

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

April 28, 2022

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

RE: Lee Ranch Pit 8

OrderNo.: 2204007

Dear Naudiea Yon:

Hall Environmental Analysis Laboratory received 14 sample(s) on 3/31/2022 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

Andy Freeman Laboratory Manager 4901 Hawkins NE Albuquerque, NM 87109

Date Reported: 4/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co

Project: Lee Ranch Pit 8 2204007-001 Lab ID: Matrix: AQUEOUS Client Sample ID: Four Corner In Use Well Collection Date: 3/31/2022 8:10:00 AM Received Date: 3/31/2022 4:33:00 PM

Analyses	Result	RL	Qual Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: LRN
Fluoride	1.2	0.50	mg/L	5	4/1/2022 1:01:06 PM
Chloride	6.9	2.5	mg/L	5	4/1/2022 1:01:06 PM
Sulfate	190	2.5	mg/L	5	4/1/2022 1:01:06 PM
EPA METHOD 200.7: DISSOLVED METALS					Analyst: ELS
Aluminum	ND	0.020	mg/L	1	4/4/2022 10:50:10 AM
Barium	0.043	0.0020	mg/L	1	4/4/2022 10:50:10 AM
Boron	0.20	0.040	mg/L	1	4/4/2022 10:50:10 AM
Cadmium	ND	0.0020	mg/L	1	4/4/2022 10:50:10 AM
Calcium	40	1.0	mg/L	1	4/4/2022 10:50:10 AM
Chromium	ND	0.0060	mg/L	1	4/4/2022 10:50:10 AM
Cobalt	ND	0.0060	mg/L	1	4/4/2022 10:50:10 AM
Iron	0.34	0.020	* mg/L	1	4/4/2022 10:50:10 AM
Magnesium	24	1.0	mg/L	1	4/4/2022 10:50:10 AM
Manganese	0.0066	0.0020	mg/L	1	4/4/2022 10:50:10 AM
Molybdenum	ND	0.0080	mg/L	1	4/4/2022 10:50:10 AM
Nickel	ND	0.010	mg/L	1	4/4/2022 10:50:10 AM
Potassium	2.5	1.0	mg/L	1	4/4/2022 10:50:10 AM
Silver	ND	0.0050	mg/L	1	4/4/2022 10:50:10 AM
Sodium	130	5.0	mg/L	5	4/4/2022 10:51:27 AM
Vanadium	ND	0.050	mg/L	1	4/4/2022 10:50:10 AM
Zinc	0.073	0.010	mg/L	1	4/4/2022 10:50:10 AM
EPA METHOD 200.7: METALS					Analyst: ELS
Iron	0.49	0.050	* mg/L	1	4/7/2022 9:56:41 AM
Manganese	0.0070	0.0020	mg/L	1	4/7/2022 9:56:41 AM
EPA 200.8: DISSOLVED METALS					Analyst: bcv
Arsenic	ND	0.0010	mg/L	1	4/5/2022 3:48:05 PM
Copper	ND	0.0010	mg/L	1	4/5/2022 3:48:05 PM
Lead	ND	0.00050	mg/L	1	4/5/2022 3:48:05 PM
Selenium	ND	0.0010	mg/L	1	4/5/2022 3:48:05 PM
EPA METHOD 245.1: MERCURY					Analyst: VP
Mercury	ND	0.00020	mg/L	1	4/15/2022 12:36:47 PM
SODIUM ADSORPTION RATIO					Analyst: ELS
Sodium Absorption Ratio	3.8	0		1	4/12/2022 8:15:00 AM
TOTAL PHENOLICS BY SW-846 9067					Analyst: JPM
Phenolics	ND	2.5	µg/L	1	4/12/2022 8:57:00 AM
SM2510B: SPECIFIC CONDUCTANCE					Analyst: LRN

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

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

Qualifiers:

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

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits Р

Sample pH Not In Range

RL Reporting Limit Page 1 of 35

Analytical Report Lab Order 2204007 Date Reported: 4/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co **Project:** Lee Ranch Pit 8

Lab ID: 2204007-001

Client Sample ID: Four Corner In Use Well Collection Date: 3/31/2022 8:10:00 AM Received Date: 3/31/2022 4:33:00 PM

Analyses	Result	RL Qu	al Units Dl	Date Analyzed
SM2510B: SPECIFIC CONDUCTANCE				Analyst: LRN
Conductivity	900	10	µmhos/c 1	4/5/2022 2:51:14 PM
SM4500-H+B / 9040C: PH				Analyst: LRN
рН	8.08	ł	H pH units 1	4/5/2022 2:51:14 PM
SM2320B: ALKALINITY				Analyst: LRN
Bicarbonate (As CaCO3)	264.6	20.00	mg/L Ca 1	4/5/2022 2:51:14 PM
Carbonate (As CaCO3)	ND	2.000	mg/L Ca 1	4/5/2022 2:51:14 PM
Total Alkalinity (as CaCO3)	264.6	20.00	mg/L Ca 1	4/5/2022 2:51:14 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS				Analyst: KS
Total Dissolved Solids	593	20.0	* mg/L 1	4/12/2022 10:40:00 AM

Matrix: AQUEOUS

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

Qualifiers:

*

D

Value exceeds Maximum Contaminant Level. 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.			Date Reported: 4/28/2022				
CLIENT: Lee Ranch Coal Co	Client Sa	Client Sample ID: Four Corner In Use Well					
Project: Lee Ranch Pit 8	Collection Date: 3/31/2022 8:10:00 AM						
Lab ID: 2204007-002	Matrix: AQUEOUS	Receiv	Received Date: 3/31/2022 4:33:00 PM				
Analyses	Result	RL Qual	Units	DF	Date Analyzed		
EPA METHOD 300.0: ANIONS					Analyst: LRN		
Nitrogen, Nitrate (As N)	ND	0.10	mg/L	1	4/1/2022 1:26:50 PM		

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

Qualifiers:

*

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

H Holding times for preparation or analysis exceeded

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit
- S % Recovery outside of range due to dilution or matrix interference

Analyte detected in the associated Method Blank В

- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

RL Reporting Limit

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Lab Order 2204007

Hall Environmental Analysis Laboratory, Inc.					Lab Order 2204007 Date Reported: 4/28/2022			
CLIENT:Lee Ranch Coal CoProject:Lee Ranch Pit 8Lab ID:2204007-003	Matrix: AQUEOUS	Col		3/31/2	2022 9:38:00 AM 2022 4:33:00 PM			
Analyses	Result	RL (Qual Units	DF	Date Analyzed			
EPA METHOD 300.0: ANIONS					Analyst: LRN			
Fluoride	1.1	0.50	mg/L	5	4/1/2022 2:44:02 PM			
Chloride	ND	2.5	mg/L	5	4/1/2022 2:44:02 PM			
Sulfate	ND	2.5	mg/L	5	4/1/2022 2:44:02 PM			
EPA METHOD 200.7: DISSOLVED METAL	S				Analyst: ELS			
Aluminum	ND	0.020	mg/L	1	4/4/2022 10:52:55 AM			
Barium	0.070	0.0020	mg/L	1	4/4/2022 10:52:55 AM			
Boron	0.12	0.040	mg/L	1	4/4/2022 10:52:55 AM			
Cadmium	ND	0.0020	mg/L	1	4/4/2022 10:52:55 AM			
Calcium	1.7	1.0	mg/L	1	4/4/2022 10:52:55 AM			
Chromium	ND	0.0060	mg/L	1	4/4/2022 10:52:55 AM			
Cobalt	ND	0.0060	mg/L	1	4/4/2022 10:52:55 AM			
Iron	ND	0.020	mg/L	1	4/4/2022 10:52:55 AM			
Magnesium	ND	1.0	mg/L	1	4/4/2022 10:52:55 AM			
Manganese	ND	0.0020	mg/L	1	4/4/2022 10:52:55 AM			
Molybdenum	ND	0.0080	mg/L	1	4/4/2022 10:52:55 AM			
Nickel	ND	0.010	mg/L	1	4/4/2022 10:52:55 AM			
Potassium	1.1	1.0	mg/L	1	4/4/2022 10:52:55 AM			
Silver	ND	0.0050	mg/L	1	4/4/2022 10:52:55 AM			
Sodium Vanadium	140 ND	5.0	mg/L	5 1	4/4/2022 10:54:23 AM			
Zinc	0.14	0.050 0.010	mg/L mg/L	1	4/4/2022 10:52:55 AM 4/4/2022 10:52:55 AM			
	0.14	0.010	mg/∟	1				
EPA METHOD 200.7: METALS					Analyst: ELS			
Iron	0.33	0.050	* mg/L	1	4/7/2022 9:59:48 AM			
Manganese	0.0060	0.0020	mg/L	1	4/7/2022 9:59:48 AM			
EPA 200.8: DISSOLVED METALS					Analyst: bcv			
Arsenic	ND	0.0010	mg/L	1	4/5/2022 3:50:46 PM			
Copper	ND	0.0010	mg/L	1	4/5/2022 3:50:46 PM			
Lead	ND	0.00050	mg/L	1	4/5/2022 3:50:46 PM			
Selenium	ND	0.0010	mg/L	1	4/5/2022 3:50:46 PM			
EPA METHOD 245.1: MERCURY					Analyst: VP			
Mercury	ND	0.00020	mg/L	1	4/15/2022 12:38:55 PM			
SODIUM ADSORPTION RATIO					Analyst: ELS			
Sodium Absorption Ratio	26	0		1	4/12/2022 8:15:00 AM			
TOTAL PHENOLICS BY SW-846 9067					Analyst: JPM			
Phenolics	ND	2.5	µg/L	1	4/12/2022 8:57:00 AM			
SM2510B: SPECIFIC CONDUCTANCE					Analyst: LRN			
					,			

SM2510B: SPECIFIC CONDUCTANCE

Qualifiers:

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

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 в Analyte detected in the associated Method Blank

Е Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

RL Reporting Limit

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Lab Order 2204007

Date Reported: 4/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co

 Project:
 Lee Ranch Pit 8

 Lab ID:
 2204007-003

Client Sample ID: PLD2 Collection Date: 3/31/2022 9:38:00 AM Received Date: 3/31/2022 4:33:00 PM

Analyses	Result	RL Qua	l Units D	F Date Analyzed
SM2510B: SPECIFIC CONDUCTANCE				Analyst: LRN
Conductivity	610	10	µmhos/c 1	4/5/2022 3:36:24 PM
SM4500-H+B / 9040C: PH				Analyst: LRN
рН	9.43	*H	pH units 1	4/5/2022 3:36:24 PM
SM2320B: ALKALINITY				Analyst: LRN
Bicarbonate (As CaCO3)	221.2	20.00	mg/L Ca 1	4/5/2022 3:36:24 PM
Carbonate (As CaCO3)	89.76	2.000	mg/L Ca 1	4/5/2022 3:36:24 PM
Total Alkalinity (as CaCO3)	311.0	20.00	mg/L Ca 1	4/5/2022 3:36:24 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS				Analyst: KS
Total Dissolved Solids	371	20.0	mg/L 1	4/12/2022 10:40:00 AM

Matrix: AQUEOUS

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

Qualifiers:

*

D

Value exceeds Maximum Contaminant Level. 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.			Date Reported: 4/28/202				
CLIENT: Lee Ranch Coal Co		Client Sa	mple ID	:PLD2	Diss		
Project: Lee Ranch Pit 8	Collection Date: 3/31/2022 9:38:00 AM				022 9:38:00 AM		
Lab ID: 2204007-004	Matrix: AQUEOUS	Receive	Received Date: 3/31/2022 4:33:00 PM				
Analyses	Result	RL Qual	Units	DF	Date Analyzed		
EPA METHOD 300.0: ANIONS					Analyst: LRN		
Nitrogen, Nitrate (As N)	ND	0.50	mg/L	5	4/1/2022 3:09:46 PM		

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

Qualifiers:

*

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

- Н 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
- Analyte detected in the associated Method Blank в
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Lab Order 2204007

