



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

July 21, 2021

Naudiea Yon
Lee Ranch Coal Co
PO Box 757
Grants, NM 87020
TEL: (505) 285-2898
FAX

RE: Lee Ranch Groundwater

OrderNo.: 2106E63

Dear Naudiea Yon:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/28/2021 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,

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2106E63

Date Reported: 7/21/2021

CLIENT: Lee Ranch Coal Co

Client Sample ID: San Miguel Springs

Project: Lee Ranch Groundwater

Collection Date: 6/28/2021 8:35:00 AM

Lab ID: 2106E63-001

Matrix: AQUEOUS

Received Date: 6/28/2021 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS							Analyst: bcv
Arsenic	0.0018	0.0010		mg/L	1	7/1/2021 5:43:27 PM	B79527
Copper	0.0021	0.0010		mg/L	1	7/1/2021 5:43:27 PM	B79527
Lead	ND	0.00050		mg/L	1	7/1/2021 5:43:27 PM	B79527
Selenium	ND	0.0010		mg/L	1	7/1/2021 5:43:27 PM	B79527
SM2340B: HARDNESS							Analyst: ELS
Hardness as CaCO3	69	6.6		mg/L	1	7/1/2021 8:37:00 AM	R79507
SODIUM ADSORPTION RATIO							Analyst: ELS
Sodium Adsorption Ratio	0.56	0			1	6/30/2021 7:37:00 AM	R79474
EPA METHOD 300.0: ANIONS							Analyst: JMT
Fluoride	0.21	0.10		mg/L	1	6/28/2021 5:24:43 PM	R79422
Chloride	2.4	0.50		mg/L	1	6/28/2021 5:24:43 PM	R79422
Sulfate	1.9	0.50		mg/L	1	6/28/2021 5:24:43 PM	R79422
SM2510B: SPECIFIC CONDUCTANCE							Analyst: CAS
Conductivity	180	10		µmhos/c	1	6/30/2021 4:32:11 PM	R79516
SM2320B: ALKALINITY							Analyst: CAS
Bicarbonate (As CaCO3)	85.20	20.00		mg/L Ca	1	6/30/2021 4:32:11 PM	R79516
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	6/30/2021 4:32:11 PM	R79516
Total Alkalinity (as CaCO3)	85.20	20.00		mg/L Ca	1	6/30/2021 4:32:11 PM	R79516
SM2540C MOD: TOTAL DISSOLVED SOLIDS							Analyst: KS
Total Dissolved Solids	130	20.0		mg/L	1	7/2/2021 3:36:00 PM	61071
SM4500-H+B / 9040C: PH							Analyst: CAS
pH	8.03		H	pH units	1	6/30/2021 4:32:11 PM	R79516
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Aluminum	ND	0.020		mg/L	1	7/1/2021 10:10:26 AM	B79507
Barium	0.036	0.0020		mg/L	1	7/1/2021 10:10:26 AM	B79507
Boron	ND	0.040		mg/L	1	7/1/2021 10:10:26 AM	B79507
Cadmium	ND	0.0020		mg/L	1	7/1/2021 10:10:26 AM	B79507
Calcium	17	1.0		mg/L	1	7/1/2021 10:10:26 AM	B79507
Chromium	ND	0.0060		mg/L	1	7/1/2021 10:10:26 AM	B79507
Cobalt	ND	0.0060		mg/L	1	7/1/2021 10:10:26 AM	B79507
Iron	0.022	0.020		mg/L	1	7/1/2021 10:10:26 AM	B79507
Magnesium	6.5	1.0		mg/L	1	7/1/2021 10:10:26 AM	B79507
Manganese	0.0021	0.0020		mg/L	1	7/1/2021 10:10:26 AM	B79507
Molybdenum	ND	0.0080		mg/L	1	7/1/2021 10:10:26 AM	B79507
Nickel	ND	0.010		mg/L	1	7/1/2021 10:10:26 AM	B79507

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

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

Hall Environmental Analysis Laboratory, Inc.**CLIENT:** Lee Ranch Coal Co**Client Sample ID:** San Miguel Springs**Project:** Lee Ranch Groundwater**Collection Date:** 6/28/2021 8:35:00 AM**Lab ID:** 2106E63-001**Matrix:** AQUEOUS**Received Date:** 6/28/2021 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS							Analyst: ELS
Potassium	3.0	1.0		mg/L	1	7/1/2021 10:10:26 AM	B79507
Silver	ND	0.0050		mg/L	1	7/1/2021 10:10:26 AM	B79507
Sodium	9.9	1.0		mg/L	1	7/1/2021 10:10:26 AM	B79507
Vanadium	ND	0.050		mg/L	1	7/1/2021 10:10:26 AM	B79507
Zinc	0.033	0.010		mg/L	1	7/1/2021 10:10:26 AM	B79507
EPA METHOD 200.7: METALS							Analyst: ELS
Iron	0.10	0.050		mg/L	1	6/30/2021 10:39:08 AM	61017
Manganese	0.0068	0.0020		mg/L	1	7/2/2021 8:50:53 AM	61083
EPA METHOD 245.1: MERCURY							Analyst: ags
Mercury	ND	0.00020		mg/L	1	6/30/2021 1:33:33 PM	60999
TOTAL PHENOLICS BY SW-846 9067							Analyst: JPM
Phenolics	ND	2.5		µg/L	1	7/7/2021 9:07:00 AM	61154

