: e plugging operations ematic s belonging to Syperay On	perating have also been remo	oved Synergy ce	
14. I hereby certify that the foregoing is to Con Name (Printed/Typed) GLEN PAP	Electronic Submission #51 For SYNERGY OF nmitted to AFMSS for proce	5895 verified by the BLM Well PERATING, LLC, sent to the F Pasing by JOE KILLINS on 05/2 Title OPERAT		NFR
Con	Electronic Submission #51 For SYNERGY OF nmitted to AFMSS for proce		Information System armington 8/2020 (20AMW0114SE) IONS MANAGER / PARTI	NER
Con	Electronic Submission #51 For SYNERGY OF nmitted to AFMSS for proce		IONS MANAGER / PARTI	NER
Con Name(Printed/Typed) GLEN PAP	Electronic Submission #51 For SYNERGY OF nmitted to AFMSS for proce P bmission)	Title OPERAT	IONS MANAGER / PARTI	NER
Con Name (Printed/Typed) GLEN PAP	Electronic Submission #51 For SYNERGY OF nmitted to AFMSS for proce P bmission) THIS SPACE FOR	Date 05/19/20	IONS MANAGER / PARTI	NER Date 05/28/2020
Name (Printed/Typed) GLEN PAPE Signature (Electronic Su	Electronic Submission #51 For SYNERGY OF milited to AFMSS for proce	Date 05/19/20 FEDERAL OR STATE O JOE KILLIN Title ENGINEER	IONS MANAGER / PARTI 20 FFICE USE S	

(Instructions on page 2)
** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED **

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 perfs 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

GL

12-1/4" hole

Plug #4: 80' - 0' Class G cement, 40 sxs

And 75' in 8-5/8"

8-5/8" 24# K-55 Casing set @ 208'
Cement with 142 sxs, circulated to surface.

Plug #3: 550' -- 73'
Class G cament, 55 sxs
Tag TOC @ 80 in 5.5"

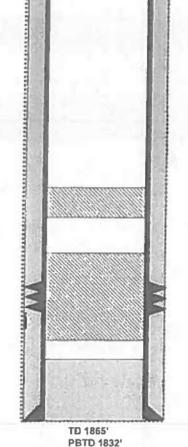
Ojo Alamo @ 329'

Kirtland @ 410

Fruitland @ 1124'

Pictured Cliffs @ 1660

7-7/8" hole



Plug #2: 1266' - 1000' Class G cement,32 sxs w/2% CaCl2 Tag TOC @ 1050'

Fruitland Coat Perforations: 1622' - 1657'

Plug #1: 1715' – 1457' Class G cement, 30 sxs w/2% CaCl2 Tag TOC @ 1450'.

5.5°,15.5#, J-55 Casing set @ 1853' Cement with 280 sxs, circulated

	UNITED STATES DEPARTMENT OF THE IN BUREAU OF LAND MANAG			OMB ? Expires	1 APPROVED NO. 1004-0137 January 31, 2018
SUNDRY	NOTICES AND REPOR	TS ON WELLS		ease Senal No. NMSF0655574	4
abandoned w	his form for proposals to d ell. Use form 3160-3 (APD)	fill or to re-enter an for such proposals.	6. 1	f Indian, Allottee	or Tribe Name
SUBMIT IN	uctions on page 2	7 If Unit or CA/Agreement, Name and/or SW97		cement, Name and/or No.	
I. Type of Well Oil Well Gas Well O			ell Name and No ORNELL E 1		
Name of Operator BP AMERICA PRODUCTION	OYA COLVIN Bbp com		PI Well No. 0-045-08444-	00-S1	
3a Address 501 WESTLAKE PARK BLVI HOUSTON, TX 77079	3b. Phone No. (include area code Ph.: 281,892,5369		Field and Pool or IASIN DAKOT	Exploratory Area A	
4. Location of Well /Footage Sec	T. R. M., or Survey Description)		11. (County or Parish.	State
Sec 12 T29N R12W SWSW (36.735352 N Lat, 108.055862	0790FSL 0900FWL 2 W Lon			AN JUAN CO	
12. CHECK THE A	PPROPRIATE BOX(ES) TO	O INDICATE NATURE O	F NOTICE, REPO	ORT, OR OT	HER DATA
TYPE OF SUBMISSION		TYPE OF	ACTION		
□ Notice of Intent	☐ Acidize	☐ Deepen	Production (St	tart/Resume)	☐ Water Shut-Off
Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation		☐ Well Integrity
	Casing Repair	☐ New Construction	☐ Recomplete		□ Other
Final Abandonment Notice	☐ Change Plans	□ Plug and Abandon	☐ Temporarily A		
War.	Convert to Injection	☐ Plug Back	☐ Water Disposa	al	
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Attach the Bond under which the wo following completion of the involved lesting has been completed. Final Al determined that the site is ready for following see the attached P&A 14. Thereby certify that the foregoing is Commit Name (Printed Typed) TOYA CO Signature (Electrone S	true and correct Electronic Submission #381 For BP AMERICA PROD ted to APMSS for processing LVIN THIS SPACE FOR Approval of this notice does not itable title to those rights in the subct operations thereon.	260 verified by the BLM Well Date Date D7/13/20 FEDERAL OR STATE C ABDELGAD Title PETROLEL warrant or opect lease Office Farmingte Con no file with BLM Well Date D7/13/20 ABDELGAD Title PETROLEL Warrant or opect lease Office Farmingte	Information Syste the Farmington on 07/18/2017 (17. ATORY ANALYST DIR ELMANDANI IM ENGINEER	epths of all pertin i reports must be cryal, a Form 316 been completed a L CONS. DI JUL 2 0 m AE0211SE)	pate 07/18/201

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/" HSC squeeze holes at 5534'.

PU WD 4.5" cement retainer; TIH and set CR at 5484'. Sting out. Load csg with 1 bbi. 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 tbg 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#. TlH 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 too!

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 8PM 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

12-1/4" hole

Ojo Alamo @ 585'

Kirtland @ 700'

Fruitland @ 1355'

Pictured Cliffs @ 1865'

of other

1 0 mm # 291

Chacra @ 2896*

Mesaverde @ 3450'

Mancos @ 4580'

Gallup @ 5484'

7.875° hole

Dakota @ 6210'

TD 6110'

PBTD 6073'

8-5/8", 24#, J-55 Casing set @ 251' Cement with 200 sxs, circulated

Perforate @ 301'

Set CR @ 700'

Perforate @ 750'

Plug #8: 301' - 0' Class B cement, 105 sxs, 123.9 cf, 15.6#. Squeeze 10 sxs. Tag 6' insdide and 5' in amulus.

