HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

July 14, 2021

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

RE: Lee Ranch Groundwater OrderNo.: 2106C57

Dear Naudiea Yon:

Hall Environmental Analysis Laboratory received 12 sample(s) on 6/23/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

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

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: Four Corner Use In Well
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 8:00:00 AM
Lab ID: 2106C57-001 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Fluoride	1.0	0.10		mg/L	1	6/23/2021 7:23:22 PM
Chloride	7.1	0.50		mg/L	1	6/23/2021 7:23:22 PM
Sulfate	190	10		mg/L	20	6/23/2021 7:35:44 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**
Aluminum	ND	0.020		mg/L	1	6/24/2021 12:14:55 PM
Barium	0.033	0.0020		mg/L	1	6/24/2021 12:14:55 PM
Boron	0.19	0.040		mg/L	1	6/24/2021 12:14:55 PM
Cadmium	ND	0.0020		mg/L	1	6/24/2021 12:14:55 PM
Calcium	33	1.0		mg/L	1	6/24/2021 12:14:55 PM
Chromium	ND	0.0060		mg/L	1	6/24/2021 12:14:55 PM
Cobalt	ND	0.0060		mg/L	1	6/24/2021 12:14:55 PM
Iron	ND	0.020		mg/L	1	6/24/2021 12:14:55 PM
Magnesium	21	1.0		mg/L	1	6/24/2021 12:14:55 PM
Manganese	0.0079	0.0020		mg/L	1	6/24/2021 12:14:55 PM
Molybdenum	ND	0.0080		mg/L	1	6/24/2021 12:14:55 PM
Nickel	ND	0.010		mg/L	1	6/25/2021 10:57:47 AM
Potassium	2.2	1.0		mg/L	1	6/24/2021 12:14:55 PM
Silver	ND	0.0050		mg/L	1	6/24/2021 12:14:55 PM
Sodium	130	5.0		mg/L	5	6/24/2021 12:21:23 PM
Vanadium	ND	0.050		mg/L	1	6/24/2021 12:14:55 PM
Zinc	0.10	0.010		mg/L	1	6/25/2021 10:57:47 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Iron	ND	0.050		mg/L	1	6/25/2021 10:35:45 AM
Manganese	0.0074	0.0020		mg/L	1	6/25/2021 10:35:45 AM
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**
Arsenic	ND	0.0010		mg/L	1	7/1/2021 7:18:04 PM
Copper	0.013	0.0010		mg/L	1	7/1/2021 7:18:04 PM
Lead	ND	0.00050		mg/L	1	6/25/2021 8:06:35 PM
Selenium	ND	0.0010		mg/L	1	6/25/2021 8:06:35 PM
EPA METHOD 245.1: MERCURY						Analyst: **ags**
Mercury	ND	0.00020		mg/L	1	6/30/2021 12:09:29 PM
SODIUM ADSORPTION RATIO						Analyst: **ELS**
Sodium Absorption Ratio	4.3	0			1	6/25/2021 7:50:00 AM
TOTAL PHENOLICS BY SW-846 9067						Analyst: **JPM**
Phenolics	ND	2.5		µg/L	1	7/7/2021 9:07:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **CAS**