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

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

Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 2106E63

Date Reported: 7/21/2021

CLIENT: Lee Ranch Coal Co

Client Sample ID: San Miguel Springs

Project: Lee Ranch Groundwater

Collection Date: 6/28/2021 8:35:00 AM

Lab ID: 2106E63-002

Matrix: AQUEOUS

Received Date: 6/28/2021 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS							Analyst: JMT
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	6/28/2021 6:42:04 PM	R79422

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

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

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1372089

Samples Received: 06/29/2021

Project Number:

Description:

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

Entire Report Reviewed By:

John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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

TABLE OF CONTENTS

Cp: Cover Page	1	
Tc: Table of Contents	2	
Ss: Sample Summary	3	
Cn: Case Narrative	4	
Sr: Sample Results	5	
2106E63-001F SAN MIGUEL SPRINGS L1372089-01	5	
Qc: Quality Control Summary	6	
Wet Chemistry by Method 4500CN E-2011	6	
Gl: Glossary of Terms	7	
Al: Accreditations & Locations	8	
Sc: Sample Chain of Custody	9	

SAMPLE SUMMARY

2106E63-001F SAN MIGUEL SPRINGS L1372089-01 WW

Collected by: _____ Collected date/time: 06/28/21 08:35 Received date/time: 06/29/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1708084	1	07/19/21 20:08	07/20/21 10:44	KEG	Mt. Juliet, TN

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

CASE NARRATIVE

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



John Hawkins
Project Manager

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis date / time	Batch
Cyanide	ND	Q	0.00500	1	07/20/2021 10:44	WG1708084

- 1 Cp
- 2 Tc
- 3 Ss
- 4 Cn
- 5 Sr
- 6 Qc
- 7 Gl
- 8 Al
- 9 Sc

Method Blank (MB)

(MB) R3681473-1 07/20/21 10:12

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

Original Sample (OS) • Duplicate (DUP)

(OS) • (DUP) R3681473-5 07/20/21 10:27

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	ND		1	200	P1	20

L1371712-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1371712-02 07/20/21 10:28 • (DUP) R3681473-6 07/20/21 10:29

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	0.0250	0.0233	1	7.04		20

Laboratory Control Sample (LCS)

(LCS) R3681473-2 07/20/21 10:13

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.0901	90.1	87.1-120	

L1371749-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1371749-02 07/20/21 10:38 • (MS) R3681473-7 07/20/21 10:39 • (MSD) R3681473-8 07/20/21 10:40

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	0.00626	0.0964	0.0918	90.1	85.5	1	90.0-110		J6	4.89	20

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

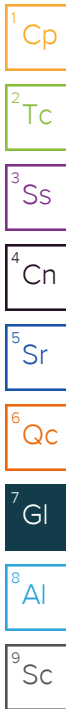
Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

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



ACCREDITATIONS & LOCATIONS

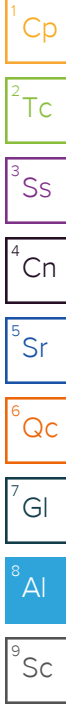
Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

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

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



SUB CONTRACTOR: Pace TN		COMPANY: PACE TN		PHONE: (800) 767-5859	FAX: (615) 758-5859		
ADDRESS: 12065 Lebanon Rd				ACCOUNT #:	EMAIL:		
CITY, STATE, ZIP: Mt. Juliet, TN 37122							
					A123		
ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS <i>L1372089</i>
1	2106E63-001F	San Miguel Springs	500AMBHDP <i>E. NAOH</i>	Aqueous	6/28/2021 8:35:00 AM	1	
2	2106E63-001G	San Miguel Springs	1LHDPEHNO <i>2</i>	Aqueous	6/28/2021 8:35:00 AM	4	

Sample Receipt Checklist

COC Seal Present/Intact: Y N IF Applicable

COC Signed/Accurate: Y N VOA Zero Headspace: Y N

Bottles arrive intact: Y N Pres. Correct/Check: Y N

Correct bottles used: Y N

Sufficient volume sent: Y N

RAD Screen <0.5 mR/hr: Y N

p360
1.1 ± 0 = 1.1 COCST

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.