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 @ 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 @ 2946'

Set CR @ 3457'

Perforate @ 3500'

Set CR @ 4577'

Perforate @ 4630*

Set CR @ 5484'

Perforate @ 5534'

TOC unknown, did not circulate

Set CR @ 6288"

Dakota Perforations:

6338' - 6446'

Plug #5: 2946' - 2846' Class B cement, 51 sxs, 60.18 cf, 15.6#. 39 sxs outside, 4

sxs below, 8 sxs above.

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'.

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' 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'

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" 1# Stage: Cement with 60 sxs

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CAUGUST 2005) CAUGUS	UNITED ST. DEPARTMENT OF T BUREAU OF LAND M	HE INTERIOR	OME	M APPROVED 3 No. 1004-0137 es. July 31, 2010	
	NDRY NOTICES AND RE se this form for proposa d well. Use Form 3160-3	EPORTS ON WELLS is to drill or to re-enter at (APD) for such proposa		SF-076465 e Name	
\$	SUBMIT IN TRIPLICATE - Other	instructions on page 2.	7. If Unit of CA/Agreement,	Name and/or No.	
1. Type of Well Oil Well X Gas Well Other			8 Well Name and No	8 Well Name and No Cornell SRC 4	
Name of Operator	gton Resources Oil & Ga	as Company I B	9. API Well No		
a. Address PO Box 4289, Farming		3b. Phone No (include area cod (505) 326-9700	le) 10 Field and Pool or Explor	-045-08528 alory Area Kutz Pictured Cliffs	
Location of Well (Footage, Sec., T., Surface Unit K (N		FWL, Sec. 12, T29N, R12	11 Country or Parish, State San Juan	, New Mexico	
12. CHECK	THE APPROPRIATE BOX(E	S) TO INDICATE NATURE C	OF NOTICE, REPORT OR OTH	HER DATA	
TYPE OF SUBMISSION		TYPE C	F ACTION		
X Subsequent Report Final Abandonment Notice	Acidize Alter Casing Casing Repair Change Plans Convert to Injection	Deepen Fracture Treat New Construction X Plug and Abandon Plug Back	Production (Start/Resume) Reclamation Recomplete Temporarily Abandon Water Disposal	Water Shut-Off Well Integrity Other	
If the proposal is to deepen direction Attach the bond under which the war following completion of the involvement of the invol	onally or recomplete horizontally, giverk will be performed or provide the ed operations. If the operation result Abandonment Notices must be filed a final inspection.) G/BLM & Brandon Powell/ Side the 4 1/2" WH. The 3	ve subsurface locations and measure e Bond No. on file with BLM/BIA. I lts in a multiple completion or recom d only after all requirements, including OCD to update that the 3 1/2"x5 1/2" annulus was he	ste of any proposed work and approxist of any proposed work and approxist and true vertical depths of all pertine Required subsequent reports must be appletion in a new interval, a Form 3160 ag reclamation, have been completed a 1/2" csg can not be pulled pot-tapped 3/21/17 & there is	ent markers and zones. Siled within 30 days He must be filed once and the operator has Her procedure as it	
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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	
Р	Rode rig and equipment to location.
P	Spot in rig and equipment on location. Note: small location.
Р	RU day light pulling unit. Perform Start Well/LOTO. Spot in equipment.
Р	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.
Р	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'.
Р	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.
Р	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

requires 50% excess in annulus due to Ojo Alamo formation. 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'. PW.O.C. Per sample. Cement sample still green; J. Morales, COP representative required W.O.C. over night. Secure location. Debrief. SDFD. Travel back to yard. O3/28/2017 PTravel to location. PHSM on JSA. Service and start equipment. POpen up well; no pressures. Note: B.H. does not have a valve. RU relief lines. Perform BOP function test. 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. Plug #3A (Kt) Spot 12 sxs (14.16 cf 15.5 PPG) Class B cement inside casing from 723' to 433' TOC. PUH to 630'. Reverse circulate well to TOC @ 630'. TOH with tubing. SI well. PW.O.C. per cement sample. TIH with tubing and tag TOC at 630'. TOH and LD tubing. load casing w/ 2 bbls of TIH with tubing and tag TOC at 630'. TOH and LD tubing. load casing w/ 2 bbls of TIH with tubing and tag TOC at 630'. TOH and LD tubing. load casing w/ 2 bbls of TIH with tubing and tag TOC at 630'. TOH and LD tubing. load casing w/ 2 bbls of TIH with tubing and tag TOC at 630'. TOH and LD tubing.		Printed on 4/7/20
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 of 15.7 PPG) Class B cement; squeeze 32 outside casing and leave 18 sxs inside casing from 1593' to 1026' TOC. 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 HSM on JSA. Service and start equipment. P Open up well; no tubing or pressure. RU relief lines. P Wait on drilling equipment. P Wait on drilling equipment. P Spot in drilling equipment. Tally A Plus 1 1/4" EUE tubing workstring. PU 2 3/4 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" and attempt make past 608'; could not work past 608'. POOH and LD GR. RD V SI well. Secure loc. Debrief. SDFD. Travel back to yard. 7 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 Bit function test. P W.O.O. J. Morales received approval not to use a CR on Plug #3. Note: NMOCD required W.O.C. over right. P Secure location. Debrief. SDFD. Travel back to yard. 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. Travel back to yard. 13/28/2017 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 BOF function test. P Till 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 L		
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	Р	
water.		
P Perforate 4 bi wire squeeze holes at 612'. SI well for 30 minutes. Check PSI: no	P	Perforate 4 bi wire squeeze holes at 612'. SI well for 30 minutes. Check PSI: no

	Printed on 4/7/201
	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.
Р	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.
Р	HSM w/ W.L. Run CBL from 500' to surface. Engineers to determine TOC. W.O.O. NMOCD request perforate 1 hole @ 50' and attempt to establish injection rate not going over 100 PSI.
Р	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. Morals received approval to go 50' below perforations and circulate cement out casing valve and WOC.
Р	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.

^{03/30/2017}

P Travel to location.

Travel to yard.

P HSM on JSA. Service and start equipment.

P Open up well; no pressures. RU relief lines to pit.