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: Four Corner Use In Well
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 8:00:00 AM
Lab ID: 2106C57-001 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **CAS**
Conductivity	860	10		µmhos/c	1	6/29/2021 12:25:50 PM
SM4500-H+B / 9040C: PH						Analyst: **CAS**
pH	8.16		H	pH units	1	6/29/2021 12:25:50 PM
SM2320B: ALKALINITY						Analyst: **CAS**
Bicarbonate (As CaCO3)	250.1	20.00		mg/L Ca	1	6/29/2021 12:25:50 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	6/29/2021 12:25:50 PM
Total Alkalinity (as CaCO3)	250.1	20.00		mg/L Ca	1	6/29/2021 12:25:50 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	544	20.0	*	mg/L	1	6/30/2021 6:12:00 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: Four Corner Use In Well Diss
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 8:00:00 AM
Lab ID: 2106C57-002
Matrix: AQUEOUS
Received Date: 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	6/23/2021 7:48:06 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: PLD3
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 8:50:00 AM
Lab ID: 2106C57-003 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Fluoride	0.64	0.10		mg/L	1	6/23/2021 8:12:49 PM
Chloride	1.4	0.50		mg/L	1	6/23/2021 8:12:49 PM
Sulfate	20	0.50		mg/L	1	6/23/2021 8:12:49 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**
Aluminum	ND	0.020		mg/L	1	6/24/2021 12:32:18 PM
Barium	0.094	0.0020		mg/L	1	6/24/2021 12:32:18 PM
Boron	0.10	0.040		mg/L	1	6/24/2021 12:32:18 PM
Cadmium	ND	0.0020		mg/L	1	6/24/2021 12:32:18 PM
Calcium	2.1	1.0		mg/L	1	6/24/2021 12:32:18 PM
Chromium	ND	0.0060		mg/L	1	6/24/2021 12:32:18 PM
Cobalt	ND	0.0060		mg/L	1	6/24/2021 12:32:18 PM
Iron	ND	0.020		mg/L	1	6/24/2021 12:32:18 PM
Magnesium	ND	1.0		mg/L	1	6/24/2021 12:32:18 PM
Manganese	0.0045	0.0020		mg/L	1	6/24/2021 12:32:18 PM
Molybdenum	ND	0.0080		mg/L	1	6/24/2021 12:32:18 PM
Nickel	ND	0.010		mg/L	1	6/25/2021 11:02:35 AM
Potassium	ND	1.0		mg/L	1	6/24/2021 12:32:18 PM
Silver	ND	0.0050		mg/L	1	6/24/2021 12:32:18 PM
Sodium	130	5.0		mg/L	5	6/24/2021 12:33:52 PM
Vanadium	ND	0.050		mg/L	1	6/24/2021 12:32:18 PM
Zinc	0.028	0.010		mg/L	1	6/25/2021 11:02:35 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Iron	ND	0.050		mg/L	1	6/25/2021 10:37:20 AM
Manganese	0.0053	0.0020		mg/L	1	6/25/2021 10:37:20 AM
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**
Arsenic	ND	0.0010		mg/L	1	7/1/2021 7:22:48 PM
Copper	0.0012	0.0010		mg/L	1	7/1/2021 7:22:48 PM
Lead	ND	0.00050		mg/L	1	6/25/2021 8:11:19 PM
Selenium	ND	0.0010		mg/L	1	6/25/2021 8:11:19 PM
EPA METHOD 245.1: MERCURY						Analyst: **ags**
Mercury	ND	0.00020		mg/L	1	6/30/2021 12:16:40 PM
SODIUM ADSORPTION RATIO						Analyst: **ELS**
Sodium Absorption Ratio	20	0			1	6/25/2021 7:50:00 AM
TOTAL PHENOLICS BY SW-846 9067						Analyst: **JPM**
Phenolics	ND	2.5		µg/L	1	7/7/2021 9:07:00 AM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **CAS**

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: PLD3
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 8:50:00 AM
Lab ID: 2106C57-003 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **CAS**
Conductivity	520	10		µmhos/c	1	6/29/2021 12:37:43 PM
SM4500-H+B / 9040C: PH						Analyst: **CAS**
pH	8.73		*H	pH units	1	6/29/2021 12:37:43 PM
SM2320B: ALKALINITY						Analyst: **CAS**
Bicarbonate (As CaCO3)	241.8	20.00		mg/L Ca	1	6/29/2021 12:37:43 PM
Carbonate (As CaCO3)	12.80	2.000		mg/L Ca	1	6/29/2021 12:37:43 PM
Total Alkalinity (as CaCO3)	254.6	20.00		mg/L Ca	1	6/29/2021 12:37:43 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	315	20.0		mg/L	1	6/30/2021 6:12:00 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: PLD3 Diss
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 8:50:00 AM
Lab ID: 2106C57-004 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	6/23/2021 8:37:31 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
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: PLD4
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 9:30:00 AM
Lab ID: 2106C57-005 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Fluoride	0.79	0.10		mg/L	1	6/23/2021 9:26:53 PM
Chloride	0.94	0.50		mg/L	1	6/23/2021 9:26:53 PM
Sulfate	15	0.50		mg/L	1	6/23/2021 9:26:53 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**
Aluminum	ND	0.020		mg/L	1	6/24/2021 12:35:27 PM
Barium	0.16	0.0020		mg/L	1	6/24/2021 12:35:27 PM
Boron	0.11	0.040		mg/L	1	6/24/2021 12:35:27 PM
Cadmium	ND	0.0020		mg/L	1	6/24/2021 12:35:27 PM
Calcium	3.4	1.0		mg/L	1	6/24/2021 12:35:27 PM
Chromium	ND	0.0060		mg/L	1	6/24/2021 12:35:27 PM
Cobalt	ND	0.0060		mg/L	1	6/24/2021 12:35:27 PM
Iron	0.023	0.020		mg/L	1	6/24/2021 12:35:27 PM
Magnesium	ND	1.0		mg/L	1	6/24/2021 12:35:27 PM
Manganese	0.0053	0.0020		mg/L	1	6/24/2021 12:35:27 PM
Molybdenum	ND	0.0080		mg/L	1	6/24/2021 12:35:27 PM
Nickel	ND	0.010		mg/L	1	6/25/2021 11:04:09 AM
Potassium	ND	1.0		mg/L	1	6/24/2021 12:35:27 PM
Silver	ND	0.0050		mg/L	1	6/24/2021 12:35:27 PM
Sodium	110	5.0		mg/L	5	6/24/2021 12:37:01 PM
Vanadium	ND	0.050		mg/L	1	6/24/2021 12:35:27 PM
Zinc	0.038	0.010		mg/L	1	6/25/2021 11:04:09 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Iron	ND	0.050		mg/L	1	6/25/2021 10:38:55 AM
Manganese	0.0046	0.0020		mg/L	1	6/25/2021 10:38:55 AM
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**
Arsenic	ND	0.0010		mg/L	1	7/7/2021 11:46:03 AM
Copper	0.0028	0.0010		mg/L	1	7/1/2021 7:46:28 PM
Lead	ND	0.00050		mg/L	1	6/25/2021 8:16:04 PM
Selenium	ND	0.0010		mg/L	1	6/25/2021 8:16:04 PM
EPA METHOD 245.1: MERCURY						Analyst: **ags**
Mercury	ND	0.00020		mg/L	1	6/30/2021 12:19:04 PM
SODIUM ADSORPTION RATIO						Analyst: **ELS**
Sodium Absorption Ratio	14	0			1	6/25/2021 7:50:00 AM
TOTAL PHENOLICS BY SW-846 9067						Analyst: **JPM**
Phenolics	ND	2.5		µg/L	1	7/13/2021 1:31:00 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **CAS**