Hall Environmental Analysis Laboratory, Inc.				Lab Order 2204007 Date Reported: 4/28/2022		
CLIENT:Lee Ranch Coal CoProject:Lee Ranch Pit 8Lab ID:2204007-005	Matrix: AQUEOUS	Co	ollectio		: 3/31/2	022 9:15:00 AM 022 4:33:00 PM
Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: LRN
Fluoride	0.74	0.50		mg/L	5	4/1/2022 3:35:29 PM
Chloride	ND	2.5		mg/L	5	4/1/2022 3:35:29 PM
Sulfate	18	2.5		mg/L	5	4/1/2022 3:35:29 PM
EPA METHOD 200.7: DISSOLVED META	LS					Analyst: ELS
Aluminum	ND	0.020		mg/L	1	4/4/2022 10:55:49 AM
Barium	0.10	0.0020		mg/L	1	4/4/2022 10:55:49 AM
Boron	0.11	0.040		mg/L	1	4/4/2022 10:55:49 AM
Cadmium	ND	0.0020		mg/L	1	4/4/2022 10:55:49 AM
Calcium	1.9	1.0		mg/L	1	4/4/2022 10:55:49 AM
Chromium	ND	0.0060		mg/L	1	4/4/2022 10:55:49 AM
Cobalt	ND	0.0060		mg/L	1	4/4/2022 10:55:49 AM
Iron	ND	0.020		mg/L	1	4/4/2022 10:55:49 AM
Magnesium	ND	1.0		mg/L	1	4/4/2022 10:55:49 AM
Manganese	0.0046	0.0020		mg/L	1	4/4/2022 10:55:49 AM
Molybdenum	ND	0.0080		mg/L	1	4/4/2022 10:55:49 AM
Nickel	ND	0.010		mg/L	1	4/4/2022 10:55:49 AM
Potassium	ND	1.0		mg/L	1	4/4/2022 10:55:49 AM
Silver	ND	0.0050		mg/L	1	4/4/2022 10:55:49 AM
Sodium	120	5.0		mg/L	5	4/4/2022 10:57:20 AM
Vanadium 	ND	0.050		mg/L	1	4/4/2022 10:55:49 AM
Zinc	0.051	0.010		mg/L	1	4/4/2022 10:55:49 AM
EPA METHOD 200.7: METALS						Analyst: ELS
Iron	ND	0.050		mg/L	1	4/7/2022 10:07:53 AM
Manganese	0.0047	0.0020		mg/L	1	4/7/2022 10:07:53 AM
EPA 200.8: DISSOLVED METALS						Analyst: bcv
Arsenic	ND	0.0010		mg/L	1	4/5/2022 3:53:27 PM
Copper	ND	0.0010		mg/L	1	4/5/2022 3:53:27 PM
Lead	ND	0.00050		mg/L	1	4/5/2022 3:53:27 PM
Selenium	ND	0.0010		mg/L	1	4/5/2022 3:53:27 PM
EPA METHOD 245.1: MERCURY						Analyst: VP
Mercury	ND	0.00020		mg/L	1	4/20/2022 8:05:44 AM
SODIUM ADSORPTION RATIO						Analyst: ELS
Sodium Absorption Ratio	21	0			1	4/12/2022 8:15:00 AM
TOTAL PHENOLICS BY SW-846 9067						Analyst: JPM
Phenolics	ND	2.5		µg/L	1	4/12/2022 8:57:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN

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

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

Qualifiers:

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

Е Estimated value

RL

J Analyte detected below quantitation limits

Р Sample pH Not In Range

Reporting Limit

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Lab Order 2204007

Date Reported: 4/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co

 Project:
 Lee Ranch Pit 8

 Lab ID:
 2204007-005

Client Sample ID: PLD3 Collection Date: 3/31/2022 9:15:00 AM Received Date: 3/31/2022 4:33:00 PM

Analyses	Result	RL Qual	l Units	DF	Date Analyzed
SM2510B: SPECIFIC CONDUCTANCE					Analyst: LRN
Conductivity	530	10	µmhos/c	1	4/5/2022 3:55:55 PM
SM4500-H+B / 9040C: PH					Analyst: LRN
рН	8.59	*H	pH units	1	4/5/2022 3:55:55 PM
SM2320B: ALKALINITY					Analyst: LRN
Bicarbonate (As CaCO3)	239.2	20.00	mg/L Ca	1	4/5/2022 3:55:55 PM
Carbonate (As CaCO3)	9.600	2.000	mg/L Ca	1	4/5/2022 3:55:55 PM
Total Alkalinity (as CaCO3)	248.8	20.00	mg/L Ca	1	4/5/2022 3:55:55 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS					Analyst: KS
Total Dissolved Solids	341	20.0	mg/L	1	4/12/2022 10:40:00 AM

Matrix: AQUEOUS

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

Qualifiers:

*

D

Value exceeds Maximum Contaminant Level. 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 E	Hall Environmental Analysis Laboratory, Inc.			Date Reported: 4/28/2				
CLIENT:	Lee Ranch Coal Co		Client Sa	mple ID	:PLD3	Diss		
Project:	Lee Ranch Pit 8		Collection Date: 3/31/2022 9:15:00 AM					
Lab ID:	2204007-006	Matrix: AQUEOUS	Receiv	Received Date: 3/31/2022 4:33:00 PM				
Analyses		Result	RL Qual	Units	DF	Date Analyzed		
EPA ME	THOD 300.0: ANIONS					Analyst: LRN		
Nitrogen	n, Nitrate (As N)	ND	0.10	mg/L	1	4/1/2022 4:01:13 PM		

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

Qualifiers:

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

H Holding times for preparation or analysis exceeded

- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

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

- Analyte detected in the associated Method Blank В
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Lab Order 2204007

Date Reported: 4/28/2022

CLIENTE Les Derek Cost Co		CI :+ C	mult ID	. DI D 4			
CLIENT: Lee Ranch Coal Co	Client Sample ID: PLD4 Collection Date: 3/31/2022 10:04:00 AM						
Project: Lee Ranch Pit 8							
Lab ID: 2204007-007	Matrix: AQUEOUSReceived Date: 3/31/2022 4:33:00 PM						
Analyses	Result	RL Qual	Units	DF	Date Analyzed		
EPA METHOD 300.0: ANIONS					Analyst: LRN		
Fluoride	0.85	0.50	mg/L	5	4/1/2022 4:26:57 PM		
Chloride	ND	2.5	mg/L	5	4/1/2022 4:26:57 PM		
Sulfate	14	2.5	mg/L	5	4/1/2022 4:26:57 PM		
EPA METHOD 200.7: DISSOLVED METALS	5				Analyst: ELS		
Aluminum	ND	0.020	mg/L	1	4/4/2022 10:58:56 AM		
Barium	0.16	0.0020	mg/L	1	4/4/2022 10:58:56 AM		
Boron	0.12	0.040	mg/L	1	4/4/2022 10:58:56 AM		
Cadmium	ND	0.0020	mg/L	1	4/4/2022 10:58:56 AM		
Calcium	3.3	1.0	mg/L	1	4/4/2022 10:58:56 AM		
Chromium	ND	0.0060	mg/L	1	4/4/2022 10:58:56 AM		
Cobalt	ND	0.0060	mg/L	1	4/4/2022 10:58:56 AM		
Iron	0.026	0.020	mg/L	1	4/4/2022 10:58:56 AM		
Magnesium	ND	1.0	mg/L	1	4/4/2022 10:58:56 AM		
Manganese	0.0050	0.0020	mg/L	1	4/4/2022 10:58:56 AM		
Molybdenum	ND	0.0080	mg/L	1	4/4/2022 10:58:56 AM		
Nickel	ND	0.010	mg/L	1	4/4/2022 10:58:56 AM		
Potassium	1.1	1.0	mg/L	1	4/4/2022 10:58:56 AM		
Silver	ND	0.0050	mg/L	1	4/4/2022 10:58:56 AM		
Sodium	100	5.0	mg/L	5	4/4/2022 11:00:34 AM		
Vanadium	ND	0.050	mg/L	1	4/4/2022 10:58:56 AM		
	0.049	0.010	mg/L	1	4/4/2022 10:58:56 AM		
EPA METHOD 200.7: METALS	ND	0.050	···· · //	4	Analyst: ELS		
Iron	ND	0.050	mg/L	1	4/4/2022 10:27:03 AM		
Manganese	0.0048	0.0020	mg/L	1	4/4/2022 10:27:03 AM		
EPA 200.8: DISSOLVED METALS					Analyst: bcv		
Arsenic	ND	0.0010	mg/L	1	4/5/2022 4:28:20 PM		
Copper	ND	0.0010	mg/L	1	4/5/2022 4:28:20 PM		
Lead		0.00050	mg/L	1	4/5/2022 4:28:20 PM		
Selenium	ND	0.0010	mg/L	1	4/5/2022 4:28:20 PM		
EPA METHOD 245.1: MERCURY					Analyst: VP		
Mercury	ND	0.00020	mg/L	1	4/20/2022 8:07:54 AM		
SODIUM ADSORPTION RATIO					Analyst: ELS		
Sodium Absorption Ratio	13	0		1	4/12/2022 8:15:00 AM		
TOTAL PHENOLICS BY SW-846 9067					Analyst: JPM		
Phenolics	ND	2.5	µg/L	1	4/12/2022 8:57:00 AM		
SM2510B: SPECIFIC CONDUCTANCE			, 5		Analyst: LRN		

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

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

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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Lab Order 2204007

Date Reported: 4/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co

 Project:
 Lee Ranch Pit 8

 Lab ID:
 2204007-007

Client Sample ID: PLD4 Collection Date: 3/31/2022 10:04:00 AM Received Date: 3/31/2022 4:33:00 PM

Analyses	Result	RL Qua	l Units DF	Date Analyzed
SM2510B: SPECIFIC CONDUCTANCE				Analyst: LRN
Conductivity	460	10	µmhos/c 1	4/5/2022 4:10:21 PM
SM4500-H+B / 9040C: PH				Analyst: LRN
pH	8.39	н	pH units 1	4/5/2022 4:10:21 PM
SM2320B: ALKALINITY				Analyst: LRN
Bicarbonate (As CaCO3)	214.1	20.00	mg/L Ca 1	4/5/2022 4:10:21 PM
Carbonate (As CaCO3)	2.800	2.000	mg/L Ca 1	4/5/2022 4:10:21 PM
Total Alkalinity (as CaCO3)	216.9	20.00	mg/L Ca 1	4/5/2022 4:10:21 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS				Analyst: KS
Total Dissolved Solids	296	20.0	mg/L 1	4/12/2022 10:40:00 AM

Matrix: AQUEOUS

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

Qualifiers:

*

D

Value exceeds Maximum Contaminant Level. 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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Iall Environmental Analysis Laboratory, Inc.			Date Reported				
CLIENT: Lee Ranch Coal Co		Client Sa	mple ID	:PLD4	Diss		
Project: Lee Ranch Pit 8		Collection Date: 3/31/2022 10:04:00 AM					
Lab ID: 2204007-008	Matrix: AQUEOUS	Receiv	Received Date: 3/31/2022 4:33:00 PM				
Analyses	Result	RL Qual	Units	DF	Date Analyzed		
EPA METHOD 300.0: ANIONS					Analyst: LRN		
Nitrogen, Nitrate (As N)	ND	0.10	mg/L	1	4/1/2022 5:18:25 PM		

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

Qualifiers:

*

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

H Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

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

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit

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Lab Order 2204007

Hall Environmental Analysis Laboratory, Inc.						b Order 2204007 te Reported: 4/28/2022		
CLIENT: Lee Ranch Coal Co		Clie	ent Sa	mple ID	:PLD5			
Project: Lee Ranch Pit 8	Collection Date: 3/31/2022 8:46:00 A							
Lab ID: 2204007-009	Matrix: AQUEOUS	I	ed Date	te: 3/31/2022 4:33:00 PM				
Analyses	Result	RL	Qual	Units	DF	Date Analyzed		
EPA METHOD 300.0: ANIONS						Analyst: LRN		
Fluoride	0.60	0.50		mg/L	5	4/1/2022 5:44:11 PM		
Chloride	5.4	2.5		mg/L	5	4/1/2022 5:44:11 PM		
Sulfate	220	2.5		mg/L	5	4/1/2022 5:44:11 PM		
EPA METHOD 200.7: DISSOLVED META	LS					Analyst: ELS		
Aluminum	ND	0.020		mg/L	1	4/4/2022 11:08:29 AM		
Barium	0.017	0.0020		mg/L	1	4/4/2022 11:08:29 AM		
Boron	0.13	0.040		mg/L	1	4/4/2022 11:08:29 AM		
Cadmium	ND	0.0020		mg/L	1	4/4/2022 11:08:29 AM		
Calcium	47	1.0		mg/L	1	4/4/2022 11:08:29 AM		
Chromium	ND	0.0060		mg/L	1	4/4/2022 11:08:29 AM		
Cobalt	ND	0.0060		mg/L	1	4/4/2022 11:08:29 AM		
Iron	0.48	0.020	*	mg/L	1	4/4/2022 11:08:29 AM		
Magnesium	31	1.0		mg/L	1	4/4/2022 11:08:29 AM		
Manganese	0.014	0.0020		mg/L	1	4/4/2022 11:08:29 AM		
Molybdenum	ND	0.0080		mg/L	1	4/4/2022 11:08:29 AM		
Nickel	ND	0.010		mg/L	1	4/4/2022 11:08:29 AM		
Potassium	2.2	1.0		mg/L	1	4/4/2022 11:08:29 AM		
Silver	ND	0.0050		mg/L	1	4/4/2022 11:08:29 AM		
Sodium Vanadium	91 ND	1.0		mg/L	1	4/4/2022 11:08:29 AM		
Zinc	ND 0.059	0.050 0.010		mg/L mg/L	1 1	4/4/2022 11:08:29 AM 4/4/2022 11:08:29 AM		
EPA METHOD 200.7: METALS	0.000	0.010		ing/∟	•	Analyst: ELS		
Iron	0.78	0.25	*	mg/L	5	4/4/2022 11:51:28 AM		
Manganese	0.78	0.23		mg/L	1	4/4/2022 11:31:28 AM		
EPA 200.8: DISSOLVED METALS		0.0020		<u>g</u> , _	·	Analyst: bcv		
Arsenic	ND	0.0010		mg/L	1	4/5/2022 4:33:43 PM		
Copper	ND	0.0010		mg/L	1	4/5/2022 4:33:43 PM		
Lead		0.00050		mg/L	1	4/5/2022 4:33:43 PM		
Selenium	ND	0.0010		mg/L	1	4/5/2022 4:33:43 PM		
EPA METHOD 245.1: MERCURY				5		Analyst: VP		
Mercury	ND	0.00020		mg/L	1	4/20/2022 8:10:01 AM		
SODIUM ADSORPTION RATIO					-	Analyst: ELS		
Sodium Absorption Ratio	2.6	0			1	4/12/2022 8:15:00 AM		
TOTAL PHENOLICS BY SW-846 9067	2.0	0			•	Analyst: JPN		
Phenolics	ND	2.5		µg/L	1	4/25/2022 8:26:00 AM		
SM2510B: SPECIFIC CONDUCTANCE		2.0		r 3' -	•	Analyst: LRN		
SWIZSTUD. SPECIFIC CUNDUCTANCE						Analysi. LRP		