Dig out W.H. Perform Hot Work Oermit. 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	State of New M		Form C-103
District I 1625 N. French Dr., Hobbs, NM 88240	Energy, Minerals and Nat	ural Resources	WELL API NO.
District II	OIL CONSERVATION DIVISION		30-045-08844
1301 W. Grand Ave , Artesia, NM 88210 District III	1220 South St. Fra		5. Indicate Type of Lease
1000 Rio Brazos Rd., Aztee, NM 87410 District IV	Santa Fe, NM 8		6. State Oil & Gas Lease No.
1220 S St Francis Dr , Santa Fc, NM 87505			FEE
(DO NOT USE THIS FORM FOR PROP	FICES AND REPORTS ON WELL DSALS TO DRILL OR TO DEEPEN OR PI ICATION FOR PERMIT" (FORM C-101) F	UG BACK TO A	7. Lease Name or Unit Agreement Name Kattler
1. Type of Well: Oil Well	Gas Well 🛛 Other P&A		8. Well Number 1
2. Name of Operator			9. OGRID Number
Burlington Resources Oil Gas (3. Address of Operator	Company LP		14538
P.O. Box 4289, Farmington, NM	87499-4289		10. Pool name or Wildcat Fulcher Kutz PC
4. Well Location			
Unit Letter C: 990		_line and1650	feet from the West line
Section 2		ange 12W	NMPM San Juan County
All Lines	11. Elevation (Show whether DR 5855	R, <i>RKB, RT, GR, etc.,</i> ' GR	
12. Check	Appropriate Box to Indicate N	Nature of Notice,	Report or Other Data
	NTENTION TO:		
PERFORM REMEDIAL WORK		REMEDIAL WOR	SEQUENT REPORT OF: K
TEMPORARILY ABANDON		COMMENCE DRI	
PULL OR ALTER CASING	MULTIPLE COMPL	CASING/CEMEN	
DOWNHOLE COMMINGLE			
OTHER:		OTHER:	
13. Describe proposed or comp	oleted operations. (Clearly state all	pertinent details, and	d give pertinent dates, including estimated date
of starting any proposed wo or recompletion.	ork). SEE RULE 1103. For Multip	le Completions: At	tach wellbore diagram of proposed completion
5/24/12 Notified Brandon squeeze. Verbal approval	Powell/OCD that we ran CBL whice received to proceed.	h indicated cmt bety	ween 3/12" & 5 1/2" was not good. Unable to
The subject well Do A			Approved for plugging of wellbore only
The subject well was P&A	d per the notification above and the 5-29-12	attached report.	Liability under bond is retained pending Receipt of C-103 (Subsequent Report of Well
			Plugging) which may be found @ OCD web page under forms
Spud Date:	Rig Rele	ased Date:	www.enund.state.us/ocd
		2115	2 0:01
I hereby certify that the information	above is true and complete to the be	est of my knowledge	and belief
SIGNATURE / William	15	Staff Regulatory	
			7
Type or print name Dollie L. Buss For State Use Only	e E-mail address: dollie.l	.busse@conocophill	ips.com PHONE: 505-324-6104
ADDROVIED		eputy Oll & Ga	is Inspector,
APPROVED BY: D Stand Conditions of Approval (if any):	TITLE_	District	
conditions of Approval (it any):	Py		

RCVD JUN 25'12 OIL COMS. DIV.

DIST. 3

P.O. BOX 1979

Farmington, New Mexico 87499 505-325-2627 *fax: 505-325-1211

Burlington Resources Kattler #1 May 29, 2012 Page 1 of 2

990' 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.

Salomit 3 Copies To Appropriate District	State of New M		Form C-103
District I	Energy, Minerals and Nat	ural Resources	Jun 19, 2008
1625 N. French Dr., Hobbs, NM 88240 District II			WELL API NO. 30-045-33573
1301 W. Grand Ave., Artesia, NM 88210	OIL CONSERVATION		5. Indicate Type of Lease
District III 1000 Rio Brazos Rd., Aztec, NM 87410	1220 South St. Fra		STATE FEE
District IV	Santa Fe, NM 8	37505	6. State Oil & Gas Lease No.
1220 S. St. Francis Dr., Santa Fc, NM 87505			FEE
	ICES AND REPORTS ON WELL		7. Lease Name or Unit Agreement Name
DIFFERENT RESERVOIR. USE "APPLI PROPOSALS.)	SALS TO DRILL OR TO DEEPEN OR P CATION FOR PERMIT" (FORM C-101) I	LUG BACK TO A FOR SUCH	Cornell Com
I. Type of Well: Oil Well	Gas Well Other P&A		8. Well Number 500S
2. Name of Operator			9. OGRID Number
Burlington Resources Oil Gas C	Company LP		14538
3. Address of Operator			10. Pool name or Wildcat
P.O. Box 4289, Farmington, NM	87499-4289		Basin FC / South Crouch Mesa FS
4. Well Location			
Unit Letter P : 760		fine and	feet from the <u>East</u> line
Section 2		nnge 12W	NMPM San Juan County
学 基本 通知 电流	11. Elevation (Show whether DI 5845	R, RKB, RT, GR, etc. 5' GR	
12. Check	Appropriate Box to Indicate N	Nature of Notice.	Report or Other Data
		Š	
NOTICE OF IN	ITENTION TO:		SSEQUENT REPORT OF:
PERFORM REMEDIAL WORK	PLUG AND ABANDON	REMEDIAL WOR	
TEMPORARILY ABANDON	CHANGE PLANS	COMMENCE DR	
PULL OR ALTER CASING	MULTIPLE COMPL	CASING/CEMEN	T JOB
DOWNHOLE COMMINGLE			
OTHER: []		OTHER:	
	leted operations. (Clearly state all	pertinent details, an	d give pertinent dates, including estimated date
of starting any proposed we or recompletion.	ork). SEE RULE 1103. For Multip	ole Completions: At	ttach wellbore diagram of proposed completion
The shirt is the point			RCVD FEB 15'13
The subject well was P&A	d on 1/23/13 per the attached repor		DIL COMO DILL
_		l for plugging of well under bond is retains	init dilij.
'DKIR'		f C-103 (Subsequent	
Spud Date:		which may be found	
	page und		-
I handay and God about 1 . S.		ird.state.us/ocd	
I hereby certify that-the information	above is true and complete to the b	est of my knowledg	e and belief.
SIGNATURE Alli	BusseTITLE_	Staff Regulatory	Technician DATE 2/14/13
Type or print name Dollie L. Buss	e E-mail address: dollie.	l.busse@conocophil	llips.com PHONE: 505-324-6104
For State Use Only	7.	eputy Oil & Ga	
APPROVED BY:		District	"0
Conditions of Approval (if any):	TITLE_	District	#3 DATE 2-20-13
	PY		

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.