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: PLD4
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 9:30:00 AM
Lab ID: 2106C57-005 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **CAS**
Conductivity	450	10		µmhos/c	1	6/29/2021 12:51:21 PM
SM4500-H+B / 9040C: PH						Analyst: **CAS**
pH	8.56		*H	pH units	1	6/29/2021 12:51:21 PM
SM2320B: ALKALINITY						Analyst: **CAS**
Bicarbonate (As CaCO3)	215.5	20.00		mg/L Ca	1	6/29/2021 12:51:21 PM
Carbonate (As CaCO3)	6.800	2.000		mg/L Ca	1	6/29/2021 12:51:21 PM
Total Alkalinity (as CaCO3)	222.3	20.00		mg/L Ca	1	6/29/2021 12:51:21 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	274	20.0		mg/L	1	6/30/2021 6:12:00 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: PLD4 Diss
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 9:30:00 AM
Lab ID: 2106C57-006 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	6/23/2021 9:51:36 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: PLD5
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 8:30:00 AM
Lab ID: 2106C57-007 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Fluoride	0.54	0.50		mg/L	5	6/23/2021 10:16:17 PM
Chloride	5.4	2.5		mg/L	5	6/23/2021 10:16:17 PM
Sulfate	220	2.5		mg/L	5	6/23/2021 10:16:17 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**
Aluminum	ND	0.020		mg/L	1	6/24/2021 12:38:35 PM
Barium	0.017	0.0020		mg/L	1	6/24/2021 12:38:35 PM
Boron	0.13	0.040		mg/L	1	6/24/2021 12:38:35 PM
Cadmium	ND	0.0020		mg/L	1	6/24/2021 12:38:35 PM
Calcium	48	1.0		mg/L	1	6/24/2021 12:38:35 PM
Chromium	ND	0.0060		mg/L	1	6/24/2021 12:38:35 PM
Cobalt	ND	0.0060		mg/L	1	6/24/2021 12:38:35 PM
Iron	ND	0.020		mg/L	1	6/24/2021 12:38:35 PM
Magnesium	31	1.0		mg/L	1	6/24/2021 12:38:35 PM
Manganese	0.017	0.0020		mg/L	1	6/24/2021 12:38:35 PM
Molybdenum	ND	0.0080		mg/L	1	6/24/2021 12:38:35 PM
Nickel	ND	0.010		mg/L	1	6/25/2021 11:05:43 AM
Potassium	2.2	1.0		mg/L	1	6/24/2021 12:38:35 PM
Silver	ND	0.0050		mg/L	1	6/24/2021 12:38:35 PM
Sodium	95	1.0		mg/L	1	6/24/2021 12:38:35 PM
Vanadium	ND	0.050		mg/L	1	6/24/2021 12:38:35 PM
Zinc	0.025	0.010		mg/L	1	6/25/2021 11:05:43 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Iron	0.69	0.050	*	mg/L	1	6/25/2021 10:40:28 AM
Manganese	0.024	0.0020		mg/L	1	6/25/2021 10:40:28 AM
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**
Arsenic	ND	0.0010		mg/L	1	7/7/2021 12:09:47 PM
Copper	ND	0.0010		mg/L	1	7/1/2021 7:55:55 PM
Lead	ND	0.00050		mg/L	1	6/25/2021 8:20:48 PM
Selenium	ND	0.0010		mg/L	1	6/25/2021 8:20:48 PM
EPA METHOD 245.1: MERCURY						Analyst: **ags**
Mercury	ND	0.00020		mg/L	1	6/30/2021 12:21:28 PM
SODIUM ADSORPTION RATIO						Analyst: **ELS**
Sodium Absorption Ratio	2.6	0			1	6/25/2021 7:50:00 AM
TOTAL PHENOLICS BY SW-846 9067						Analyst: **JPM**
Phenolics	ND	2.5		µg/L	1	7/13/2021 1:31:00 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **CAS**