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

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

Qualifiers:

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

Е Estimated value

J Analyte detected below quantitation limits Р

Sample pH Not In Range RL Reporting Limit

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Lab Order 2204007

Date Reported: 4/28/2022

CLIENT: Lee Ranch Coal Co

Project: Lee Ranch Pit 8 Lab ID: 2204007-009

Client Sample ID: PLD5 Collection Date: 3/31/2022 8:46:00 AM Received Date: 3/31/2022 4:33:00 PM

Result	RL Q	ual	Units	DF	Date Analyzed
					Analyst: LRN
840	10		µmhos/c	: 1	4/5/2022 4:23:09 PM
					Analyst: LRN
7.85		н	pH units	1	4/5/2022 4:23:09 PM
					Analyst: LRN
223.3	20.00		mg/L Ca	1	4/5/2022 4:23:09 PM
ND	2.000		mg/L Ca	1	4/5/2022 4:23:09 PM
223.3	20.00		mg/L Ca	1	4/5/2022 4:23:09 PM
					Analyst: KS
554	20.0	*	mg/L	1	4/12/2022 10:40:00 AM
	840 7.85 223.3 ND 223.3	840 10 7.85 223.3 20.00 ND 2.000 223.3 20.00	840 10 7.85 H 223.3 20.00 ND 2.000 223.3 20.00	840 10 μmhos/c 7.85 H pH units 223.3 20.00 mg/L Ca ND 2.000 mg/L Ca 223.3 20.00 mg/L Ca	840 10 μmhos/c 1 7.85 H pH units 1 223.3 20.00 mg/L Ca 1 ND 2.000 mg/L Ca 1 223.3 20.00 mg/L Ca 1

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. Sample Diluted Due to Matrix

- D Н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

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

- в Analyte detected in the associated Method Blank
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Hall Environmental Analy	Environmental Analysis Laboratory, Inc.			Date Reported: 4/28/202				
CLIENT: Lee Ranch Coal Co		Client Sample ID: PLD5 Diss						
Project: Lee Ranch Pit 8		Collectio	on Date	: 3/31/2	022 8:46:00 AM			
Lab ID: 2204007-010	Matrix: AQUEOUS	Receive	ed Date	: 3/31/2	022 4:33:00 PM			
Analyses	Result	RL Qual	Units	DF	Date Analyzed			
EPA METHOD 300.0: ANIONS					Analyst: LRN			
Nitrogen, Nitrate (As N)	ND	0.10	mg/L	1	4/1/2022 6:09:56 PM			

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

Qualifiers:

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

Н 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

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit

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Date Reported: 4/28/2022

CLIENT: Lee Ranch Coal Co		Clie	ent Sai	nple ID	Pit 8 V	Wells		
Project: Lee Ranch Pit 8	Collection Date: 3/31/2022 10:30:00 AM							
Lab ID: 2204007-011	Matrix: AQUEOUS Received Date: 3/31/2022 4:33:00 PM							
Analyses	Result	RL	Qual	Units	DF	Date Analyzed		
EPA METHOD 300.0: ANIONS						Analyst: LRN		
Fluoride	0.68	0.10		mg/L	1	4/1/2022 6:35:40 PM		
Chloride	1.5	0.50		mg/L	1	4/1/2022 6:35:40 PM		
Sulfate	12	0.50		mg/L	1	4/1/2022 6:35:40 PM		
EPA METHOD 200.7: DISSOLVED METAL	S					Analyst: ELS		
Aluminum	ND	0.020		mg/L	1	4/4/2022 11:11:39 AM		
Barium	0.19	0.0020		mg/L	1	4/4/2022 11:11:39 AM		
Boron	0.11	0.040		mg/L	1	4/4/2022 11:11:39 AM		
Cadmium	ND	0.0020		mg/L	1	4/4/2022 11:11:39 AM		
Calcium	3.9	1.0		mg/L	1	4/4/2022 11:11:39 AM		
Chromium	ND	0.0060		mg/L	1	4/4/2022 11:11:39 AM		
Cobalt	ND	0.0060		mg/L	1	4/4/2022 11:11:39 AM		
Iron	0.020	0.020		mg/L	1	4/4/2022 11:11:39 AM		
Magnesium	ND	1.0		mg/L	1	4/4/2022 11:11:39 AM		
Manganese	ND	0.0020		mg/L	1	4/4/2022 11:11:39 AM		
Molybdenum	ND	0.0080		mg/L	1	4/4/2022 11:11:39 AM		
Nickel	ND	0.010		mg/L	1	4/4/2022 11:11:39 AM		
Potassium	1.5	1.0		mg/L	1	4/4/2022 11:11:39 AM		
Silver	ND	0.0050		mg/L	1	4/4/2022 11:11:39 AM		
Sodium Vanadium	110 ND	5.0 0.050		mg/L	5 1	4/4/2022 11:13:18 AM		
Zinc	0.10	0.050		mg/L mg/L	1	4/4/2022 11:11:39 AM 4/4/2022 11:11:39 AM		
EPA METHOD 200.7: METALS	0.10	0.010		mg/∟	1	Analyst: ELS		
Iron	0.055	0.050		mg/L	1	4/7/2022 10:11:09 AM		
Manganese	0.0034	0.0020		mg/L	1	4/7/2022 10:11:09 AM		
EPA 200.8: DISSOLVED METALS				-		Analyst: bcv		
Arsenic	ND	0.0010		mg/L	1	4/5/2022 4:36:24 PM		
Copper	0.011	0.0010		mg/L	1	4/5/2022 4:36:24 PM		
Lead	ND	0.00050		mg/L	1	4/5/2022 4:36:24 PM		
Selenium	ND	0.0010		mg/L	1	4/5/2022 4:36:24 PM		
EPA METHOD 245.1: MERCURY						Analyst: VP		
Mercury	ND	0.00020		mg/L	1	4/20/2022 8:12:08 AM		
SODIUM ADSORPTION RATIO						Analyst: ELS		
Sodium Absorption Ratio	13	0			1	4/12/2022 8:15:00 AM		
TOTAL PHENOLICS BY SW-846 9067						Analyst: JPN		
Phenolics	ND	2.5		µg/L	1	4/25/2022 8:26:00 AM		
SM2510B: SPECIFIC CONDUCTANCE						Analyst: LRN		

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

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

Qualifiers:

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

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits Р

Sample pH Not In Range

RL Reporting Limit

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Hall Environmental Analysis Laboratory, Inc.

Hall Environmental Analysis Laboratory, Inc.

Date Reported: 4/28/2022

CLIENT: Lee Ranch Coal Co **Project:** Lee Ranch Pit 8

Lab ID: 2204007-011 Client Sample ID: Pit 8 Wells Collection Date: 3/31/2022 10:30:00 AM Received Date: 3/31/2022 4:33:00 PM

Analyses	Result	RL Qual	Units DF	Date Analyzed
SM2510B: SPECIFIC CONDUCTANCE				Analyst: LRN
Conductivity	490	10	µmhos/c 1	4/5/2022 6:35:22 PM
SM4500-H+B / 9040C: PH				Analyst: LRN
рН	8.77	*H	pH units 1	4/5/2022 6:35:22 PM
SM2320B: ALKALINITY				Analyst: LRN
Bicarbonate (As CaCO3)	218.5	20.00	mg/L Ca 1	4/5/2022 6:35:22 PM
Carbonate (As CaCO3)	18.48	2.000	mg/L Ca 1	4/5/2022 6:35:22 PM
Total Alkalinity (as CaCO3)	237.0	20.00	mg/L Ca 1	4/5/2022 6:35:22 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS				Analyst: KS
Total Dissolved Solids	306	20.0	mg/L 1	4/12/2022 10:40:00 AM

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

- н Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- PQL Practical Quanitative Limit

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

Analyte detected in the associated Method Blank в

- Е Estimated value
- J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit Page 17 of 35

Hall Environmental Analy	vironmental Analysis Laboratory, Inc.				te Reported: 4/28/2022
CLIENT: Lee Ranch Coal Co		Client Sam	ole ID	: Pit 8 V	Vells Diss
Project: Lee Ranch Pit 8		Collection	Date	: 3/31/2	022 10:30:00 AM
Lab ID: 2204007-012	Matrix: AQUEOUS	Received	Date	: 3/31/2	022 4:33:00 PM
Analyses	Result	RL Qual U	J nits	DF	Date Analyzed
EPA METHOD 300.0: ANIONS					Analyst: LRN
Nitrogen, Nitrate (As N)	ND	0.10	mg/L	1	4/1/2022 7:01:24 PM

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

Qualifiers:

*

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

Н 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

Analyte detected in the associated Method Blank в

Е Estimated value

- J Analyte detected below quantitation limits
- Р Sample pH Not In Range

RL Reporting Limit

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CLIENT: Lee Ranch Coal Co	Client Sample ID: Dr. Arroyo							
Project: Lee Ranch Pit 8	Collection Date: 3/31/2022 10:51:00 AM							
Lab ID: 2204007-013	Matrix: AQUEOUS	e: 3/31/2022 4:33:00 PM						
Analyses	Result	RL (Qual Units	DF	Date Analyzed			
EPA METHOD 300.0: ANIONS					Analyst: LRN			
Fluoride	0.54	0.10	mg/L	1	4/1/2022 7:52:52 PM			
Chloride	0.96	0.50	mg/L	1	4/1/2022 7:52:52 PM			
Sulfate	11	0.50	mg/L	1	4/1/2022 7:52:52 PM			
EPA METHOD 200.7: DISSOLVED METALS	3				Analyst: ELS			
Aluminum	ND	0.020	mg/L	1	4/4/2022 11:14:57 AM			
Barium	0.16	0.0020	mg/L	1	4/4/2022 11:14:57 AM			
Boron	0.092	0.040	mg/L	1	4/4/2022 11:14:57 AM			
Cadmium	ND	0.0020	mg/L	1	4/4/2022 11:14:57 AM			
Calcium	2.7	1.0	mg/L	1	4/4/2022 11:14:57 AM			
Chromium	ND	0.0060	mg/L	1	4/4/2022 11:14:57 AM			
Cobalt	ND	0.0060	mg/L	1	4/4/2022 11:14:57 AM			
Iron	ND	0.020	mg/L	1	4/4/2022 11:14:57 AM			
Magnesium	ND	1.0	mg/L	1	4/4/2022 11:14:57 AM			
Manganese	0.0034	0.0020	mg/L	1	4/4/2022 11:14:57 AM			
Molybdenum	ND	0.0080	mg/L	1	4/4/2022 11:14:57 AM			
Nickel	ND	0.010	mg/L	1	4/4/2022 11:14:57 AM			
Potassium Silver	1.2 ND	1.0 0.0050	mg/L mg/L	1 1	4/4/2022 11:14:57 AM 4/4/2022 11:14:57 AM			
Solum	89	1.0	mg/∟ mg/L	1	4/4/2022 11:14:57 AM			
Vanadium	ND	0.050	mg/L	1	4/4/2022 11:14:57 AM			
Zinc	0.065	0.010	mg/L	1	4/4/2022 11:14:57 AM			
EPA METHOD 200.7: METALS			0		Analyst: ELS			
Iron	ND	0.050	mg/L	1	4/4/2022 10:35:50 AM			
Manganese	0.0053	0.0020	mg/L	1	4/4/2022 10:35:50 AM			
EPA 200.8: DISSOLVED METALS					Analyst: bcv			
Arsenic	ND	0.0010	mg/L	1	4/5/2022 4:44:28 PM			
Copper	0.0045	0.0010	mg/L	1	4/5/2022 4:44:28 PM			
Lead	ND	0.00050	mg/L	1	4/5/2022 4:44:28 PM			
Selenium	ND	0.0010	mg/L	1	4/5/2022 4:44:28 PM			
EPA METHOD 245.1: MERCURY					Analyst: VP			
Mercury	ND	0.00020	mg/L	1	4/20/2022 8:16:33 AM			
SODIUM ADSORPTION RATIO			-		Analyst: ELS			
Sodium Absorption Ratio	13	0		1	4/12/2022 8:15:00 AM			
TOTAL PHENOLICS BY SW-846 9067					Analyst: JPM			
Phenolics	ND	2.5	μg/L	1	4/25/2022 8:26:00 AM			
SM2510B: SPECIFIC CONDUCTANCE			r-3/		Analyst: LRN			