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.

Sübmit 3 Copies To Appropriate 1	District State	of New Mexico		Form C-103
District I	Energy, Minera	ils and Natural Resource		Jun 19, 2008
1625 N. French Dr., Hobbs, NM 8 District II			WELL API NO.	9700
1301 W. Grand Ave., Artesia, NA		RVATION DIVISION	5. Indicate Type of Leas	8709
District III 1000 Rio Brazos Rd., Aztec, NM	(7410)	uth St. Francis Dr.	STATE	FEE 🛛
District IV	Santa	Fe, NM 87505	6. State Oil & Gas Leas	
1220 S. St. Francis Dr., Santa Fe, 87505			FEE	
(DO NOT USE THIS FORM FOR	Y NOTICES AND REPORTS PROPOSALS TO DRILL OR TO D "APPLICATION FOR PERMIT" (FO	FEPEN OR PLUG BACK TO A	7. Lease Name or Unit A McGrath	Agreement Name
1. Type of Well: Oil Well	☐ Gas Well ☒ Other	P&A	8. Well Number 3	
2. Name of Operator	0.5		9. OGRID Number	
Burlington Resources Oil 3. Address of Operator	Gas Company LP		14538	
P.O. Box 4289, Farmington	NM 87499-4289		10. Pool name or Wilder Basin Fruitla	
4. Well Location				nu cour
Unit Letter_J	1650 feet from the	South line and	1650 feet from the	East line
Section 3	Township 29N		NMPM San Juan C	
	11. Elevation (Show	whether DR, RKB, RT, GR 5845' GR	R, etc.)	3 July 2 20
12. C	neck Appropriate Box to	Indicate Nature of No.	tice, Report or Other Data	
PERFORM REMEDIAL WO	OF INTENTION TO:		SUBSEQUENT REPORT	
TEMPORARILY ABANDON	PLUG AND ABANDO CHANGE PLANS			RING CASING 🔲
PULL OR ALTER CASING	MULTIPLE COMPL		E DRILLING OPNS. P AND) A 🛛
DOWNHOLE COMMINGLE	□ MOETIFEE COMPL	☐ CASING/CE	MENI JOB	
	Ξ,			
OTHER:		OTHER:		
of starting any propo or recompletion.	sed work). SEE RULE 1103.	ly state all pertinent detail For Multiple Completions	s, and give pertinent dates, inclus: Attach wellbore diagram of pr	ding estimated date roposed completion
2/27/12 Notified Pro	de De Wood Di e d			
POOH, & perf @ 14	1001 Powell/OCD to Plug 2. P	'erl'd @ 1510', couldn't p	ump into. PT to 1000#. Verbal a	ipproval to
77 12 11			RCVD MA	R 28'13
The subject well was	P&A'd on 3/1/13 per the notif	ication above and the atta	ched report. OIL CON	IS. DIU
			DIST	
Spud Date:	UK ONLY			
opad Date.		Rig Released Date:		
I hereby certify that the inform	ation above is take and a1			
	ation above is true and comple	ne to the best of my know	ledge and belief.	
SIGNATURE ALLA	11X Eurose	TITLE Staff Regula	tory Technician DATE 34	25/13
Type or print name Dollie L. For State Use Only	Busse E-mail address:	dollic.l.busse@conocc	phillips.com PHONE: 505-3	24-6104
POT State OSE ONLY	1. 1.15	Deputy Oil	& Gas Inspector,	
APPROVED BY:	uce Lienema			4-1-13
Conditions of Approval (if any): [^	gging of wellbore only.	
	~	Liability under bo	and is retained pending.	
	\circ		Subsequent Report of Well	
		Plugging) which a page under forms	nay be found @ OCD web	
		page under forms		

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.

P.O. BOX 1979

Farmington, New Mexico 87499 505-325-2627 *fax: 505-325-1211

Burlington Resources McGrath #3 March 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 ininutes. 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.
- 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 Weibe, NMOCD representative, was on location. Jim Morris, MVCI representative, was on location.

. Submit 1 Copy To Appropriate District State of New Mexico	Form C-103
District J - (575) 393-6161 Energy, Minerals and Natural Resources 1625 N. French Dr., Hobbs, NM 88240	Revised July 18, 2013 WELL API NO.
District II - (575) 748-1283 811 S. First St., Artesia, NM 88210 OIL CONSERVATION DIVISION	30-045-30456
District III - (505) 334-6178 1220 South St. Francis Dr.	5. Indicate Type of Lease
1000 Rio Brazos Rd., Aztec, NM 87410	STATE FEE
District IV – (505) 476-3460 1220 S. St. Francis Dr., Santa Fe, NM 87505	6. State Oil & Gas Lease No.
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	7. Lease Name or Unit Agreement Name
PROPOSALS.)	8. Well Number #2
1. Type of Well: Oil Well Gas Well Other	8. Well Number #2
2. Name of Operator Merrion Oil & Gas Corporation	9. OGRID Number 14634
3. Address of Operator	10. Pool name or Wildcat
610 Reilly Ave Farmington, NM 87401	Aztec PC/Basin FC
4. Well Location	
Unit LetterP_:1199feet from theSouth line and126	3feet from theEastline
	IMPM San Juan County
11. Elevation (Show whether DR, RKB, RT, GR, et	c.)
5686	
12. Check Appropriate Box to Indicate Nature of Notice	e, Report or Other Data
107107 07 117717101171	
	BSEQUENT REPORT OF:
PERFORM REMEDIAL WORK PLUG AND ABANDON REMEDIAL WO	RK ALTERING CASING
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PULL OR ALTER CASING	nd give pertinent dates, including estimated date ompletions: Attach wellbore diagram of
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PULL OR ALTER CASING	and give pertinent dates, including estimated date completions: Attach wellbore diagram of eattached PA report. OIL CONS. DIV DIST. 3
PULL OR ALTER CASING MULTIPLE COMPL CASING/CEME DOWNHOLE COMMINGLE CLOSED-LOOP, SYSTEM OTHER: OTHER: OTHER: OTHER: OTHER: OTHER: Approved for plugging of wellbore only. Linblity under bond is retained pending Receipt of C-103 (Subsequent Report of Well Plugging) which may be found @ OCD web.	and give pertinent dates, including estimated date completions: Attach wellbore diagram of eattached PA report. OIL CONS. DIV DIST. 3
PULL OR ALTER CASING	and give pertinent dates, including estimated date completions: Attach wellbore diagram of eattached PA report. OIL CONS. DIV DIST. 3
PULL OR ALTER CASING	and give pertinent dates, including estimated date completions: Attach wellbore diagram of eattached PA report. OIL CONS. DIV DIST. 3
PULL OR ALTER CASING	and give pertinent dates, including estimated date completions: Attach wellbore diagram of eattached PA report. OIL CONS. DIV DIST. 3
PULL OR ALTER CASING MULTIPLE COMPL CASING/CEME DOWNHOLE COMMINGLE CLOSED-LOOP, SYSTEM OTHER: 13. Describe proposed or completed operations. (Clearly state all pertinent details, a of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple C proposed completion or recompletion. Merrion Oil & Gas Corporation P&Ad the above mentioned well on 8/10/2015. Please set 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/ocul Rig Release Date:	and give pertinent dates, including estimated date completions: Attach wellbore diagram of eattached PA report. OIL CONS. DIV DIST. 3 SEP 0 \$ 2015
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OIL CONS. DIV DIST. 3