1749 9998 3598

Relinquished By: <i>See</i>	Date: 6/28/2021	Time: 2:36 PM	Received By:	Date:	Time:	REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARDCOPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE FOR LAB USE ONLY Temp of samples _____ °C Attempt to Cool? _____ Comments: _____
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Received By: <i>Handy</i>	Date: <i>6/29/21</i>	Time: <i>09:00</i>	
TAT: Standard <input type="checkbox"/> RUSH <input checked="" type="checkbox"/> Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/>						

July 07, 2021

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Hall Environmental Analysis Laboratory

Sample Delivery Group: L1372093
Samples Received: 06/29/2021
Project Number:
Description:

Report To: Jackie Bolte

Entire Report Reviewed By:



John Hawkins
Project Manager

Results relate only to the items tested or calibrated and are reported as rounded values. This test report shall not be reproduced, except in full, without written approval of the laboratory. Where applicable, sampling conducted by Pace Analytical National is performed per guidance provided in laboratory standard operating procedures ENV-SOP-MTJL-0067 and ENV-SOP-MTJL-0068. Where sampling conducted by the customer, results relate to the accuracy of the information provided, and as the samples are received.

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

TABLE OF CONTENTS

Cp: Cover Page	1	¹ Cp
Tc: Table of Contents	2	
Ss: Sample Summary	3	² Tc
Cn: Case Narrative	4	
Sr: Sample Results	5	³ Ss
2106E63-001G L1372093-01	5	
Qc: Quality Control Summary	6	⁴ Cn
Radiochemistry by Method 900	6	⁵ Sr
Radiochemistry by Method 904	7	
Radiochemistry by Method SM7500Ra B M	8	⁶ Qc
Gl: Glossary of Terms	9	⁷ Gl
Al: Accreditations & Locations	10	⁸ Al
Sc: Sample Chain of Custody	11	⁹ Sc

SAMPLE SUMMARY

2106E63-001G L1372093-01 Non-Potable Water

Collected by: _____ Collected date/time: 06/28/21 08:35 Received date/time: 06/29/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Radiochemistry by Method 900	WG1697633	1	06/30/21 14:02	07/05/21 10:53	JMR	Mt. Juliet, TN
Radiochemistry by Method 904	WG1697279	1	06/30/21 10:48	07/05/21 12:35	JMR	Mt. Juliet, TN
Radiochemistry by Method SM7500Ra B M	WG1688247	1	07/01/21 09:59	07/02/21 16:15	RGT	Mt. Juliet, TN

- ¹Cp
- ²Tc
- ³Ss
- ⁴Cn
- ⁵Sr
- ⁶Qc
- ⁷Gl
- ⁸Al
- ⁹Sc

CASE NARRATIVE

All sample aliquots were received at the correct temperature, in the proper containers, with the appropriate preservatives, and within method specified holding times, unless qualified or notated within the report. Where applicable, all MDL (LOD) and RDL (LOQ) values reported for environmental samples have been corrected for the dilution factor used in the analysis. All radiochemical sample results for solids are reported on a dry weight basis with the exception of tritium, carbon-14 and radon, unless wet weight was requested by the client. 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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

Radiochemistry by Method 900

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
GROSS ALPHA	0.797	J	0.856	1.14	07/05/2021 10:53	WG1697633
GROSS BETA	1.33	J	1.76	2.32	07/05/2021 10:53	WG1697633

Radiochemistry by Method 904

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-228	1.11		0.316	0.561	07/05/2021 12:35	WG1697279
(T) Barium	101			62.0-143	07/05/2021 12:35	WG1697279
(T) Yttrium	91.3			79.0-136	07/05/2021 12:35	WG1697279

Radiochemistry by Method SM7500Ra B M

Analyte	Result	Qualifier	Uncertainty	MDA	Analysis Date	Batch
	pCi/l		+ / -	pCi/l	date / time	
RADIUM-226	0.0241	U	0.145	0.292	07/02/2021 16:15	WG1688247
(T) Barium-133	96.0			30.0-143	07/02/2021 16:15	WG1688247

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

Method Blank (MB)

(MB) R3676087-1 07/04/21 17:58

Analyte	MB Result pCi/l	MB Qualifier	MB MDA pCi/l
GROSS ALPHA	-0.216	U	0.462
GROSS BETA	-0.262	U	1.12

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1369188-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1369188-02 07/04/21 17:58 • (DUP) R3676087-5 07/04/21 17:58

Analyte	Original Result pCi/l	DUP Result pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
GROSS ALPHA	2.74	2.77	1	0.871	0.0201		20	3
GROSS BETA	5.55	4.86	1	13.2	0.440		20	3

Laboratory Control Sample (LCS)

(LCS) R3676087-2 07/04/21 17:58

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
GROSS ALPHA	15.0	13.0	86.6	80.0-120	
GROSS BETA	30.6	32.0	105	80.0-120	

L1369188-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1369188-01 07/04/21 17:58 • (MS) R3676087-3 07/04/21 17:58 • (MSD) R3676087-4 07/04/21 17:58

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
GROSS ALPHA	18.8	2.79	21.7	22.0	101	102	1	70.0-130			1.19		20
GROSS BETA	38.3	4.57	50.0	49.3	118	117	1	70.0-130			1.29		20

Method Blank (MB)

(MB) R3676067-1 07/05/21 12:35

Analyte	MB Result pCi/l	MB Qualifier	MB MDA pCi/l
Radium-228	-0.0850	<u>U</u>	0.436
(T) Barium	109		
(T) Yttrium	102		