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

ND Not Detected at the Reporting Limit

PQL Practical Quanitative Limit

Qualifiers:

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

Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range

RL Reporting Limit

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Date Reported: 4/28/2022

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co **Project:** Lee Ranch Pit 8

Lab ID: 2204007-013

Client Sample ID: Dr. Arroyo Collection Date: 3/31/2022 10:51:00 AM Received Date: 3/31/2022 4:33:00 PM

Analyses	Result	RL Qual	l Units DF	Date Analyzed
SM2510B: SPECIFIC CONDUCTANCE				Analyst: LRN
Conductivity	390	10	µmhos/c 1	4/5/2022 6:50:07 PM
SM4500-H+B / 9040C: PH				Analyst: LRN
рН	8.34	н	pH units 1	4/5/2022 6:50:07 PM
SM2320B: ALKALINITY				Analyst: LRN
Bicarbonate (As CaCO3)	186.2	20.00	mg/L Ca 1	4/5/2022 6:50:07 PM
Carbonate (As CaCO3)	ND	2.000	mg/L Ca 1	4/5/2022 6:50:07 PM
Total Alkalinity (as CaCO3)	187.4	20.00	mg/L Ca 1	4/5/2022 6:50:07 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS				Analyst: KS
Total Dissolved Solids	251	20.0	mg/L 1	4/12/2022 10:40:00 AM

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. Sample Diluted Due to Matrix

- D Sample Diluted Due to MatrixH 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 Analy	Environmental Analysis Laboratory, Inc.			Lab Order 2204007 Date Reported: 4/28/202				
CLIENT: Lee Ranch Coal Co		Client Sar	nple ID	:Dr. Ar	royo Diss			
Project: Lee Ranch Pit 8		Collectio	on Date	: 3/31/2	022 10:51:00 AM			
Lab ID: 2204007-014	Matrix: AQUEOUS	Receive	ed Date	: 3/31/2	022 4:33:00 PM			
Analyses	Result	RL Qual	Units	DF	Date Analyzed			
EPA METHOD 300.0: ANIONS					Analyst: LRN			
Nitrogen, Nitrate (As N)	0.10	0.10	mg/L	1	4/1/2022 8:18:35 PM			

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

Qualifiers:

*

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

Н 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

- Analyte detected in the associated Method Blank в
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Pace Analytical® ANALYTICAL REPORT April 14, 2022

Hall Environmental Analysis Laboratory

Sample Delivery Group: Samples Received:

L1478609 04/05/2022

Report To:

Description:

Project Number:

Andy Freeman 4901 Hawkins NE Albuquerque, NM 87109

Тс Ss Cn Sr ʹQc Gl AI Sc

Entire Report Reviewed By: John V Haulins

John Hawkins Project Manager

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

Pace Analytical National

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

ACCOUNT: Hall Environmental Analysis Laboratory

SDG: L1478609

DATE/TIME. 04/14/22 09:25

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¹Cp ²Tc ³Ss ⁴Cn ⁵Sr ⁶Qc ⁷Gl ⁸Al ⁹Sc

SAMPLE SUMMARY

2204007-001E FOUR CORNERS IN USE WELL L1	478609-01	GW	Collected by	Collected date/time 03/31/22 08:10	Received da 04/05/22 09	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1843967	1	04/07/22 23:19	04/08/22 15:53	LDT	Mt. Juliet, TN
2204007-003E PLD2 L1478609-02 GW			Collected by	Collected date/time 03/31/22 09:38	Received da 04/05/22 09	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1843967	1	04/07/22 23:19	04/08/22 15:56	LDT	Mt. Juliet, TN
2204007-005E PLD3 L1478609-03 GW			Collected by	Collected date/time 03/31/22 09:15	Received da 04/05/22 09	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1843967	1	04/07/22 23:19	04/08/22 15:59	LDT	Mt. Juliet, TN
2204007-007E PLD4 L1478609-04 GW			Collected by	Collected date/time 03/31/22 10:04	Received da 04/05/22 09	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1843967	1	04/07/22 23:19	04/08/22 16:01	LDT	Mt. Juliet, TN
2204007-009E PLD5 L1478609-05 GW			Collected by	Collected date/time 03/31/22 08:46	Received da 04/05/22 09	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1843967	1	04/07/22 23:19	04/08/22 16:04	LDT	Mt. Juliet, TN
2204007-011E PIT 8 WELLS L1478609-06 GW			Collected by	Collected date/time 03/31/22 10:30	Received date/time 04/05/22 09:30	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1843967	1	04/07/22 23:19	04/08/22 16:05	LDT	Mt. Juliet, TN
2204007-013E DR. ARROYO L1478609-07 GW			Collected by	Collected date/time 03/31/22 10:51	Received da 04/05/22 09	
Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2016	WG1843969	1	04/10/22 13:01	04/13/22 10:17	LDT	Mt. Juliet, TN

SDG: L1478609 DATE/TIME: 04/14/22 09:25 Ср

²Tc

Ss

Cn

Sr

Qc

GI

ΆI

Sc

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 V Howkins

John Hawkins Project Manager



Collected date/time: 03/31/22 08:10

SAMPLE RESULTS - 01

							Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		 2
Cyanide	ND		0.00500	1	04/08/2022 15:53	WG1843967	Tc

	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		 2
Cyanide	ND		0.00500	1	04/08/2022 15:56	WG1843967	Tc

	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Cyanide	ND		0.00500	1	04/08/2022 15:59	WG1843967	⁻ Tc

	 Result	Qualifier	RDL	Dilution	Analysis	Batch	 Ср
Analyte	mg/l		mg/l		date / time		2
Cyanide	ND	<u>J6</u>	0.00500	1	04/08/2022 16:01	WG1843967	Tc

	 Result	Qualifier	RDL	Dilution	Analysis	Batch	 Ср
Analyte	mg/l		mg/l		date / time		2
Cyanide	ND		0.00500	1	04/08/2022 16:04	WG1843967	Tc

							Cn
	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Cyanide	ND		0.00500	1	04/08/2022 16:05	WG1843967	Tc

	Result	Qualifier	RDL	Dilution	Analysis	Batch	Ср
Analyte	mg/l		mg/l		date / time		2
Cyanide	ND		0.00500	1	04/13/2022 10:17	WG1843969	Tc

WG1843967

Wet Chemistry by Method 4500CN E-2016

QUALITY CONTROL SUMMARY L1478609-01,02,03,04,05,06

Method Blank (MB)

(MB) R3779093-1 04	(MB) R3779093-1 04/08/22 15:47										
	MB Result	MB Qualifier	MB MDL	MB RDL							
Analyte	mg/l		mg/l	mg/l							
Cyanide	U		0.00180	0.00500							

Тс

Ss

Cn

Sr

L1478595-05 Original Sample (OS) • Duplicate (DUP)

(OS) L1478595-05 04/08	/22 15:51 • (DUP) R3779093-3	04/08/22	2 15:52		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	ND	1	0.000		20

L1478609-03 Original Sample (OS) • Duplicate (DUP)

L1478609-03 Orig	jinal Sample	(OS) • Du	plicate	(DUP)		
(OS) L1478609-03 04/08	3/22 15:59 • (DUF	P) R3779093-6	6 04/08/2	2 16:00		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3779093-2 04/08	(LCS) R3779093-2 04/08/22 15:48											
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier							
Analyte	mg/l	mg/l	%	%								
Cyanide	0.100	0.103	103	87.1-120								

L1478609-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1478609-01 04/08/22 15:53 • (MS) R3779093-4 04/08/22 15:54 • (MSD) R3779093-5 04/08/22 15:55												
Spike Amount Original Result MS Result MS Result MS Rec. MSD Rec. Dilution Rec. Limits MS Qualifier MSD Qualifier RPD RPD Limits												
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide 0.100 ND 0.0901 0.0971 90.1 97.1 1 90.0-110 7.48 20												

L1478609-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1478609-04	04/08/22 16:01 • (MS)	R3779093-7 0	04/08/22 16:0	2 • (MSD) R377	9093-8 04/0	8/22 16:03							
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%	
Cyanide	0.100	ND	0.0892	0.0893	89.2	89.3	1	90.0-110	<u>J6</u>	<u>J6</u>	0.112	20	
	ACCOUNT:			PRC	DJECT:			SDG:		DATE	/TIME:		PAGE:
Hall Environmental Analysis Laboratory							L1	478609		04/14/22 09:25			12 of 16

WG1843969

Wet Chemistry by Method 4500CN E-2016

QUALITY CONTROL SUMMARY L1478609-07

Method Blank (MB)

(MB) R3780476-1 04	4/13/22 10:13			
	MB Result	MB Qualifier	MB MDL	MB RDL
Analyte	mg/l		mg/l	mg/l
Cyanide	U		0.00180	0.00500

Тс

Ss

Cn

Sr

L1478609-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1478609-07 04/13/2	22 10:17 • (DUP)	R3780476-3	04/13/22 1	0:18						
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits				
Analyte	mg/l	mg/l		%		%				
Cyanide	ND	ND	1	2.72		20				

L1478620-01 Original Sample (OS) • Duplicate (DUP)

L1478620-01 C	riginal Sample	(OS) • Dup	plicate (DUP)		
(OS) L1478620-01 0	4/13/22 10:19 • (DUP)	R3780476-4	04/13/22 1	0:20		
	Original Result	DUP Result	Dilution	DUP RPD	DUP Qualifier	DUP RPD Limits
Analyte	mg/l	mg/l		%		%
Cyanide	ND	ND	1	0.000		20

Laboratory Control Sample (LCS)

(LCS) R3780476-2 04/13	/22 10:14				
	Spike Amount	LCS Result	LCS Rec.	Rec. Limits	LCS Qualifier
Analyte	mg/l	mg/l	%	%	
Cyanide	0.100	0.0946	94.6	87.1-120	

L1478844-03 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1478844-03 04/13/2	22 10:34 • (MS)	R3780476-5 0	4/13/22 10:35	• (MSD) R37804	476-6 04/13/22	2 10:38						
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%
Cyanide	0.100	ND	0.102	0.0982	102	98.2	1	90.0-110			3.80	20

L1478844-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1478844-04	04/13/22 10:39 • (MS) I	R3780476-7 0	4/13/22 10:40) • (MSD) R3780	476-8 04/13/	/22 10:41							
	Spike Amount	Original Result	MS Result	MSD Result	MS Rec.	MSD Rec.	Dilution	Rec. Limits	MS Qualifier	MSD Qualifier	RPD	RPD Limits	
Analyte	mg/l	mg/l	mg/l	mg/l	%	%		%			%	%	
Cyanide	0.100	ND	0.100	0.0992	100	99.2	1	90.0-110			0.803	20	
	ACCOUNT:			PRC	DJECT:			SDG:		DATE	/TIME:		PAGE:
Hall Environmental Analysis Laboratory							L1478609 04/14/2			04/14/22	2 09:25		13 of 16

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

AI

Sc

SDG: L1478609

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
lowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO00356
Kentucky ¹⁶	KY90010	South Carolina	84004002
Kentucky ²	16	South Dakota	n/a
Louisiana	AI30792	Tennessee ¹⁴	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.