P.O. BOX 1979 Farmington, New Mexico 87499 505-325-2627 *fax: 505-325-1211

SEP 0 3 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 perfs. 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 ¾" 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 tail. 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.

	6-6-15 OIL CONS. DIV DIST. 3
	To: Merrion D. 7 16as SEP 0 8 2015
	Re: Katy 2 Fence
2	I see you are plugging the Katy 2.
	I would like you to please leave the
	fernce up.
of the state of	. Thank You
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Parallel .	len floor

Submit 1 Copy To Appropriate District Office	State of New M	Form C-103 Revised July 18, 2013				
District - (575) 393-6161 1625 N. French Dr., Hobbs, NM 88240	Energy, Minerals and Na	WELL API NO.				
District II - (575) 748-1283	OIL CONSERVATIO	N DIVISION	28-029-DE089 30.045.091			
811 S. First St., Artesia, NM 88210 District III - (505) 334-6178	1220 South St. Fr		5. Indicate Type of Lease STATE FEE 6. State Oil & Gas Lease No.			
1000 Rio Brazos Rd., Aztec, NM 87410	Santa Fc, NM	2100 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2				
<u>District IV</u> = (505) 476-3460 1220 S. St. Francis Dr., Santa Fe, NM 87505	Suma 1 C, 1117	07505				
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PROPOSALS) 1. Type of Well: Oil Well	Gas Well 🗵 Other		8. Well Num	ber		
2. Name of Operator			9. OGRID N	umber		
Merrion Oil & Gas Corporation			14634			
 Address of Operator Reilly Ave, Farmington NM 87 	401		10. Pool nam Flora Vista M			
4. Well Location						
	feet from theSouth		et from the	Westline		
Section 26 Te	ownship 30N Range		NMPM San Ju	an County		
	11. Elevation (Show whether D	R, RKB, RT, GR, etc 630	:.)			
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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.

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 Weibe, NMOCD representative was on location.

Kenny Davis Signature	(S)	Tale S	arricgumory Icen	8/22/2013	•
		Title St	min seckninger & vecu		
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14 11 11 11 11 11 11 11 11 11	is true and correct. Name (Primed/Typ	ped)			
THE SUBJECT WE!! WAS	P&A'd on 7/25/13 per the a	pove notifications	and the attached	reports.	DIST. 3
Powell w/ OCD & got	verbal approval.	1			RCVD AUG 26'13 DIL CONS. DIV.
and test was good. B	irface perfs @ 281' PT to 10 ill Diers on site w/ BLM wai	100#-OK. Tied ont nts to perf @ 125'	o Bradenhead & pr , run in thg and cir	imped 5 bbl's c to surface in	water down (145') PT to 5
Powell w/ Ocd and go	d to be combined as there in t verbal approval.				
Called Steve Masonw	hole was supposed to shu / BLM & Charlie Perrin w/ C	DCD. Both gave ve	erbal approval.		
Called Steve Masonw	ker in procedure is not hold BLM & Charlie Perrin w/ C	DCD. Both gave vi	erbal approval.		
determined that the site is ready	for final Inspection)				
following completion of the inve	e work will be performed or provide the plyed operations. If the operation results nal Abandonment Notices must be filed o	s in a multiple completion	or recompletion in a new int	erval, a Fonn 3160-4	must be filed once
If the proposal is to deepen direct	Operation: Clearly state all pertinent det ctionally or recomplete borizontally, give	e subsurface locations and	measured and true vertical	depths of all pertinen	it markers and zones.
Final Abandonment Notice	Convert to Injection	Plug Back	Water Dispo	sal	
X Subsequent Report	Casing Repair Change Plans	New Construction X Plug and Abandon	Recomplete Temporarily	Abandon	Other
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TYPE OF SUBMISSION Notice of Intent	Acidize		YPE OF ACTION	N-48	
	K THE APPROPRIATE BOX(ES			PORT OR OTHE	ER DATA
Surface Unit B	(NWNE), 800' FNL & 1730' F	FEL, Sec.34, T30N	, R12W	San Juan	, New Mexico
PO Box 4289, Farmin 4. Location of Well (Foologe, Sec., 2)	T.R.M., or Survey Description)	(505) 326	11. Count	y or Parish, State	averde SWD
3a. Address		3b. Phone No. (include		nd Pool or Explorate	
2. Name of Operator	ngton Resources Oil & Gas	Company LD	9. API We	ill No.	
Oil Well	X Gas Well Other		8. Well N	une and No.	Frath SWD 4
1. Type of Well	SUBMIT IN TRIPLICATE - Other in:	structions on page 2.	7. If Unit	of CA/Agreement, N	ame and/or No.
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Bureau of Land (išt	UNDหวังโด๊TICES AND REP ise this form for proposals			a, Atlottee or Tribe h	Name
Farmington Field	d Office		5. Lease S	7728	F-077922
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NMOCDA

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.

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 get 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, MVCI representative, was on location. Bill Diers, BLM representative, was on location.