¹Cp

²Tc

³Ss

⁴Cn

⁵Sr

⁶Qc

⁷Gl

⁸Al

⁹Sc

L1369868-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1369868-01 07/05/21 12:35 • (DUP) R3676067-5 07/05/21 12:35

Analyte	Original Result pCi/l	DUP Result pCi/l	Dilution	DUP RPD %	DUP RER	DUP Qualifier	DUP RPD Limits %	DUP RER Limit
Radium-228	0.249	0.245	1	1.38	0.00541	<u>U</u>	20	3
(T) Barium	98.0	97.3						
(T) Yttrium	108	101						

Laboratory Control Sample (LCS)

(LCS) R3676067-2 07/05/21 12:35

Analyte	Spike Amount pCi/l	LCS Result pCi/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Radium-228	5.00	5.27	105	80.0-120	
(T) Barium			110		
(T) Yttrium			88.4		

L1369875-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1369875-07 07/05/21 12:35 • (MS) R3676067-3 07/05/21 12:35 • (MSD) R3676067-4 07/05/21 12:35

Analyte	Spike Amount pCi/l	Original Result pCi/l	MS Result pCi/l	MSD Result pCi/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	MS RER	RPD Limits %
Radium-228	10.0	1.37	10.7	9.15	93.1	77.8	1	70.0-130			15.4		20
(T) Barium		98.2			113	108							
(T) Yttrium		89.7			102	90.3							

Method Blank (MB)

(MB) R3676480-1 07/02/21 15:48

Analyte	MB Result	MB Qualifier	MB MDA
	pCi/l		pCi/l
Radium-226	0.000	<u>U</u>	0.0244
(T) Barium-133	91.6		

L1372093-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1372093-01 07/02/21 16:15 • (DUP) R3676480-5 07/02/21 16:15

Analyte	Original Result	DUP Result	Dilution	DUP RPD	DUP RER	DUP Qualifier	DUP RPD Limits	DUP RER Limit
	pCi/l	pCi/l		%			%	
Radium-226	0.0241	0.0137	1	55.2	0.0621	<u>U</u>	20	3
(T) Barium-133	96.0	97.0						

Laboratory Control Sample (LCS)

(LCS) R3676480-2 07/02/21 16:15

Analyte	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
	pCi/l	pCi/l	%	%	
Radium-226	5.02	4.68	93.2	80.0-120	
(T) Barium-133			103		

1 Cp

2 Tc

3 Ss

4 Cn

5 Sr

6 Qc

7 Gl

8 Al

9 Sc

GLOSSARY OF TERMS

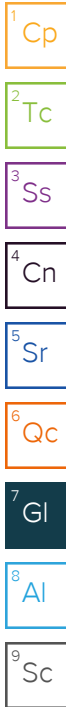
Guide to Reading and Understanding Your Laboratory Report

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

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

Abbreviations and Definitions

MDA	Minimum Detectable Activity.
Rec.	Recovery.
RER	Replicate Error Ratio.
RPD	Relative Percent Difference.
SDG	Sample Delivery Group.
(T)	Tracer - A radioisotope of known concentration added to a solution of chemically equivalent radioisotopes at a known concentration to assist in monitoring the yield of the chemical separation.
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
J	The identification of the analyte is acceptable; the reported value is an estimate.
U	Below Detectable Limits: Indicates that the analyte was not detected.



ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico ¹	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina ¹	DW21704
Georgia	NELAP	North Carolina ³	41
Georgia ¹	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LA000356
Kentucky ^{1,6}	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ^{1,4}	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas ⁵	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 ⁵	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

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

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

¹ Cp

² Tc

³ Ss

⁴ Cn

⁵ Sr

⁶ Qc

⁷ Gl

⁸ Al

⁹ Sc

SUB CONTRACTOR: Pace TN		COMPANY: PACE TN		PHONE: (800) 767-5859	FAX: (615) 758-5859		
ADDRESS: 12065 Lebanon Rd				ACCOUNT #:	EMAIL:		
CITY, STATE, ZIP: Mt. Juliet, TN 37122							
ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	A123 L1372093 ANALYTICAL COMMENTS
1	2106E63-001F	San Miguel Springs	500AMBHDP E-NAOH	Aqueous	6/28/2021 8:35:00 AM	1	Total Cyanide *RUSH 3 DAY TAT*
2	2106E63-001G	San Miguel Springs	1LHDPEHNO	Aqueous	6/28/2021 8:35:00 AM	4	Gross Alpha/Beta + RA 226/228 *RUSH 3 DAY TAT* - CI

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

A360
1.1 ± 0.1 = 1.1 COC SI

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.