SDG: L1478609

HALL C ENVIRONMENTAL ANALYSIS LABORATORY	HAIN OF CUST	FODY	RECORD PAGE	5 OF: 1	Hall Environmental Analysis Laboratory 4901 Hawkins NE Albuquerque, NM 87109 TEL: 505-345-3975 FAX: 505-345-4107 Website: www.hallenvironmental.com
SUB CONTRATOR Pace TN COMPANY ADDRESS 12065 Lebanon Rd CITY, STATE, ZIP Mt. Juliet, TN 37122	PACE TN		PHONE. ACCOUNT #	(800) 767-5859	FAX: (615) 758-5859 EMAIL
ITEM SAMPLE CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION	#CONTAINER	LIM78 609 ANALYTICAL COMMENTS
1 2204007-001E Four Corner In Use Well		Aqueous	3/31/2022 8:10:00 AM	1 Total Cyanide	70
2 2204007-003E PLD2		Aqueous	3/31/2022 9:38:00 AM	1 Total Cyanide	- 22
3 2204007-005E PLD3		Aqueous	3/31/2022 9:15:00 AM	1 Total Cyanide	-03
4 2204007-007E PLD4		Aqueous	3/31/2022 10:04:00 AM	1 Total Cyanide	-04
5 2204007-009E PLD5		Aqueous	3/31/2022 8:46:00 AM	1 Total Cyanide	-05
6 2204007-011E Pit 8 Wells		Aqueous	3/31/2022 10:30:00 AM	1 Total Cyanide	-60
7 2204007-013E Dr. Arroyo	500AMBHDP	Aqueous	3/31/2022 10:51:00 AM	1 Total Cyanide	-05
			COC :	Seal Present/Intact: Signed/Accurate:	Pecceipt Checklist Y N If Applicable N VOA Zero Headspace: Y N N Pres.Correct/Check: Y N
SPECIAL INSTRUCTIONS / COMMENTS:	1. pp		Corr Suff:	ect bottles used: icient volume sent: Screen <0.5 mR/hr:	J. N
Please include the LAB ID and the CLIENT SAMPLE ID on al	l final reports. Please e-r	nail results	s to lab@hallenvironme	ntal.com. Please return a	Il coolers and blue ice. Thank you.
Relinquished By: CMC Date: 4/1/2022 Time: Rel	ceived By falling	Stough "	at 45/22 Time 6930	HARDCOP	REPORT TRANSMITTAL DESIRED: Y (extra cost) FAX EMAIL ONLINE
Relinquished By Date Time Re	ceived By	T	Date. Time	HARDOP	FOR LAB USE ONLY
Relinquished By Date Time Re	eived By:	E	Date Time		
TAT: Standard 🎾 RUSH	Next BD 2n	d BD	3rd BD	Temp of samp Comments	Siles C Attempt to Cool ?
	T	RA7.	-2.3+0=23	5528594	170591

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

Lee Ranch Coal Co

WO#: 2204007

28-Apr-22

Project: Lee F	Ranch Pit 8									
Sample ID: MB	Samp	Туре: МЕ	BLK	Tes	tCode: E	PA Method	200.7: Metals			
Client ID: PBW	Bate	ch ID: A8	6961	R	unNo: 8	6961				
Prep Date:	Analysis	Date: 4/	4/2022	S	eqNo: 3	072800	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								
admium	ND	0.0020								
alcium	ND	1.0								
hromium	ND	0.0060								
obalt	ND	0.0060								
on	ND	0.050								
lagnesium	ND	1.0								
langanese	ND	0.0020								
olybdenum	ND	0.0080								
ickel	ND	0.010								
otassium	ND	1.0								
ilver	ND	0.0050								
odium	ND	1.0								
anadium	ND	0.050								
inc	ND	0.010								
Sample ID: LLLCS	Samp	Type: LC	SLL	Test	tCode: E	PA Method	200.7: Metals			
Client ID: BatchQC	Bate	ch ID: A8	6961	R	unNo: 8	6961				
Prep Date:	Analysis	Date: 4/	4/0000	· · · · ·			Linitor mar/l			
		Duto: 4	4/2022	c	eqNo: 3	072802	Units: mg/L			
Analyte	Result	PQL		SPK Ref Val	SeqNo: 3 %REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
	-						_	%RPD	RPDLimit	Qual
luminum	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
luminum arium oron	Result	PQL 0.020	SPK value 0.01000	SPK Ref Val 0	%REC 128	LowLimit 50	HighLimit 150	%RPD	RPDLimit	Qual
luminum arium oron admium	Result ND ND	PQL 0.020 0.0030 0.040 0.0020	SPK value 0.01000 0.002000 0.04000 0.002000	SPK Ref Val 0 0	%REC 128 99.3	LowLimit 50 50 50 50	HighLimit 150 150	%RPD	RPDLimit	Qual
luminum arium oron admium alcium	Result ND ND ND ND ND	PQL 0.020 0.0030 0.040 0.0020 1.0	SPK value 0.01000 0.002000 0.04000 0.002000 0.5000	SPK Ref Val 0 0 0 0 0	%REC 128 99.3 99.0 80.6 99.6	LowLimit 50 50 50 50 50	HighLimit 150 150 150 150 150	%RPD	RPDLimit	Qual
luminum arium oron admium alcium hromium	Result ND ND ND ND 0.0062	PQL 0.020 0.0030 0.040 0.0020 1.0 0.0060	SPK value 0.01000 0.002000 0.04000 0.002000 0.5000 0.006000	SPK Ref Val 0 0 0 0	%REC 128 99.3 99.0 80.6	LowLimit 50 50 50 50 50 50 50	HighLimit 150 150 150 150 150 150	%RPD	RPDLimit	Qual
uminum arium oron admium alcium hromium	Result ND ND ND ND ND	PQL 0.020 0.0030 0.040 0.0020 1.0	SPK value 0.01000 0.002000 0.04000 0.002000 0.5000	SPK Ref Val 0 0 0 0 0	%REC 128 99.3 99.0 80.6 99.6	LowLimit 50 50 50 50 50	HighLimit 150 150 150 150 150	%RPD	RPDLimit	Qual
uminum arium oron admium alcium hromium obalt on	Result ND ND ND ND 0.0062 ND ND	PQL 0.020 0.0030 0.040 0.0020 1.0 0.0060 0.0060 0.050	SPK value 0.01000 0.002000 0.04000 0.002000 0.5000 0.006000 0.006000 0.02000	SPK Ref Val 0 0 0 0 0 0 0	%REC 128 99.3 99.0 80.6 99.6 103 90.3 110	LowLimit 50 50 50 50 50 50 50 50	HighLimit 150 150 150 150 150 150 150 150	%RPD	RPDLimit	Qual
luminum arium oron admium alcium hromium obalt on	Result ND ND ND ND 0.0062 ND ND ND	PQL 0.020 0.0030 0.040 0.0020 1.0 0.0060 0.0060 0.050 1.0	SPK value 0.01000 0.002000 0.04000 0.002000 0.5000 0.006000 0.02000 0.5000	SPK Ref Val 0 0 0 0 0 0 0 0	%REC 128 99.3 99.0 80.6 99.6 103 90.3 110 101	LowLimit 50 50 50 50 50 50 50 50 50	HighLimit 150 150 150 150 150 150 150 150 150	%RPD	RPDLimit	Qual
luminum arium oron admium alcium hromium obalt on lagnesium langanese	Result ND ND ND ND 0.0062 ND ND ND ND	PQL 0.020 0.0030 0.040 0.0020 1.0 0.0060 0.0060 0.050 1.0 0.0020	SPK value 0.01000 0.002000 0.04000 0.002000 0.006000 0.006000 0.02000 0.5000 0.002000	SPK Ref Val 0 0 0 0 0 0 0 0 0 0	%REC 128 99.3 99.0 80.6 99.6 103 90.3 110 101 88.4	LowLimit 50 50 50 50 50 50 50 50 50 50	HighLimit 150 150 150 150 150 150 150 150 150 150	%RPD	RPDLimit	Qual
luminum arium oron admium alcium chromium cobalt on lagnesium langanese lolybdenum	Result ND ND ND ND 0.0062 ND ND ND ND ND ND	PQL 0.020 0.0030 0.040 0.0020 1.0 0.0060 0.050 1.0 0.0020 0.0080	SPK value 0.01000 0.002000 0.04000 0.002000 0.5000 0.006000 0.02000 0.5000	SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0	%REC 128 99.3 99.0 80.6 99.6 103 90.3 110 101 88.4 68.3	LowLimit 50 50 50 50 50 50 50 50 50 50 50 50	HighLimit 150 150 150 150 150 150 150 150 150 150	%RPD	RPDLimit	Qual
luminum arium oron admium alcium chromium cobalt on lagnesium langanese lolybdenum	Result ND ND ND ND 0.0062 ND ND ND ND ND ND ND	PQL 0.020 0.0030 0.040 0.0020 1.0 0.0060 0.050 1.0 0.0020 0.0080 0.010	SPK value 0.01000 0.002000 0.04000 0.5000 0.006000 0.006000 0.02000 0.002000 0.002000 0.008000 0.005000	SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0	%REC 128 99.3 99.0 80.6 99.6 103 90.3 110 101 88.4 68.3 97.0	LowLimit 50 50 50 50 50 50 50 50 50 50	HighLimit 150 150 150 150 150 150 150 150 150 150	%RPD	RPDLimit	Qual
Analyte Juminum Barium Boron Cadmium Calcium Chromium Cobalt Con Magnesium Manganese Molybdenum Jickel Potassium	Result ND ND ND ND 0.0062 ND ND ND ND ND ND	PQL 0.020 0.0030 0.040 0.0020 1.0 0.0060 0.050 1.0 0.0020 0.0080	SPK value 0.01000 0.002000 0.04000 0.5000 0.006000 0.006000 0.02000 0.5000 0.002000 0.002000	SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	%REC 128 99.3 99.0 80.6 99.6 103 90.3 110 101 88.4 68.3	LowLimit 50 50 50 50 50 50 50 50 50 50 50 50	HighLimit 150 150 150 150 150 150 150 150 150 150	%RPD	RPDLimit	Qual
luminum larium loron admium acloium chromium cobalt on lagnesium langanese lolybdenum lickel lotassium	Result ND ND ND ND 0.0062 ND ND ND ND ND ND ND	PQL 0.020 0.0030 0.040 0.0020 1.0 0.0060 0.050 1.0 0.0020 0.0080 0.010	SPK value 0.01000 0.002000 0.04000 0.5000 0.006000 0.006000 0.02000 0.002000 0.002000 0.008000 0.005000	SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	%REC 128 99.3 99.0 80.6 99.6 103 90.3 110 101 88.4 68.3 97.0	LowLimit 50 50 50 50 50 50 50 50 50 50 50 50	HighLimit 150 150 150 150 150 150 150 150 150 150	%RPD	RPDLimit	Qual
Juminum Jarium Boron Sadmium Salcium Shromium Sobalt Sobalt Ton Magnesium Manganese Molybdenum Jickel	Result ND ND ND ND 0.0062 ND ND ND ND ND ND ND ND ND	PQL 0.020 0.0030 0.040 0.0020 1.0 0.0060 0.050 1.0 0.0020 0.0080 0.010 1.0	SPK value 0.01000 0.02000 0.04000 0.002000 0.006000 0.006000 0.02000 0.002000 0.002000 0.008000 0.005000 0.5000	SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	%REC 128 99.3 99.0 80.6 99.6 103 90.3 110 101 88.4 68.3 97.0 107	LowLimit 50 50 50 50 50 50 50 50 50 50 50 50 50	HighLimit 150 150 150 150 150 150 150 150 150 150	%RPD	RPDLimit	Qual

Qualifiers:

Client:

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

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

^{*} Value exceeds Maximum Contaminant Level.

B Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

SampType: LCSLL

Analysis Date: 4/4/2022

Batch ID: A86961

Lee Ranch Coal Co

Lee Ranch Pit 8

WO#: 2204007 28-Apr-22

Qual

Qual S

RPDLimit

RPDLimit

							5	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD
Zinc	0.012	0.010	0.01000	0	120	50	150	
Sample ID: LCS	Samp	Туре: LC	S	Test	tCode: El	PA Method	200.7: Metals	
Client ID: LCSW	Bate	ch ID: A8	6961	R	RunNo: 8	6961		
Prep Date:	Analysis	Date: 4/	4/2022	S	SeqNo: 3	072804	Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD
Aluminum	0.58	0.020	0.5000	0	116	85	115	
Barium	0.48	0.0030	0.5000	0	96.9	85	115	
Boron	0.51	0.040	0.5000	0	102	85	115	
Cadmium	0.48	0.0020	0.5000	0	95.1	85	115	
Calcium	47	1.0	50.00	0	93.8	85	115	
Chromium	0.48	0.0060	0.5000	0	96.3	85	115	
Cobalt	0.47	0.0060	0.5000	0	94.8	85	115	
Iron	0.51	0.050	0.5000	0	102	85	115	
Magnesium	48	1.0	50.00	0	95.4	85	115	
Manganese	0.48	0.0020	0.5000	0	96.2	85	115	
Molybdenum	0.49	0.0080	0.5000	0	98.6	85	115	
Nickel	0.47	0.010	0.5000	0	93.5	85	115	
Potassium	47	1.0	50.00	0	94.6	85	115	
Silver	0.096	0.0050	0.1000	0	96.4	85	115	
Sodium	48	1.0	50.00	0	96.6	85	115	
Vanadium	0.50	0.050	0.5000	0	99.7	85	115	
Zinc	0.49	0.010	0.5000	0	98.8	85	115	
Sample ID: 2204007-007CMS	Samp	Туре: М	6	Tes	tCode: El	PA Method	200.7: Metals	
Client ID: PLD4	Bate	ch ID: A8	6961	R	RunNo: 8	6961		
Prep Date:	Analysis	Date: 4/	4/2022	S	SeqNo: 3	072853	Units: mg/L	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD
Iron	0.52	0.050	0.5000	0.03292	97.7	70	130	
Manganese	0.50	0.0020	0.5000	0.004770	98.2	70	130	

TestCode: EPA Method 200.7: Metals

Units: mg/L

RunNo: 86961

SeqNo: 3072802

Sample ID: 2204007-007CMSD SampType: MSD TestCode: EPA Method 200.7: Metals Client ID: PLD4 Batch ID: A86961 RunNo: 86961 Prep Date: Analysis Date: 4/4/2022 SeqNo: 3072854 Units: mg/L SPK value SPK Ref Val %REC HighLimit %RPD RPDLimit Analyte Result PQL LowLimit Qual 0.55 0.050 0.5000 0.03292 104 70 130 5.58 20 Iron 70 Manganese 0.50 0.0020 0.5000 0.004770 98.7 130 0.520 20

Qualifiers:

Client:

Project:

Prep Date:

Sample ID: LLLCS

Client ID: BatchQC

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 PQL

- Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- Analyte detected in the associated Method Blank в

Е Estimated value

J Analyte detected below quantitation limits Р

Sample pH Not In Range

RL Reporting Limit Page 23 of 35

RPDLimit

Qual

QC SUMMARY REPORT	
Hall Environmental Analysis Laboratory, Inc	2.