Submit 3 Copies To Appropriate District	State of New Me	exico			Form C-1	03
Office District I	Energy, Minerals and Natu	ural Resources			Jun 19, 2	2008
1625 N, French Dr., Hobbs, NM 88240	biloty, minerals and trace	artii Mosouroos	WELL AP	NO.		
District II	OIL CONSERVATION	DIVISION		30-045-28	177	
1301 W. Grand Ave., Artesia, NM 88210			5. Indicate	Type of Leas	e	
District III 1000 Rio Brazos Rd., Aztec, NM 87410	1220 South St. Fra		STA		FEE	
District IV	Santa Fe, NM 8	7505	6. State Oi	& Gas Lease	No.	
1220 S. St. Francis Dr., Santa Fe, NM				B-11303-	10	
87505	CES AND REPORTS ON WELLS		7 Lanca N	ama an I Init A	greement Nam	_
(DO NOT USE THIS FORM FOR PROPOS DIFFERENT RESERVOIR. USE "APPLIC	SALS TO DRILL OR TO DEEPEN OR PL	UG BACK TO A	7. Lease N	FC State Co		e
PROPOSALS.) I. Type of Well: Oil Well	Gas Well 🛛 Other P&A		8. Well Nu	mber 24		
2. Name of Operator	Gas Well & Other T&A		9. OGRID	Number		
ConocoPhillips Company). OUNID	217817	,	
3. Address of Operator			10 Pool n	me or Wildca		_
P.O. Box 4289, Farmington, NM 8	7499-4289			Basin Fruitlai		
4. Well Location						-
' Unit Letter M : 114	n feet from the South	line and 1	220 6	6 st. s	West E	
						е
Section 36		lange 12W	NMPM	San Juan (County	CUMB
	11. Elevation (Show whether DR		c.)		1	
12 Charles	ppropriate Box to Indicate N			TO THE CHARLES		2
of starting any proposed wo or recompletion.	CHANGE PLANS MULTIPLE COMPL eted operations. (Clearly state all prk). SEE RULE 1103. For Multip	le Completions: A	NT JOB	nt dates, includiagram of pr	ding estimated	date
Spud Date:	Rig Rele	ased Date:				
hereby certify that the information a	have is true and complete to the h	act of my linewiled	us and halist			_
initial of the second s	ove is the and complete to the be	est of my knowled	ge and bener.			
SIGNATURE MILLA	J Susse_TITLE_	Staff Regulator	y Technician	DATE #/	24/13	
	E-mail address: dollie.1	.busse@conocoph	illips.com Pl	-IONE: 505-	324-6104	
For State Use Only	7. Day		1151 12055457 15		114-34-3-3-3-3-3-1	
APPROVED BY: Bel 190	///	puty Oil & Ga District			4/26/13	
Conditions of Approval (if any).	TITLE_	District	, .	DATE	7/26/12	
	· P					
Approved for plugging of wellbore only.						
Liability under bond is retained pending Receipt of C-103 (Subsequent Report of We						
Plugging) which may be found @ OCD web	nan-					
under forms.	17"5"					
www.emnrd_state_us/ocd						

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 ¾, 32' ¾", 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, MVCI 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.

<u>Sample Collection and Field Screening Procedures</u>

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)

Sample ID	MW	/-1				
Collection Date	1/14/2	2021		WQCC Groundwater Standards*		
Analyte	Laboratory Results	Field Results	Units			
рН	6.97 H	7.52	su	6 to 9 s	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 r	ng/L	
Bicarbonate (As CaCO ₃)	537.1		mg/L			
Carbonate (As CaCO ₃)	<2.000		mg/L			
Fluoride	<0.50		mg/L	1.6 r	ng/L	
Chloride	36		mg/L	250.0 r		
Bromide	<0.50		mg/L		0/ =	
Phosphorus, Orthophosphate	<2.5		mg/L			
Sulfate	2,200		mg/L	600.0 r	ng/L	
Nitrogen, Nitrate (as N)	<0.50		,8, -	10.0 r		
Nitrogen, Nitrite (as N)	<0.50		mg/L	1.0 r		
Calcium	660		mg/L	2.0 1		
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	100	<u> ⊬</u> 8/ ∟	
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	30	μ6/ -	
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 μg/L	5	μg/L	
Chlorobenzene	<1.0		μg/L μg/L	 	<u>⊬6/ ∟</u>	
Chloroethane	<2.0		μg/L μg/L			
Chloroform	<1.0		μg/L μg/L	100	μg/L	
Chloromethane	<3.0		μg/L μg/L	100	<u>⊬6/ ∟</u>	
2-Chlorotoluene	<1.0		μg/L μg/L			
4-Chlorotoluene	<1.0		μg/L μg/L			
cis-1,2-DCE	<1.0		μg/L μg/L	70	μg/L	
cis-1,3-Dichloropropene	<1.0		μg/L μg/L	 	<u>⊬</u> 8/ ∟	
1,2-Dicbbromo-3-chloropropane	<2.0		μg/L μg/L			
Dibromochloromethane	<1.0		μg/L μg/L			
Dibromomethane	<1.0		μg/L μg/L			

Table 1: Summary of Field Screening and Laboratory Analytical Results

AGUA MOSS LLC SUNCO DISPOSAL #1

Sample ID	MW	'-1	1		
Collection Date	1/14/2	2021	11	WQCC Groundwater	
Analyte	Laboratory Results	Field Results	Units	Standa	rds*
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,

Andy Freeman

Laboratory Manager

andyl

4901 Hawkins NE

Albuquerque, NM 87109

Analytical ReportLab 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

Lab ID: 2101615-001

Matrix: AQUEOUS

Collection Date: 1/14/2021 11:20:00 AM

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 CaCO3)	537.1	20.00		mg/L Ca	1	1/18/2021 12:39:47 PM	R74696
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	1/18/2021 12:39:47 PM	R74696
Total Alkalinity (as CaCO3)	537.1	20.00		mg/L Ca	1	1/18/2021 12:39:47 PM	R74696
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst	МН
Total Dissolved Solids	3540	40.0	*D	mg/L	1	1/20/2021 3:09:00 PM	57621
SM4500-H+B / 9040C: PH						Analyst	МН
рН	6.97		Н	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

Page 1 of 12

2101615-001

Lab ID:

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)

Agua Moss Sunco Disposal 1 Collection Date: 1/14/2021 11:20:00 AM Project: Matrix: AQUEOUS **Received Date:** 1/15/2021 7:52:00 AM