1749 9998 3598

Relinquished By: SCC	Date: 6/28/2021	Time: 2:36 PM	Received By:	Date:	Time:	REPORT TRANSMITTAL DESIRED: <input type="checkbox"/> HARD COPY (extra cost) <input type="checkbox"/> FAX <input type="checkbox"/> EMAIL <input type="checkbox"/> ONLINE FOR LAB USE ONLY Temp of samples _____ °C Attempt to Cool? _____ Comments: _____
Relinquished By:	Date:	Time:	Received By:	Date:	Time:	
Relinquished By:	Date:	Time:	Received By: <i>[Signature]</i>	Date: 6/29/21	Time: 0900	
TAT: Standard <input type="checkbox"/> RUSH Next BD <input type="checkbox"/> 2nd BD <input type="checkbox"/> 3rd BD <input type="checkbox"/>						

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: MB-61017	SampType: MBLK	TestCode: EPA Method 200.7: Metals								
Client ID: PBW	Batch ID: 61017	RunNo: 79474								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2793961	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.050								

Sample ID: LLCS-61017	SampType: LCSLL	TestCode: EPA Method 200.7: Metals								
Client ID: BatchQC	Batch ID: 61017	RunNo: 79474								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2793963	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.050	0.02000	0	108	50	150			

Sample ID: LCS-61017	SampType: LCS	TestCode: EPA Method 200.7: Metals								
Client ID: LCSW	Batch ID: 61017	RunNo: 79474								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2793965	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.48	0.050	0.5000	0	96.5	85	115			

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 200.7: Metals								
Client ID: PBW	Batch ID: B79507	RunNo: 79507								
Prep Date:	Analysis Date: 7/1/2021	SeqNo: 2795653	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0030								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Iron	ND	0.050								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Vanadium	ND	0.050								
Zinc	ND	0.010								

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: LLLCS		SampType: LCSLL		TestCode: EPA Method 200.7: Metals						
Client ID: BatchQC		Batch ID: B79507		RunNo: 79507						
Prep Date:		Analysis Date: 7/1/2021		SeqNo: 2795654			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	103	50	150			
Barium	ND	0.0030	0.002000	0	95.1	50	150			
Boron	ND	0.040	0.04000	0	96.4	50	150			
Cadmium	ND	0.0020	0.002000	0	66.9	50	150			
Calcium	ND	1.0	0.5000	0	106	50	150			
Chromium	ND	0.0060	0.006000	0	82.7	50	150			
Cobalt	ND	0.0060	0.006000	0	86.6	50	150			
Iron	ND	0.050	0.02000	0	103	50	150			
Magnesium	ND	1.0	0.5000	0	102	50	150			
Manganese	ND	0.0020	0.002000	0	92.1	50	150			
Molybdenum	ND	0.0080	0.008000	0	99.9	50	150			
Nickel	ND	0.010	0.005000	0	90.5	50	150			
Potassium	ND	1.0	0.5000	0	112	50	150			
Silver	ND	0.0050	0.005000	0	92.5	50	150			
Sodium	ND	1.0	0.5000	0	95.0	50	150			
Vanadium	ND	0.050	0.01000	0	102	50	150			
Zinc	ND	0.010	0.01000	0	89.6	50	150			

Sample ID: LCS		SampType: LCS		TestCode: EPA Method 200.7: Metals						
Client ID: LCSW		Batch ID: B79507		RunNo: 79507						
Prep Date:		Analysis Date: 7/1/2021		SeqNo: 2795655			Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.58	0.020	0.5000	0	116	85	115			S
Barium	0.51	0.0030	0.5000	0	102	85	115			
Boron	0.53	0.040	0.5000	0	105	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Cobalt	0.49	0.0060	0.5000	0	98.4	85	115			
Iron	0.52	0.050	0.5000	0	104	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Molybdenum	0.53	0.0080	0.5000	0	107	85	115			
Nickel	0.49	0.010	0.5000	0	97.8	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	50	1.0	50.00	0	100	85	115			
Vanadium	0.53	0.050	0.5000	0	106	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 200.7: Metals								
Client ID: LCSW	Batch ID: B79507	RunNo: 79507								
Prep Date:	Analysis Date: 7/1/2021	SeqNo: 2795655	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.52	0.010	0.5000	0	105	85	115			

Sample ID: MB-61083	SampType: MBLK	TestCode: EPA Method 200.7: Metals								
Client ID: PBW	Batch ID: 61083	RunNo: 79546								
Prep Date: 7/1/2021	Analysis Date: 7/2/2021	SeqNo: 2797213	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	ND	0.0020								

Sample ID: LLLCS-61083	SampType: LCSLL	TestCode: EPA Method 200.7: Metals								
Client ID: BatchQC	Batch ID: 61083	RunNo: 79546								
Prep Date: 7/1/2021	Analysis Date: 7/2/2021	SeqNo: 2797215	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.0021	0.0020	0.002000	0	106	50	150			

Sample ID: LCS-61083	SampType: LCS	TestCode: EPA Method 200.7: Metals								
Client ID: LCSW	Batch ID: 61083	RunNo: 79546								
Prep Date: 7/1/2021	Analysis Date: 7/2/2021	SeqNo: 2797217	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Manganese	0.48	0.0020	0.5000	0	96.2	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: MB	SampType: MBLK	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: PBW	Batch ID: B79507	RunNo: 79507								
Prep Date:	Analysis Date: 7/1/2021	SeqNo: 2795409	Units: mg/L							