WO#: 2204007

Client: Lee Ranch Coal Co **Project:** Lee Ranch Pit 8 Sample ID: 2204007-009CMS SampType: MS TestCode: EPA Method 200.7: Metals Client ID: PLD5 Batch ID: A86961 RunNo: 86961 Prep Date: Analysis Date: 4/4/2022 SeqNo: 3072856 Units: mg/L SPK value SPK Ref Val %REC HiahLimit %RPD **RPDLimit** Analvte Result PQL LowLimit Qual Manganese 0.52 0.0020 0.5000 0.01421 101 70 130 Sample ID: 2204007-009CMSD SampType: MSD TestCode: EPA Method 200.7: Metals Client ID: PLD5 Batch ID: A86961 RunNo: 86961 Prep Date: Analysis Date: 4/4/2022 SeqNo: 3072857 Units: mg/L Analyte SPK value SPK Ref Val %REC %RPD RPDLimit Result PQL LowLimit HighLimit Qual Manganese 0.51 0.0020 0.5000 0.01421 98.3 70 130 2.89 20 Sample ID: 2204007-009CMS SampType: MS TestCode: EPA Method 200.7: Metals Client ID: PLD5 Batch ID: A86961 RunNo: 86961 Prep Date: Analysis Date: 4/4/2022 SeqNo: 3072905 Units: mg/L Analyte Result POL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD **RPDLimit** Qual 3.2 0.25 2.500 0.7772 97.9 70 130 Iron Sample ID: 2204007-009CMSD SampType: MSD TestCode: EPA Method 200.7: Metals Client ID: PLD5 Batch ID: A86961 RunNo: 86961 Prep Date: Analysis Date: 4/4/2022 SeqNo: 3072906 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 3.5 0.25 2.500 0.7772 130 20 Iron 109 70 7.89 Sample ID: MB-66677 SampType: MBLK TestCode: EPA Method 200.7: Metals Client ID: PBW Batch ID: 66677 RunNo: 87067 Prep Date: 4/6/2022 Analysis Date: 4/7/2022 SeqNo: 3077619 Units: mg/L Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual ND 0.050 Iron ND 0.0020 Manganese Sample ID: LLLCS-66677 SampType: LCSLL TestCode: EPA Method 200.7: Metals Client ID: BatchQC Batch ID: 66677 RunNo: 87067 Prep Date: 4/6/2022 Analysis Date: 4/7/2022 SeqNo: 3077621 Units: mg/L SPK value SPK Ref Val %REC HighLimit %RPD RPDLimit Qual Analyte Result PQL LowLimit ND 0.050 134 50 150 Iron 0.02000 0 Manganese 0.0021 0.0020 0.002000 0 105 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 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

WO#: **2204007**

28-Apr-22

Client: Project:	Lee Ran Lee Ran	ich Coal Co ich Pit 8)								
Sample ID: LCS-66677 SampType: LCS					Tes	tCode: EF	PA Method	200.7: Metals	i		
Client ID: LCS	v	Bato	h ID: 666	677	F	lunNo: 87	7067				
Prep Date: 4/6/	2022	Analysis	Date: 4/	7/2022	S	eqNo: 3	077623	Units: mg/L			
Analyte		Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron		0.51	0.050	0.5000	0	102	85	115			
Manganese		0.48	0.0020	0.5000	0	96.4	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 25 of 35

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: 2204007 28-Apr-22

Client:Lee Ranch Coal CoProject:Lee Ranch Pit 8

Sample ID: MB	Samp	Туре: МЕ	BLK	Test	TestCode: EPA Method 200.7: Dissolved Metals						
Client ID: PBW	Bate	ch ID: A8	6961	R	RunNo: 86961						
Prep Date:	Analysis	Date: 4/	4/2022	S	eqNo: 30	072912	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									
Vickel	ND	0.010									
Potassium	ND	1.0									
Silver	ND	0.0050									
Sodium	ND	1.0									
/anadium	ND	0.050									
Zinc	ND	0.010									
Zinc Sample ID: LLLCS			SLL	Test	Code: EF	PA Method	200.7: Dissol ⁹	ved Metal	s		
	Samp	0.010			Code: EF		200.7: Dissol	ved Metal	s		
Sample ID: LLLCS Client ID: BatchQC	Samp Bato	0.010 Type: LC	6961	R		6961	200.7: Dissol Units: mg/L	ved Metal	S		
Sample ID: LLLCS Client ID: BatchQC Prep Date:	Samp Bato	0.010 Type: LC ch ID: A8	6961 4/2022	R	unNo: 86	6961		ved Metal %RPD	s RPDLimit	Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte	Samp Bato Analysis	0.010 Type: LC ch ID: A8 Date: 4/4	6961 4/2022	R	unNo: 86 eqNo: 36	6961 072913	Units: mg/L			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Aluminum	Samp Bato Analysis Result	0.010 Type: LC ch ID: A8 Date: 4/4 PQL	6961 4/2022 SPK value	R S SPK Ref Val	unNo: 86 eqNo: 36 %REC	5961 072913 LowLimit	Units: mg/L HighLimit			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Aluminum Barium	Samp Bato Analysis Result ND	0.010 Type: LC ch ID: A8 Date: 4/ PQL 0.020	6961 4/2022 SPK value 0.01000	R S SPK Ref Val 0	unNo: 86 eqNo: 30 %REC 128	5961 072913 LowLimit 50	Units: mg/L HighLimit 150			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Aluminum Barium Boron	Samp Bato Analysis Result ND ND	0.010 Type: LC ch ID: A8 Date: 4/4 PQL 0.020 0.0020	6961 4/2022 SPK value 0.01000 0.002000	R S SPK Ref Val 0 0	unNo: 86 eqNo: 36 <u>%REC</u> 128 99.3	5961 072913 LowLimit 50 50	Units: mg/L HighLimit 150 150			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date:	Samp Bato Analysis Result ND ND ND	0.010 Type: LC ch ID: A8 Date: 4/ PQL 0.020 0.0020 0.040	6961 4/2022 SPK value 0.01000 0.002000 0.04000	R SPK Ref Val 0 0 0	unNo: 86 eqNo: 36 <u>%REC</u> 128 99.3 99.0	5961 072913 LowLimit 50 50 50	Units: mg/L HighLimit 150 150 150			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Aluminum Barium Boron Cadmium Calcium	Samp Bate Analysis Result ND ND ND ND	0.010 Type: LC ch ID: A8 Date: 4/ PQL 0.020 0.0020 0.040 0.0020	6961 4/2022 SPK value 0.01000 0.002000 0.04000 0.002000	R SPK Ref Val 0 0 0 0	unNo: 86 eqNo: 36 <u>%REC</u> 128 99.3 99.0 80.6	5961 072913 LowLimit 50 50 50 50	Units: mg/L HighLimit 150 150 150 150			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Aluminum Barium Boron Cadmium	Samp Bate Analysis Result ND ND ND ND ND	0.010 Type: LC th ID: A8 Date: 4/ PQL 0.020 0.0020 0.0020 0.0020 1.0	6961 4/2022 SPK value 0.01000 0.002000 0.04000 0.002000 0.5000	R SPK Ref Val 0 0 0 0 0 0	unNo: 86 eqNo: 30 %REC 128 99.3 99.0 80.6 99.6	5961 572913 LowLimit 50 50 50 50 50 50	Units: mg/L HighLimit 150 150 150 150 150			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Aluminum Barium Boron Cadmium Calcium Chromium	Samp Bate Analysis Result ND ND ND ND 0.0062	0.010 Type: LC ch ID: A8 Date: 4/ PQL 0.020 0.0020 0.0020 0.0020 1.0 0.0060	6961 4/2022 SPK value 0.01000 0.002000 0.04000 0.002000 0.5000 0.006000	R SPK Ref Val 0 0 0 0 0 0 0 0	unNo: 86 eqNo: 30 %REC 128 99.3 99.0 80.6 99.6 103	5961 072913 LowLimit 50 50 50 50 50 50 50	Units: mg/L HighLimit 150 150 150 150 150 150			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Aluminum Barium Barium Cadmium Cadmium Calcium Chromium Cobalt ron	Samp Bato Analysis Result ND ND ND ND 0.0062 ND	0.010 Type: LC ch ID: A8 Date: 4/4 PQL 0.020 0.0020 0.040 0.0020 1.0 0.0060 0.0060	6961 4/2022 SPK value 0.01000 0.002000 0.04000 0.002000 0.5000 0.006000 0.006000	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0	unNo: 86 eqNo: 30 <u>%REC</u> 128 99.3 99.0 80.6 99.6 103 90.3	5961 072913 LowLimit 50 50 50 50 50 50 50 50	Units: mg/L HighLimit 150 150 150 150 150 150 150			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Aluminum Barium Barium Cadmium Cadmium Calcium Chromium Cobalt ron Magnesium	Samp Bato Analysis Result ND ND ND ND ND 0.0062 ND 0.022	0.010 Type: LC ch ID: A8 Date: 4/ PQL 0.020 0.040 0.0020 1.0 0.0060 0.0060 0.020	6961 4/2022 SPK value 0.01000 0.002000 0.04000 0.002000 0.5000 0.006000 0.006000 0.02000	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0	unNo: 86 eqNo: 30 %REC 128 99.3 99.0 80.6 99.6 103 90.3 110	5961 772913 LowLimit 50 50 50 50 50 50 50 50 50 50	Units: mg/L HighLimit 150 150 150 150 150 150 150 150			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Aluminum Barium Barium Cadmium Cadmium Calcium Chromium Cobalt ron Magnesium Manganese	Samp Bate Analysis Result ND ND ND ND 0.0062 ND 0.0022 ND	0.010 Type: LC ch ID: A8 Date: 4/ PQL 0.020 0.040 0.0020 1.0 0.0060 0.0060 0.020 1.0	6961 4/2022 SPK value 0.01000 0.002000 0.002000 0.006000 0.006000 0.02000 0.02000 0.5000	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	unNo: 86 reqNo: 30 %REC 128 99.3 99.0 80.6 99.6 103 90.3 110 101	5961 772913 LowLimit 50 50 50 50 50 50 50 50 50 50	Units: mg/L HighLimit 150 150 150 150 150 150 150 150 150			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Auminum Barium Boron Cadmium Calcium Chromium Cobalt ron Magnesium Manganese Molybdenum	Samp Bate Analysis Result ND ND ND ND 0.0062 ND 0.0062 ND 0.022 ND ND	0.010 Type: LC ch ID: A8 Date: 4/ PQL 0.020 0.040 0.0020 1.0 0.0060 0.0060 0.0060 1.0 0.020 1.0 0.020	6961 4/2022 SPK value 0.01000 0.002000 0.04000 0.002000 0.006000 0.006000 0.02000 0.5000 0.002000	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	unNo: 86 eqNo: 30 %REC 128 99.3 99.0 80.6 99.6 103 90.3 110 101 88.4	5961 572913 LowLimit 50 50 50 50 50 50 50 50 50 50 50 50 50	Units: mg/L HighLimit 150 150 150 150 150 150 150 150 150 150			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Aluminum Barium Barium Cadmium Calcium Chromium Cobalt	Samp Bate Analysis Result ND ND ND ND 0.0062 ND 0.0062 ND 0.022 ND ND ND ND	0.010 Type: LC ch ID: A8 Date: 4/ PQL 0.020 0.0020 0.0020 1.0 0.0060 0.0060 0.0060 1.0 0.0020 1.0 0.0020 0.0020 0.0020	6961 4/2022 SPK value 0.01000 0.002000 0.04000 0.002000 0.006000 0.006000 0.02000 0.5000 0.002000 0.002000	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	unNo: 86 eqNo: 36 %REC 128 99.3 99.0 80.6 99.6 103 90.3 110 101 88.4 68.3	5961 572913 LowLimit 50 50 50 50 50 50 50 50 50 50 50 50 50	Units: mg/L HighLimit 150 150 150 150 150 150 150 150 150 150			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Aluminum Barium Barium Cadmium Calcium Chromium Cobalt ron Magnesium Manganese Molybdenum Vickel Potassium	Samp Bate Analysis Result ND ND ND 0.0062 ND 0.0062 ND 0.022 ND ND ND ND ND	0.010 Type: LC th ID: A8 Date: 4/ PQL 0.020 0.0020 0.0020 1.0 0.0060 0.0020 1.0 0.0060 0.020 1.0 0.0020 0.020 0.0020 0.0020	6961 4/2022 SPK value 0.01000 0.002000 0.04000 0.002000 0.006000 0.006000 0.02000 0.002000 0.002000 0.008000 0.005000	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	unNo: 86 eqNo: 36 %REC 128 99.3 99.0 80.6 99.6 103 90.3 110 101 88.4 68.3 97.0	5961 772913 LowLimit 50 50 50 50 50 50 50 50 50 50	Units: mg/L HighLimit 150 150 150 150 150 150 150 150 150 150			Qual	
Sample ID: LLLCS Client ID: BatchQC Prep Date: Analyte Aluminum Barium Boron Cadmium Calcium Chromium Cobalt ron Wagnesium Wanganese Wolybdenum Vickel	Samp Bate Analysis Result ND ND ND ND 0.0062 ND 0.0062 ND 0.022 ND ND ND ND ND	0.010 Type: LC ch ID: A8 Date: 4/ PQL 0.020 0.0020 0.0020 1.0 0.0060 0.0060 0.0020 1.0 0.0020 1.0 0.0020 0.0020 0.0020 0.0020 0.0020 0.0020 1.0 0.0020 0.0020 1.0 0.0020 0.0020 1.0 0.0020 1.0 0.0020 1.0 0.0020 1.0 0.0020 1.0 0.0020 0.0020 1.0 0.0020 1.0 0.0020 1.0 0.0020 0.0020 1.0 0.0020 1.0 0.0020 1.0 0.0020 1.0 0.0020 1.0 0.0020 1.0 0.0020 1.0 0.0020 1.0 0.0020 1.0 0.0020 1.0 0.0020	6961 4/2022 SPK value 0.01000 0.002000 0.04000 0.002000 0.006000 0.006000 0.02000 0.002000 0.002000 0.002000 0.005000 0.005000 0.5000	R SPK Ref Val 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	unNo: 86 eqNo: 30 %REC 128 99.3 99.0 80.6 99.6 103 90.3 110 101 88.4 68.3 97.0 107	5961 D72913 LowLimit 50 50 50 50 50 50 50 50 50 50	Units: mg/L HighLimit 150 150 150 150 150 150 150 150 150 150			Qual	