Result **Analyses RL Qual Units DF** Date Analyzed Batch **EPA METHOD 8260B: VOLATILES** Analyst: JMR Bromodichloromethane ND 1.0 1/23/2021 12:49:04 AM A74821 μg/L 1 **Bromoform** ND 1.0 μg/L 1/23/2021 12:49:04 AM A74821 **Bromomethane** ND 3.0 1/23/2021 12:49:04 AM A74821 μg/L 1 2-Butanone ND 10 μg/L 1 1/23/2021 12:49:04 AM A74821 1/23/2021 12:49:04 AM A74821 Carbon disulfide ND 10 μg/L 1 Carbon Tetrachloride ND 1.0 1 1/23/2021 12:49:04 AM A74821 μg/L Chlorobenzene ND 1.0 μg/L 1 1/23/2021 12:49:04 AM A74821 Chloroethane ND 2.0 1/23/2021 12:49:04 AM A74821 μg/L 1 Chloroform ND 1.0 μg/L 1/23/2021 12:49:04 AM A74821 Chloromethane 1/23/2021 12:49:04 AM A74821 ND 3.0 μg/L 1 2-Chlorotoluene ND 10 μg/L 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 ND 1/23/2021 12:49:04 AM A74821 cis-1,3-Dichloropropene 1.0 μg/L 1 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 1/23/2021 12:49:04 AM A74821 μg/L ND 1.0 1/23/2021 12:49:04 AM A74821 1,3-Dichlorobenzene μg/L 1 1/23/2021 12:49:04 AM A74821 1,4-Dichlorobenzene ND 1.0 μg/L 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 1/23/2021 12:49:04 AM A74821 μg/L 1 1,3-Dichloropropane ND 1.0 µg/L 1 1/23/2021 12:49:04 AM A74821 2,2-Dichloropropane ND 2.0 1 1/23/2021 12:49:04 AM A74821 μg/L 1,1-Dichloropropene ND 1.0 µg/L 1/23/2021 12:49:04 AM A74821 Hexachlorobutadiene ND 1.0 1 1/23/2021 12:49:04 AM A74821 μg/L 10 2-Hexanone ND 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 1 1/23/2021 12:49:04 AM A74821 μg/L n-Butylbenzene ND 3.0 μg/L 1 1/23/2021 12:49:04 AM A74821 ND 1.0 1/23/2021 12:49:04 AM A74821 n-Propylbenzene μg/L 1 sec-Butylbenzene ND 1.0 μg/L 1 1/23/2021 12:49:04 AM A74821 1/23/2021 12:49:04 AM A74821 Styrene ND 1.0 1 μg/L tert-Butylbenzene ND 1.0 μg/L 1/23/2021 12:49:04 AM A74821 1,1,1,2-Tetrachloroethane ND 1/23/2021 12:49:04 AM A74821 1.0 μg/L

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
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- POL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

- Analyte detected in the associated Method Blank
- Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

Page 2 of 12

Analytical ReportLab 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.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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 ND Magnesium 1.0 ND Potassium 1.0 Sodium ND 1.0

Sample ID: LLLCS	e ID: LLLCS SampType: LCSLL			TestCode: EPA Method 200.7: Dissolved Metals					ls	
Client ID: BatchQC	Batch	ID: B7	4718	F	RunNo: 7	4718				
Prep Date:	Analysis D	ate: 1/	19/2021	8	SeqNo: 20	636918	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	SampT	ype: LC	S	TestCode: EPA Method 200.7: Dissolved Metals											
Client ID: LCSW	Batch	h I D: B7	4718	F	RunNo: 7	4718									
Prep Date:	Ana l ysis D	Date: 1 /	19/2021	S	SeqNo: 2	636919	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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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 0.10 ND ND Chloride 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	Sampl	Гуре: Ics	;	Tes									
Client ID: LCSW	Batc	h I D: R7	4675	F	RunNo: 7	4675							
Prep Date:	Analysis [Date: 1 /	15/2021	5	SeqNo: 2	635665	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	SampT	ype: m k	olk	Tes	tCode: El	3						
Client ID: PBW	Batch	ID: R7	4685	F	RunNo: 7							
Prep Date:	Analysis D	ate: 1 /	18/2021	S	SeqNo: 2	636249	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: Io	s	Tes	tCode: E	s				
Client ID: LCSW	Batch ID: R	74685	F	RunNo: 7					
Prep Date:	Analysis Date:	1/18/2021	5	SeqNo: 2	636261	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.
- Sample Diluted Due to Matrix
- Holding times for preparation or analysis exceeded Н
- ND Not Detected at the Reporting Limit
- Practical Quanitative Limit POL
- % Recovery outside of range due to dilution or matrix

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2101615 27-Jan-21**

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

Sample ID: 100ng Ics	SampT	ype: LC	s	TestCode: EPA Method 8260B: VOLATILES								
Client ID: LCSW	Batch	n I D: A7 4	4821	F	RunNo: 7	4821						
Prep Date:	Analysis D	ate: 1 /2	22/2021	S	SeqNo: 2	640690	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

SampType: MBLK

WO#: 2101615 27-Jan-21

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

Sample ID: mb1

Client ID: DDW Ratch ID: A74924

TestCode: EPA Method 8260B: VOLATILES

Client ID: PBW	Batch	n I D: A7	'4821	1	RunNo: 7	4821				
Prep Date:	Analysis D)ate: 1 /	/22/2021	:	SeqNo: 2	640691	Units: µg/L			
Analyte	Result	PQL	SPK va l ue	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.
- Sample Diluted Due to Matrix
- Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- POL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix

- Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

WO#: **2101615**

27-Jan-21

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

Sample ID: mb1 Client ID: PBW		ype: ME			tCode: El RunNo: 7	PA Method 4821	ATILES			
Prep Date:	Analysis D	ate: 1 /	22/2021	S	SeqNo: 2	640691	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 Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

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- 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, Inc.

WO#: **2101615**

0.130

20

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

10

4100

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

Qualifiers:

Conductivity

Value exceeds Maximum Contaminant Level.

D Sample Diluted Due to Matrix

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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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

Qualifiers:

- Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix

- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

2101615 27-Jan-21

WO#:

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: Ics-1 alk SampType: Ics 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 98 5 110

TestCode: SM2320B: Alkalinity Sample ID: 2101615-001B DUP SampType: dup

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

SPK value SPK Ref Val %REC LowLimit Result **PQL** HighLimit %RPD **RPDLimit** Qual Analyte

Total Alkalinity (as CaCO3) 539.7 20.00 0.483

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: Ics-2 alk SampType: Ics TestCode: SM2320B: Alkalinity

Client ID: LCSW Batch ID: R74696 RunNo: 74696

Analysis Date: 1/18/2021 Prep Date: SeqNo: 2636377 Units: mg/L CaCO3

Analyte Result **PQL** SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual

90 Total Alkalinity (as CaCO3) 79.52 20.00 80.00 99.4 110

Qualifiers:

Value exceeds Maximum Contaminant Level.