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Barium	ND	0.0020								
Boron	ND	0.040								
Cadmium	ND	0.0020								
Calcium	ND	1.0								
Chromium	ND	0.0060								
Cobalt	ND	0.0060								
Iron	ND	0.020								
Magnesium	ND	1.0								
Manganese	ND	0.0020								
Molybdenum	ND	0.0080								
Nickel	ND	0.010								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Vanadium	ND	0.050								
Zinc	ND	0.010								

Sample ID: LLLCS	SampType: LCSLL	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: BatchQC	Batch ID: B79507	RunNo: 79507								
Prep Date:	Analysis Date: 7/1/2021	SeqNo: 2795410	Units: mg/L							

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	103	50	150			
Barium	ND	0.0020	0.002000	0	95.1	50	150			
Boron	ND	0.040	0.04000	0	96.4	50	150			
Cadmium	ND	0.0020	0.002000	0	66.9	50	150			
Calcium	ND	1.0	0.5000	0	106	50	150			
Chromium	ND	0.0060	0.006000	0	82.7	50	150			
Cobalt	ND	0.0060	0.006000	0	86.6	50	150			
Iron	0.021	0.020	0.02000	0	103	50	150			
Magnesium	ND	1.0	0.5000	0	102	50	150			
Manganese	ND	0.0020	0.002000	0	92.1	50	150			
Molybdenum	ND	0.0080	0.008000	0	99.9	50	150			
Nickel	ND	0.010	0.005000	0	90.5	50	150			
Potassium	ND	1.0	0.5000	0	112	50	150			
Silver	ND	0.0050	0.005000	0	92.5	50	150			
Sodium	ND	1.0	0.5000	0	95.0	50	150			
Vanadium	ND	0.050	0.01000	0	102	50	150			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: LLLCS	SampType: LCSLL	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: BatchQC	Batch ID: B79507	RunNo: 79507								
Prep Date:	Analysis Date: 7/1/2021	SeqNo: 2795410	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	ND	0.010	0.01000	0	89.6	50	150			

Sample ID: LCS	SampType: LCS	TestCode: EPA Method 200.7: Dissolved Metals								
Client ID: LCSW	Batch ID: B79507	RunNo: 79507								
Prep Date:	Analysis Date: 7/1/2021	SeqNo: 2795411	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.58	0.020	0.5000	0	116	85	115			S
Barium	0.51	0.0020	0.5000	0	102	85	115			
Boron	0.53	0.040	0.5000	0	105	85	115			
Cadmium	0.51	0.0020	0.5000	0	102	85	115			
Calcium	52	1.0	50.00	0	104	85	115			
Chromium	0.50	0.0060	0.5000	0	100	85	115			
Cobalt	0.49	0.0060	0.5000	0	98.4	85	115			
Iron	0.52	0.020	0.5000	0	104	85	115			
Magnesium	52	1.0	50.00	0	104	85	115			
Manganese	0.50	0.0020	0.5000	0	100	85	115			
Molybdenum	0.53	0.0080	0.5000	0	107	85	115			
Nickel	0.49	0.010	0.5000	0	97.8	85	115			
Potassium	51	1.0	50.00	0	102	85	115			
Silver	0.10	0.0050	0.1000	0	101	85	115			
Sodium	50	1.0	50.00	0	100	85	115			
Vanadium	0.53	0.050	0.5000	0	106	85	115			
Zinc	0.52	0.010	0.5000	0	105	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: MB	SampType: MBLK	TestCode: EPA 200.8: Dissolved Metals								
Client ID: PBW	Batch ID: B79527	RunNo: 79527								
Prep Date:	Analysis Date: 7/1/2021	SeqNo: 2796003	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Copper	ND	0.0010								
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID: LCSLL	SampType: LCSLL	TestCode: EPA 200.8: Dissolved Metals								
Client ID: BatchQC	Batch ID: B79527	RunNo: 79527								
Prep Date:	Analysis Date: 7/1/2021	SeqNo: 2796004	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	91.4	50	150			
Copper	ND	0.0010	0.001000	0	92.9	50	150			
Lead	0.00050	0.00050	0.0005000	0	100	50	150			
Selenium	0.0010	0.0010	0.001000	0	103	50	150			

Sample ID: LCS	SampType: LCS	TestCode: EPA 200.8: Dissolved Metals								
Client ID: LCSW	Batch ID: B79527	RunNo: 79527								
Prep Date:	Analysis Date: 7/1/2021	SeqNo: 2796005	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.4	85	115			
Copper	0.024	0.0010	0.02500	0	94.3	85	115			
Lead	0.012	0.00050	0.01250	0	94.6	85	115			
Selenium	0.025	0.0010	0.02500	0	98.6	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: MB-60999	SampType: MBLK	TestCode: EPA Method 245.1: Mercury								
Client ID: PBW	Batch ID: 60999	RunNo: 79504								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2795170	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: LL LCS-60999	SampType: LC SLL	TestCode: EPA Method 245.1: Mercury								
Client ID: BatchQC	Batch ID: 60999	RunNo: 79504								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2795171	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020	0.0001500	0	53.4	50	150			