Qualifiers:

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

E Estimated value

В

J Analyte detected below quantitation limits

Analyte detected in the associated Method Blank

P Sample pH Not In Range

^{*} Value exceeds Maximum Contaminant Level.

	ator y, me.
Lee Ranch Coal Co	

Project: Le	e Ranch Pit 8									
Sample ID: LLLCS	SampTy	pe: LC	SLL	Test	tCode: El	PA Method	200.7: Dissol	ved Meta	s	
Client ID: BatchQC	Batch	D: A8	6961	R	RunNo: 8	6961				
Prep Date:	Analysis Da	te: 4/	4/2022	S	SeqNo: 3	072913	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Zinc	0.012	0.010	0.01000	0	120	50	150			
Sample ID: LCS	SampTy	pe: LC	S	Tes	tCode: El	PA Method	200.7: Dissol	ved Meta	s	
Client ID: LCSW	Batch	D: A8	6961	R	RunNo: 8	6961				
Prep Date:	Analysis Da	te: 4/	4/2022	S	SeqNo: 3	072914	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	0.48 0	.0020	0.5000	0	96.9	85	115			
Boron	0.51	0.040	0.5000	0	102	85	115			
Cadmium	0.48 0	.0020	0.5000	0	95.1	85	115			
Calcium	47	1.0	50.00	0	93.8	85	115			
Chromium	0.48 0	.0060	0.5000	0	96.3	85	115			
Cobalt	0.47 0	.0060	0.5000	0	94.8	85	115			
ron	0.51	0.020	0.5000	0	102	85	115			
Magnesium	48	1.0	50.00	0	95.4	85	115			
Manganese	0.48 0	.0020	0.5000	0	96.2	85	115			
Molybdenum	0.49 0	.0080	0.5000	0	98.6	85	115			
Nickel	0.47	0.010	0.5000	0	93.5	85	115			
Potassium	47	1.0	50.00	0	94.6	85	115			
Silver	0.096 0	.0050	0.1000	0	96.4	85	115			
Sodium	48	1.0	50.00	0	96.6	85	115			
Vanadium	0.50	0.050	0.5000	0	99.7	85	115			
Zinc	0.49	0.010	0.5000	0	98.8	85	115			

Qualifiers:

Client:

- * 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

28-Apr-22

WO#: 2204007

QC SUMMARY REPORT	
Hall Environmental Analysis Laboratory, Inc.	

WO#:	2204007
	20 4

28-Apr-22

Client:		Lee Ranch C	Coal C	0								
Project:		Lee Ranch F	Pit 8									
Sample ID:	MR		Somr			Tos	tCodo: El	DV 200 8- L	Dissolved Met	ale		
Client ID:						TestCode: EPA 200.8: Dissolved Metals RunNo: 87015						
	FDW	۸.							linito, ma/l			
Prep Date:		A	alysis	Date: 4			SeqNo: 3	0/46/4	Units: mg/L			
Analyte		F	Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic			ND ND	0.0010								
Copper Lead			ND	0.0010								
Selenium			ND	0.00000								
Sample ID:	LCSLL		Samp	Type: L	SLL	Tes	tCode: El	PA 200.8: [Dissolved Met	als		
Client ID:	Batch	SC	Bat	ch ID: A	37015	F	RunNo: 8	7015				
Prep Date:		Ar	nalysis	Date: 4	/5/2022	S	SeqNo: 3	074675	Units: mg/L			
Analyte		F	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic			ND	0.0010	0.001000	0	95.9	50	150			
Copper		0	.0011	0.0010	0.001000	0	106	50	150			
Lead			00053	0.00050	0.0005000	0	106	50	150			
Selenium		0	.0012	0.0010	0.001000	0	118	50	150			
Sample ID:	LCS		Samp	оТуре: L(cs	Tes	tCode: El	PA 200.8: [Dissolved Met	als		
Client ID:	LCSW		Bat	ch ID: A	37015	F	RunNo: 8	7015				
Prep Date:		Ar	nalysis	Date: 4	/5/2022	S	SeqNo: 3	074676	Units: mg/L			
Analyte		F	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic			0.025	0.0010	0.02500	0	102	85	115			
Copper			0.027	0.0010	0.02500	0	108	85	115			
Lead			0.013	0.00050	0.01250	0	105	85	115			
Selenium			0.026	0.0010	0.02500	0	103	85	115			
Sample ID:	220400	07-013DMSLL	Samp	оТуре: М	S	TestCode: EPA 200.8: Dissolved Metals						
Client ID:	Dr. Arr	оуо	Bat	ch ID: A	37015	F	RunNo: 8	7015				
Prep Date:		Ar	nalysis	Date: 4	/5/2022	5	SeqNo: 3	074707	Units: mg/L			
Analyte			Result	PQL		SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic			0.030	0.0010		0	118	70	130			
Copper			0.030	0.0010		0.004484	103	70	130			
Lead				0.00050		0	94.6	70	130			
Selenium			0.031	0.0010	0.02500	0	123	70	130			
Sample ID:	220400	7-013DMSDL	Samp	Туре: М	SD	Tes	tCode: El	PA 200.8: [Dissolved Met	als		
Client ID:	Dr. Arr	оуо	Bat	ch ID: A	37015	RunNo: 87015						
Prep Date:		Ar	nalysis	Date: 4	/5/2022	S	SeqNo: 3	074708	Units: mg/L			
Analyte		F	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

Н Holding times for preparation or analysis exceeded

ND Not Detected at the Reporting Limit PQL Practical Quanitative Limit

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

Е Estimated value

J Analyte detected below quantitation limits

Р Sample pH Not In Range Page 28 of 35

WO#: 2204007 28-Apr-22

Client:Lee Ranch Coal CoProject:Lee Ranch Pit 8

Sample ID: 2204007-013DMS	DL Samp	Type: MS	D	Tes	tCode: EF	PA 200.8: I	Dissolved Met	als		
Client ID: Dr. Arroyo	Bat	ch ID: A8	7015	R	RunNo: 87	7015				
Prep Date:	Analysis	Date: 4/	5/2022	S	SeqNo: 30	074708	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.029	0.0010	0.02500	0	115	70	130	2.87	20	
Copper	0.029	0.0010	0.02500	0.004484	98.9	70	130	3.84	20	
Lead	0.012	0.00050	0.01250	0	92.7	70	130	2.07	20	
Selenium	0.029	0.0010	0.02500	0	117	70	130	4.44	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 interference
- B Analyte detected in the associated Method Blank
- E Estimated value
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Limit

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QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#:	2204007
	28 4

28-Apr-22

Client: Project:	Lee Ranc Lee Ranc									
Sample ID:	MB-66868	SampType: I	MBLK	Tes	tCode: El	PA Method	245.1: Mercu	ry		
Client ID:	PBW	Batch ID:	66868	F	RunNo: 8	7278				
Prep Date:	4/15/2022	Analysis Date:	4/15/2022	ç	SeqNo: 3	086429	Units: mg/L			
Analyte		Result PQI	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND 0.0002	20							
Sample ID:	LCSLL-66868	SampType: I	LCSLL	Tes	tCode: El	PA Method	245.1: Mercu	ry		
Client ID:	BatchQC	Batch ID:	66868	F	RunNo: 8	7278				
Prep Date:	4/15/2022	Analysis Date:	4/15/2022	S	SeqNo: 3	086430	Units: mg/L			
Analyte		Result PQI	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND 0.0002	0.0001500	0	104	50	150			
Sample ID:	LCS-66868	SampType: I	LCS	Tes	tCode: El	PA Method	245.1: Mercu	ry		
Client ID:	LCSW	Batch ID:	66868	F	RunNo: 8	7278				
Prep Date:	4/15/2022	Analysis Date:	4/15/2022	S	SeqNo: 3	086431	Units: mg/L			
Analyte		Result PQI	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0050 0.0002	0.005000	0	101	85	115			
Sample ID:	MB-66909	SampType: I	MBLK	Tes	tCode: El	PA Method	245.1: Mercu	ry		
Client ID:	PBW	Batch ID:	66909	F	RunNo: 8	7356				
Prep Date:	4/18/2022	Analysis Date:	4/20/2022	S	SeqNo: 3	089945	Units: mg/L			
Analyte		Result PQI	L SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND 0.0002	20							
Sample ID:	LCSLL-66909	SampType: I	LCSLL	Tes	tCode: El	PA Method	245.1: Mercu	ry		
Client ID:	BatchQC	Batch ID:	66909	F	RunNo: 8	7356				
Prep Date:	4/18/2022	Analysis Date:	4/20/2022	S	SeqNo: 3	089946	Units: mg/L			
Analyte		Result PQI	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		ND 0.0002	0.0001500	0	84.4	50	150			
Sample ID:	LCS-66909	SampType: I	LCS	Tes	tCode: El	PA Method	245.1: Mercu	ry		
Client ID:	LCSW	Batch ID:	66909	F	RunNo: 8	7356				
Prep Date:	4/18/2022	Analysis Date:	4/20/2022	S	SeqNo: 3	089947	Units: mg/L			
Analyte		Result PQI	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury		0.0049 0.0002	0.005000	0	97.3	85	115			

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

- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- В Analyte detected in the associated Method Blank

Е Estimated value

J

Analyte detected below quantitation limits Sample pH Not In Range Р

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#:	2204007
	20 4

Client: Project:	Lee Ranch Coal C Lee Ranch Pit 8	Со								
Sample ID: MB	Sam	pType: m l	blk	Tes	tCode: EF	PA Method	300.0: Anions	5		
Client ID: PBW	Ва	tch ID: R8	6958	F	lunNo: 8	6958				
Prep Date:	Analysis	s Date: 4	/1/2022	S	eqNo: 3	072704	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	Sam	pType: Ics	6	Tes	tCode: EF	PA Method	300.0: Anions	6		
Client ID: LCSW	Ba	tch ID: R	86958	F	tunNo: 8	6958				
Prep Date:	Analysis	s Date: 4,	/1/2022	S	eqNo: 3	072705	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	104	90	110			
Chloride	4.7	0.50	5.000	0	94.9	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			
Sulfate	9.4	0.50	10.00	0	94.1	90	110			
Sample ID: 220400	07-002AMS Sam	pType: m	5	Tes	tCode: EF	PA Method	300.0: Anions	5		
Client ID: Four C	Corner In Use Ba	tch ID: R	86958	RunNo: 86958						
Prep Date:	Analysis	s Date: 4	/1/2022	SeqNo: 3072709 Units: mg/L						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.10	0.5000	1.036	92.3	79.7	110			
Chloride	12	0.50	5.000	7.048	100	86.3	114			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0.02920	97.3	93.5	110			
Sample ID: 220400	07-002AMSD Sam	pType: m	sd	Tes	tCode: EF	PA Method	300.0: Anions	5		
Client ID: Four C	Corner In Use Ba	tch ID: R8	86958	F	unNo: 8	6958				
Prep Date:	Analysis	s Date: 4	/1/2022	S	eqNo: 3	072710	Units: mg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	1.5	0.10	0.5000	1.036	93.9	79.7	110	0.553	20	
Chloride	12	0.50	5.000	7.048	101	86.3	114	0.448	20	
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0.02920	97.9	93.5	110	0.652	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 interference
- B Analyte detected in the associated Method Blank