Sample Diluted Due to Matrix

Н Holding times for preparation or analysis exceeded

Not Detected at the Reporting Limit ND POL. Practical Quanitative Limit

% Recovery outside of range due to dilution or matrix

Analyte detected in the associated Method Blank

E Value above quantitation range

Analyte detected below quantitation limits

Sample pH Not In Range

RI. Reporting Limit Page 11 of 12

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 Quanitative Limit

S % Recovery outside of range due to dilution or matrix

B Analyte detected in the associated Method Blank

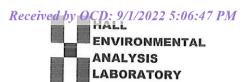
E Value above quantitation range

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

Page 12 of 12



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: So	uder, Miller and Associ	Work Order Nu	mber: 2101615		RcptNo: 1	
Received By: Is	aiah Ortiz	1/15/2021 7:52:0	O AM	I	24	
	aiah Ortiz	1/15/2021 11:15:4	45 AM	Inc	2-4	
Reviewed By:	21/11/21					
Chain of Custod	¥					
1. Is Chain of Custoo	dy complete?		Yes 🗸	No 🗌	Not Present	
2. How was the same	ple delivered?		Courier			
Log In						
	ade to cool the samples?		Yes 🗸	No 🗌	NA 🗌	
4. Were all samples r	eceived at a temperature of	of >0° C to 6.0°C	Yes 🗸	No 🗌	NA 🗆	
5. Sample(s) in prope	er container(s)?		Yes 🗸	No 🗌		
6. Sufficient sample v	olume for indicated test(s)	?	Yes 🗸	No 🗌		
7. Are samples (except	ot VOA and ONG) properly	preserved?	Yes 🗸	No 🗌		
8. Was preservative a	idded 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 o	containers received broken	?	Yes	No 🗸		
a v					# of preserved bottles checked	
11. Does paperwork ma			Yes 🗸	No 🗌	for pH:	-
	s on chain of custody) ctly identified on Chain of C	unto du?	v			unless noted)
13. Is it clear what anal		ustody?	Yes 🗸	No 🗌	/ lajusteu :	20
14. Were all holding tim			Yes 🗹	No 🗆	Checked by:	11.51
	er for authorization.)		ies 💌	NO L	Checked by.	1/13/
Special Handling ((if applicable)					
15. Was client notified	of all discrepancies with th	is order?	Yes	No 🗌	NA 🗸	
Person Notifi	ed:	Date	n: [equal control of the		
By Whom:		Via:	Comment of the Comment of	Phone Fax	In Person	
Regarding:	1					
Client Instruc	tions:					
16. Additional remarks	:					
17. <u>Cooler Informatio</u>	un.					
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1 1.6	And the second of the second o	Present	Sear Date	Signed By		

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L	ANAI YSTS	www.hallenvironmental.com	Albuquerque, NM 87109	Fax	Analysis Request	, ,						3CRA 8 Me	-						+	+				emarks: Direct Bill to Agua pH, VOCs, major cations	pages (5)	ill be cl
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√-uır	X Standard	Project Name:	1906	Project #:		ojec		Heather	Sampler:	On Ice:	ldme	Container Type and #	(3) 40m L UGA	(1) SOOM Playie	(1) 125ml Plashia	1) SODALPROFIL	1)250ml Plastic							Received by:	213	acted to
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Chain-of-Custody Record			Mailing Address: 401 W.	Farmington	Phone #: (505) 714-2787	email or Fax#: heather woods@ Soudermiller.com	QA/QC Package:	y Standard	Accreditation	AP	☐ EDD (Type)													Time:	7.	lf nece
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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)

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)

Numer	ical Standards
(a)	Antimony (Sb) (CAS 7440-36-0)
(b)	Arsenic (As) (CAS 7440-38-2)
(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)
(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)
(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)
(n)	Silver (Ag) (CAS 7440-224)0.05 mg/l
(o)	Thallium (Tl) (CAS 7440-28-0)
(p)	Uranium (U) (CAS 7440-61-1)
(q)	Radioactivity: Combined Radium-226 (CAS 13982-63-3) and
R	adium-228 (CAS 15262-20-1)
(r)	Benzene (CAS 71-43-2)
(s)	Polychlorinated biphenyls (PCB's) (CAS 1336-36-3).0.0005 mg/l
(t)	Toluene (CAS 108-88-3)
(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)
(aa)	total xylenes (CAS 1330-20-7)
(bb)	methylene chloride (CAS 75-09-2)
(cc)	chloroform (CAS 67-66-3)
(dd)	1,1-dichloroethane (CAS 75-34-3)
(ee)	ethylene dibromide (EDB) (CAS 106-93-4)0.00005 mg/l
(ff)	1,1,1-trichloroethane (CAS 71-55-6)
(gg)	1,1,2-trichloroethane (CAS 79-00-5)
(hh)	1,1,2,2-tetrachloroethane (CAS 79-34-5)
(ii)	vinyl chloride (CAS 75-01-4)
	AHs: total naphthalene (CAS 91-20-3) plus monomethylnaphthalenes0.03 mg/l
(kk)	benzo-a-pyrene (CAS 50-32-8)
(ll)	cis-1,2-dichloroethene (CAS 156-59-2)
(mm)	trans-1,2-dichloroethene (CAS 156-60-5)
(nn)	1,2-dichloropropane (PDC) (CAS 78-87-5)
(00)	styrene (CAS 100-42-5)
(pp)	1,2-dichlorobenzene (CAS 95-50-1)
(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)	

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.

В.	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		
	(6)	Sulfate (SO ₄) (CAS 14808-79-8)	600.0 mg/l	
	(7)	Total Dissolved Solids (TDS) TDS		
	(8)	Zinc (Zn) (CAS 7440-66-6)		
	(9)	pH		
	(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

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:	OGRID:
AGUA MOSS, LLC	247130
P.O. Box 600	Action Number:
Farmington, NM 87499	140289
	Action Type:
	[UF-DP] NOI Discharge Permit (DISCHARGE PERMIT NOI)

COMMENTS

Created B	y Comment	Comment Date
cchavez	Annual Report 2021 Submittal	11/8/2023

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Created B	y Condition	Condition Date
cchavez	Condition of Approval: 1. Follow Discharge Permit Guidelines for content based on type of report submitted.	11/8/2023