Sample ID: LCS-60999	SampType: LCS	TestCode: EPA Method 245.1: Mercury								
Client ID: LCSW	Batch ID: 60999	RunNo: 79504								
Prep Date: 6/29/2021	Analysis Date: 6/30/2021	SeqNo: 2795172	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	92.1	85	115			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: MB	SampType: mblk	TestCode: EPA Method 300.0: Anions								
Client ID: PBW	Batch ID: R79422	RunNo: 79422								
Prep Date:	Analysis Date: 6/28/2021	SeqNo: 2791911			Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrate (As N)	ND	0.10								
Sulfate	ND	0.50								

Sample ID: LCS	SampType: ics	TestCode: EPA Method 300.0: Anions								
Client ID: LCSW	Batch ID: R79422	RunNo: 79422								
Prep Date:	Analysis Date: 6/28/2021	SeqNo: 2791912			Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.7	0.50	5.000	0	94.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.8	90	110			
Sulfate	9.6	0.50	10.00	0	96.4	90	110			

Sample ID: 2106E63-001AMS	SampType: ms	TestCode: EPA Method 300.0: Anions								
Client ID: San Miguel Springs	Batch ID: R79422	RunNo: 79422								
Prep Date:	Analysis Date: 6/28/2021	SeqNo: 2791929			Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.70	0.10	0.5000	0.2148	96.3	73.3	111			
Chloride	7.2	0.50	5.000	2.446	96.0	84.2	117			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0.04460	94.4	86.8	110			
Sulfate	11	0.50	10.00	1.944	95.2	83.3	112			

Sample ID: 2106E63-001AMSD	SampType: msd	TestCode: EPA Method 300.0: Anions								
Client ID: San Miguel Springs	Batch ID: R79422	RunNo: 79422								
Prep Date:	Analysis Date: 6/28/2021	SeqNo: 2791930			Units: mg/L					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.70	0.10	0.5000	0.2148	96.7	73.3	111	0.330	20	
Chloride	7.3	0.50	5.000	2.446	96.4	84.2	117	0.266	20	
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0.04460	95.1	86.8	110	0.700	20	
Sulfate	12	0.50	10.00	1.944	96.0	83.3	112	0.694	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: MB-61154	SampType: MBLK	TestCode: Total Phenolics by SW-846 9067								
Client ID: PBW	Batch ID: 61154	RunNo: 79604								
Prep Date: 7/7/2021	Analysis Date: 7/7/2021	SeqNo: 2799936	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics	ND	2.5								

Sample ID: LCS-61154	SampType: LCS	TestCode: Total Phenolics by SW-846 9067								
Client ID: LCSW	Batch ID: 61154	RunNo: 79604								
Prep Date: 7/7/2021	Analysis Date: 7/7/2021	SeqNo: 2799937	Units: µg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics	19	2.5	20.00	0	95.5	54.7	121			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: ics-1 100.1uS eC	SampType: ics	TestCode: SM2510B: Specific Conductance								
Client ID: LCSW	Batch ID: R79516	RunNo: 79516								
Prep Date:	Analysis Date: 6/30/2021	SeqNo: 2795750			Units: µmhos/cm					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	100.1	0	100	85	115			

Sample ID: 2106e63-001a dup	SampType: dup	TestCode: SM2510B: Specific Conductance								
Client ID: San Miguel Springs	Batch ID: R79516	RunNo: 79516								
Prep Date:	Analysis Date: 6/30/2021	SeqNo: 2795764			Units: µmhos/cm					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	180	10						0.0564	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: 2106e63-001a dup	SampType: dup	TestCode: SM4500-H+B / 9040C: pH								
Client ID: San Miguel Springs	Batch ID: R79516	RunNo: 79516								
Prep Date:	Analysis Date: 6/30/2021	SeqNo: 2795808 Units: pH units								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
pH	8.06									H

Qualifiers:

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

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: mb-1 alk	SampType: mblk	TestCode: SM2320B: Alkalinity								
Client ID: PBW	Batch ID: R79516	RunNo: 79516								
Prep Date:	Analysis Date: 6/30/2021	SeqNo: 2795726	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: lcs-1 alk	SampType: lcs	TestCode: SM2320B: Alkalinity								
Client ID: LCSW	Batch ID: R79516	RunNo: 79516								
Prep Date:	Analysis Date: 6/30/2021	SeqNo: 2795727	Units: mg/L CaCO3							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	73.64	20.00	80.00	0	92.0	90	110			

Sample ID: 2106e63-001a dup	SampType: dup	TestCode: SM2320B: Alkalinity									
Client ID: San Miguel Springs	Batch ID: R79516	RunNo: 79516									
Prep Date:	Analysis Date: 6/30/2021	SeqNo: 2795730	Units: mg/L CaCO3								
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Total Alkalinity (as CaCO3)	85.12	20.00							0.0939	20	