E Estimated value

J Analyte detected below quantitation limits

P Sample pH Not In Range

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#:	2204007
	20 4 22

28-Apr-22

	nch Coal Co nch Pit 8				
Sample ID: MB-66783	SampType: MBLK	TestCode: Total Pheno	lics by SW-846 9067	,	
Client ID: PBW	Batch ID: 66783	RunNo: 87154			
Prep Date: 4/12/2022	Analysis Date: 4/12/2022	SeqNo: 3081604	Units: µg/L		
Analyte Phenolics	ResultPQLSPK valueND2.5	SPK Ref Val %REC LowLimit	HighLimit %RF	PD RPDLimit	Qual
Sample ID: LCS-66783	SampType: LCS	TestCode: Total Pheno	lics by SW-846 9067	,	
Client ID: LCSW	Batch ID: 66783	RunNo: 87154			
Prep Date: 4/12/2022	Analysis Date: 4/12/2022	SeqNo: 3081605	Units: µg/L		
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RF	D RPDLimit	Qual
Phenolics	12 2.5 20.00	0 61.8 58.1	107		
Sample ID: LCSD-66783	SampType: LCSD	TestCode: Total Pheno	lics by SW-846 9067	,	
Client ID: LCSS02	Batch ID: 66783	RunNo: 87154			
Prep Date: 4/12/2022	Analysis Date: 4/12/2022	SeqNo: 3081606	Units: µg/L		
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RF	D RPDLimit	Qual
Phenolics	12 2.5 20.00	0 61.8 58.1	107	0 20	
Sample ID: MB-67036	SampType: MBLK	TestCode: Total Pheno	lics by SW-846 9067	,	
Client ID: PBW	Batch ID: 67036	RunNo: 87471			
Prep Date: 4/25/2022	Analysis Date: 4/25/2022	SeqNo: 3095173	Units: µg/L		
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RF	D RPDLimit	Qual
Phenolics	ND 2.5				
Sample ID: LCS-67036	SampType: LCS	TestCode: Total Pheno	lics by SW-846 9067	,	
Client ID: LCSW	Batch ID: 67036	RunNo: 87471			
Prep Date: 4/25/2022	Analysis Date: 4/25/2022	SeqNo: 3095174	Units: µg/L		
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RF	D RPDLimit	Qual
Phenolics	13 2.5 20.00	0 66.8 58.1	107		
Sample ID: LCSD-67036	SampType: LCSD	TestCode: Total Pheno	lics by SW-846 9067	,	
Client ID: LCSS02	Batch ID: 67036	RunNo: 87471			
Prep Date: 4/25/2022	Analysis Date: 4/25/2022	SeqNo: 3095175	Units: µg/L		
Analyte	Result PQL SPK value	SPK Ref Val %REC LowLimit	HighLimit %RF	D RPDLimit	Qual
Phenolics	14 2.5 20.00	0 68.8 58.1	107 2.9	92 20	

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
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- В Analyte detected in the associated Method Blank
- Е Estimated value
- Analyte detected below quantitation limits Sample pH Not In Range J
- Р
- RL Reporting Limit

WO#: 2204007 28-Apr-22

	Ranch Coal Co Ranch Pit 8									
Sample ID: Ics-1 100.2u	S eC SampT	ype: Ics	5	Tes	tCode: SI	M2510B: Sp	pecific Condu	uctance		
Client ID: LCSW	Batch	n ID: R8	7028	F	RunNo: 87	7028				
Prep Date:	Analysis D	Date: 4/	5/2022	5	SeqNo: 30	075403	Units: µmh	os/cm		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	100.2	0	100	85	115			
Sample ID: Ics-2 100.2u	ample ID: Ics-2 100.2uS eC SampType: Ics TestCode: SM2510B: Specific Conductance									
Client ID: LCSW	Batcl	n ID: R8	7028	F	RunNo: 87	7028				
Prep Date:	Analysis D	Date: 4/	5/2022	5	SeqNo: 30	075427	Units: µmh	os/cm		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	100.2	0	104	85	115			

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
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- В
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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Analyte detected in the associated Method Blank

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#:	2204007
	28.Anr.22

Client: Project:	Lee Ranch Coal Co Lee Ranch Pit 8
Sample ID: mb-1	Ik SampType: mblk TestCode: SM2320B: Alkalinity
Client ID: PBW	Batch ID: R87028 RunNo: 87028
Prep Date:	Analysis Date: 4/5/2022 SeqNo: 3075482 Units: mg/L CaCO3
Analyte Total Alkalinity (as CaC	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual 03) ND 20.00
Sample ID: Ics-1	Ik SampType: Ics TestCode: SM2320B: Alkalinity
Client ID: LCSV	Batch ID: R87028 RunNo: 87028
Prep Date:	Analysis Date: 4/5/2022 SeqNo: 3075483 Units: mg/L CaCO3
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Alkalinity (as CaC	73.64 20.00 80.00 0 92.0 90 110
Sample ID: mb-2	Ik SampType: mblk TestCode: SM2320B: Alkalinity
Client ID: PBW	Batch ID: R87028 RunNo: 87028
Prep Date:	Analysis Date: 4/5/2022 SeqNo: 3075505 Units: mg/L CaCO3
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Alkalinity (as CaC	03) ND 20.00
Sample ID: Ics-2	Ik SampType: Ics TestCode: SM2320B: Alkalinity
Client ID: LCSV	Batch ID: R87028 RunNo: 87028
Prep Date:	Analysis Date: 4/5/2022 SeqNo: 3075506 Units: mg/L CaCO3
Analyte	Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit %RPD RPDLimit Qual
Total Alkalinity (as CaC	73.84 20.00 80.00 0 92.3 90 110

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
- PQL Practical Quanitative Limit
- % Recovery outside of range due to dilution or matrix interference S
- В Analyte detected in the associated Method Blank
- Е Estimated value
- J Analyte detected below quantitation limits
- Р Sample pH Not In Range
- RL Reporting Limit

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-Api

WO#:	2204007
	28-Anr-22

	e Ranch Coal Co e Ranch Pit 8	
Sample ID: MB-66702	SampType: MBLK	TestCode: SM2540C MOD: Total Dissolved Solids
Client ID: PBW	Batch ID: 66702	RunNo: 87163
Prep Date: 4/7/2022	Analysis Date: 4/12/2022	SeqNo: 3081901 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-66702	SampType: LCS	TestCode: SM2540C MOD: Total Dissolved Solids
Client ID: LCSW	Batch ID: 66702	RunNo: 87163
Prep Date: 4/7/2022	Analysis Date: 4/12/2022	SeqNo: 3081902 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 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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ANAL	ONMENTAL (SIS Ratory	Hall Environmen A TEL: 505-345-39 Website: www.	490 Ibuquere 75 FAX:	01 Hawk jue, NM 505-34	kins NE 187109 15-4107	Sar	nple Log-In Check List
Client Name:	Lee Ranch Coal Co	Work Order Numb	er: 220	4007			RcptNo: 1
Received By:	Kasandra Payan	3/31/2022 4:33:00 P	M		H. Class	11-	
Completed By:	Cheyenne Cason	4/1/2022 8:44:11 AM	1		(Jas	L	
Reviewed By:	IO	4/1/22					
Chain of Cus	tody						
1. Is Chain of Cι	ustody complete?		Yes	\checkmark	N	o 🗌	Not Present
2. How was the	sample delivered?		<u>Cou</u>	rier			
<u>Log In</u> 3. Was an attem	pt made to cool the sample	es?	Yes	~	N	o 🗌	
4. Were all samp	les received at a temperat	ure of >0° C to 6.0°C	Yes		N	•	
5 0		Samples we					d chilled.
5. Sample(s) in p	proper container(s)?		Yes	\checkmark	N	o 🗀	
	ple volume for indicated te		Yes	✓	No		
7. Are samples (e	except VOA and ONG) pro	perly preserved?	Yes	\checkmark	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 br	oken?	Yes		N		# of preserved
	rk match bottle labels? ncies on chain of custody)		Yes	✓	No		for pH:
12. Are matrices c	orrectly identified on Chain	of Custody?	Yes	\checkmark	No		Adjusted? MO
13. Is it clear what	analyses were requested?		Yes	\checkmark	No		
	g times able to be met? stomer for authorization.)		Yes	\checkmark	No		Checked by: JN 4/1/2
Special Handli	ng (if applicable)						
15. Was client not	ified of all discrepancies w	ith this order?	Yes		N	b	NA 🔽
Person I	Notified:	Date:				a transferrator.	
By Who	m:	Via:	🗌 eM	ail 🗌	Phone [Fax	In Person
Regardir	ng:	LEN, EN LEN, AND THE SCHOOL IN COMPANY AND AND PLACE AND IN THE SCHOOL IN THE SCHOOL IN THE SCHOOL IN THE SCHOOL			NARCE CONTINUES (INCOME)	in the second	
Client In	structions:		art og 4 hondraconski				n Al-rad and hand you the benefit of the operation of the
16. Additional ren	narks:						
Poured of	off and filtered ~100mls fro	m unpreserved volume for	dissolve	ed NO3	analysis	on all s	samples, Filter lot # FJ 4820_ US
17. Cooler Inform							
Cooler No	Temp °C Condition	Seal Intact Seal No	Seal D	ate	Signed	Ву	FFilters. JR 4/1/22
1 2		Not Present Not Present					JR 411/22
-	0.0 0000						

	Chain-c	of-Cus	Chain-of-Custody Record	Turn-Around Time:							
Client: Lee Ranch				>	1		HALL	HALL ENVIRONMENTAL	DNME	INTAL	
				Standard A	Rush		ANAL	ANALYSTS LAROPATORY	POD	OCT	>
				Project Name: Lee Ranch Pit 8	h Pit 8						
Mailing Address: PO Box 757 Grants, NM 87020	5: PO Box 757	Grants, N	UM 87020				A901 Hawkins NE	www.nallenvironmental.com	tal.com		
				PO#:453211349				nbianhnrik	e, NM 8/1C	22	
Phone #: 505 285 3062	15 3062						1el. 505-345-39/5	Tax 505-345-4107	45-4107		
email : Mnewm	an@Peabodyer	nergy.con	email : Mnewman@Peabodyenergy.com / NYon@peabodyenergy.com	Project Manager: Naudiea Yon	a Von				Alialysis Request		
QA/QC Package:							SNS S'8		eav		
Standard							VISO Dd i V / O	Qq Altri	-//11/2		
Accreditation:		DAZC	□ Az Compliance	Sampler: Myron Newman			2808 (1.1 728		2621		
U VELAC		Other	er	On Ice:	BYes	UN D	01 10 10 10	(∀			
				# of Coolers: 1		2:	GR de de de de de de de de de de de de de	0			
				chuding CF):	9.8-0.5:	5.0	5D(83 83 83 83	(AC			
							F08 99 (M) (M 8 8 ∆	ov)			
Date	Time	Matrix		Container Type and #	Preservative Type	7 HEAL No.	2081 2081 2081 2081	250 260 2131 250			
3/31/2022	810	WT	FOUR CORNER INUSE WELL			1001 100		8		+	
	938	WT	PLD2			2021.20				+	
	216	TW				0000000000				-	
	i NAI I	-	PLU3			cosloci			_		
	1004	IM	PLD4			0011008					
	040	WT	PLD5			0101600					
	0001	WT	PIT 8 WELLS			2101110				╞	
	isn/	WT	DR. ARROYO*			0131014	See The Attached Parameters Lis	ameters Lis		+	
						919					
						willize					
Date: 3/31/2022	01/100	Relinquish	Cross Relinquished by: Myron Newman / Naudiea Yon	Received by: Via:	Date Time		Damarke.				
Date:	12.05				r 321122	16:23					
		Kelinquisned by:	led by:	Recorded by: Via:	Date Time						
			If necessary, samples submitted to Hall Environmental	ntal may be subcontracted to other acc	redited laboratories. This ser	ves as notice of this possibilit	may be subcontracted to other accredited jaboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly extended as the contracted of the serves as notice of the serves as notice of the serves as a server as the server a	the number of the second second	and the second		
							in an its man name allowing fire .	carly notated on un	le analytical rej	port.]

Lee Ranch Wells

Test for:	Hall Bottels	
pH	(1) 500mL NP plastic,	
Conductivity	(1) 250mL HNO3 plastic	
Total Dissolved Solids	(1) 125mL HNO3 plastic	
Dissolved Sodium	(1) 125mL H2SO4 plastic	
Dissolved Potassium	(1) 500mL NaOH Plastiic	
Dissolved Calcium	(1) 1L Amber H2So4 Glass	
Magnesium		
Sodium Adsorption Ratio		
Bicarbonate as CaCO3		
Carbonate as CaCO3		
Chloride		
Fluoride		
Sulfate		
Dissolved Nitrate		
Total Phenols		
Dissolved Aluminum Dissolved Arsenic		
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		