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: 2106E63

21-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: MB-61071	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: PBW	Batch ID: 61071	RunNo: 79554								
Prep Date: 7/1/2021	Analysis Date: 7/2/2021	SeqNo: 2797645	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-61071	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids								
Client ID: LCSW	Batch ID: 61071	RunNo: 79554								
Prep Date: 7/1/2021	Analysis Date: 7/2/2021	SeqNo: 2797646	Units: mg/L							
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1000	20.0	1000	0	100	80	120			

Qualifiers:

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

Sample Log-In Check List

Client Name: **Lee Ranch Coal Co**

Work Order Number: **2106E63**

RcptNo: 1

Received By: **Sean Livingston**

6/28/2021 1:15:00 PM

Sean Livingston

Completed By: **Sean Livingston**

6/28/2021 2:10:50 PM

Sean Livingston

Reviewed By: *SL 6/28/21*

Chain of Custody

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

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
Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes No
6. Sufficient sample volume for indicated test(s)? Yes No
7. Are samples (except VOA and ONG) properly preserved? Yes No
8. Was preservative added to bottles? Yes No NA
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes No NA
10. Were any sample containers received broken? Yes No
11. Does paperwork match bottle labels? Yes No
 (Note discrepancies on chain of custody)
12. Are matrices correctly identified on Chain of Custody? Yes No
13. Is it clear what analyses were requested? Yes No
14. Were all holding times able to be met? Yes No
 (If no, notify customer for authorization.)

of preserved bottles checked for pH: *801*
 (<2 or >12 unless noted)
 Adjusted? *NO*
 Checked by: *SPA 6.28.21*

Special Handling (if applicable)

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

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

16. Additional remarks: *Filtered - OFF ~120 ml From CO1A (10F2) to make CO2A.*

Cooler Information

SPA 6.28.21

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	12.2	Good				

Chain-of-Custody Record

Turn-Around Time:

Client: Lee Ranch

Standard Rush

Project Name: Lee Ranch Groundwater

Mailing Address: PO Box 757 Grants, NM 87020

PO#: 453035065

Phone #: 505 285 3062

Email or Fax#: mnewman@peabodyenergy.com NYon@peabodyenergy.com

Project Manager: Naudiea Yon

QA/QC Package:

Standard

Accreditation:

NELAC

EDD (Type)

Az Compliance

Other

Sampler: Myron Newman

On Ice: Yes No

of Coolers: 1

Cooler Temp (including IPI): 12.2 ± 0 = 12.2 °C

Date

6/28/2021

Time

835

Matrix

WT

San Miguel Springs

WT

WT

WT

WT

WT

WT

WT

WT

WT

WT

WT

Container Type and #

Preservative Type

HEAL No. ZIDGEG3

001902

TPH:8015D(GRO / DRO / MRO)

8081 Pesticides/8082 PCB's

EDB (Method 504.1)

PAHs by 8310 or 8270SIMS

RCRA 8 Metals

Cl, F, Br, NO₃, NO₂, PO₄, SO₄

8260 (VOA)

8270 (Semi-VOA)

Total Coliform (Present/Absent)

Date: 6/28/2021

Relinquished by: Myron Newman / Naudiea Yon

Received by: SGC

Via: CDD

Date: 6/28/21 13:15

Remarks:

See The Attached Parameters List

Date:

Relinquished by:

Received by:

Date:

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



HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

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

Analytical Request

LR San Miguel Springs Additional Springs Parameters (2nd Quarter only):

Max: 32/yr.

Test for:	Hall Bottles
pH	(1) 500mL NP plastic
Conductivity	(1) 125mL HNO3 plastic, red label Filtered, 50% nitric acid, 2mL per sample (vials red dots)
Total Dissolved Solids	(1) 500mL HNO3 plastic, green label Unfiltered, 6N sodium hydroxide, .5mL per sample (vials green lids)
Dissolved Sodium	(1) 500mL NaOH plastic, red label Filtered, 50% nitric acid, 2mL per sample (vials red dots)
Dissolved Potassium	(1) 1L amber glass, white label .5mL 50% sulfuric acid (already in bottle)
Dissolved Calcium	(1) 125mL H2SO4 Plastic
Magnesium	(4) 1L HNO3 plastic
Sodium Adsorption Ratio	
Bicarbonate as CaCO3	
Carbonate as CaCO3	
Chloride	
Fluoride	
Sulfate	
Dissolved Nitrate	
Total Phenols	
Dissolved Aluminum	
Dissolved Arsenic	
Dissolved Barium	
Dissolved Boron	
Dissolved Cadmium	
Dissolved Chromium	
Dissolved Cobalt	
Dissolved Copper	
Total Cyanide	
Dissolved Iron	
Total Iron	
Dissolved Lead	
Dissolved Manganese	
Total Manganese	
Total Mercury	
Dissolved Molybdenum	
Dissolved Nickel	
Dissolved Selenium	
Dissolved Silver	
Dissolved Vanadium	
Dissolved Zinc	
Static Water Level	
Add:	

Hardness (by ICP) (mg eq CaCO3/L)

- Nitrite-N (mg/L)
- Gross Alpha (pCi/L)
- Gross Beta (pCi/L)
- Radium-226 (pCi/L)
- Radium-228 (pCi/L)