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: PLD5
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 8:30:00 AM
Lab ID: 2106C57-007 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **CAS**
Conductivity	840	10		µmhos/c	1	6/29/2021 1:04:02 PM
SM4500-H+B / 9040C: PH						Analyst: **CAS**
pH	8.12		H	pH units	1	6/29/2021 1:04:02 PM
SM2320B: ALKALINITY						Analyst: **CAS**
Bicarbonate (As CaCO3)	226.3	20.00		mg/L Ca	1	6/29/2021 1:04:02 PM
Carbonate (As CaCO3)	ND	2.000		mg/L Ca	1	6/29/2021 1:04:02 PM
Total Alkalinity (as CaCO3)	226.3	20.00		mg/L Ca	1	6/29/2021 1:04:02 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	546	20.0	*	mg/L	1	6/30/2021 6:12:00 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: PLD5 Diss
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 8:30:00 AM
Lab ID: 2106C57-008 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	6/23/2021 10:40:58 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: Pit 8 Wells
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 10:00:00 AM
Lab ID: 2106C57-009 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Fluoride	0.55	0.10		mg/L	1	6/23/2021 11:05:39 PM
Chloride	1.0	0.50		mg/L	1	6/23/2021 11:05:39 PM
Sulfate	12	0.50		mg/L	1	6/23/2021 11:05:39 PM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**
Aluminum	ND	0.020		mg/L	1	6/24/2021 12:41:45 PM
Barium	0.16	0.0020		mg/L	1	6/24/2021 12:41:45 PM
Boron	0.091	0.040		mg/L	1	6/24/2021 12:41:45 PM
Cadmium	ND	0.0020		mg/L	1	6/24/2021 12:41:45 PM
Calcium	3.5	1.0		mg/L	1	6/24/2021 12:41:45 PM
Chromium	ND	0.0060		mg/L	1	6/24/2021 12:41:45 PM
Cobalt	ND	0.0060		mg/L	1	6/24/2021 12:41:45 PM
Iron	ND	0.020		mg/L	1	6/24/2021 12:41:45 PM
Magnesium	ND	1.0		mg/L	1	6/24/2021 12:41:45 PM
Manganese	0.0038	0.0020		mg/L	1	6/24/2021 12:41:45 PM
Molybdenum	ND	0.0080		mg/L	1	6/24/2021 12:41:45 PM
Nickel	ND	0.010		mg/L	1	6/25/2021 11:07:17 AM
Potassium	1.2	1.0		mg/L	1	6/24/2021 12:41:45 PM
Silver	ND	0.0050		mg/L	1	6/24/2021 12:41:45 PM
Sodium	97	1.0		mg/L	1	6/24/2021 12:41:45 PM
Vanadium	ND	0.050		mg/L	1	6/24/2021 12:41:45 PM
Zinc	0.017	0.010		mg/L	1	6/25/2021 11:07:17 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Iron	0.051	0.050		mg/L	1	6/25/2021 9:35:01 AM
Manganese	0.0081	0.0020		mg/L	1	6/25/2021 9:35:01 AM
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**
Arsenic	ND	0.0010		mg/L	1	7/7/2021 12:19:16 PM
Copper	0.0024	0.0010		mg/L	1	7/1/2021 8:00:39 PM
Lead	ND	0.00050		mg/L	1	6/25/2021 8:25:33 PM
Selenium	ND	0.0010		mg/L	1	6/25/2021 8:25:33 PM
EPA METHOD 245.1: MERCURY						Analyst: **ags**
Mercury	ND	0.00020		mg/L	1	6/30/2021 12:23:53 PM
SODIUM ADSORPTION RATIO						Analyst: **ELS**
Sodium Absorption Ratio	12	0			1	6/25/2021 7:50:00 AM
TOTAL PHENOLICS BY SW-846 9067						Analyst: **JPM**
Phenolics	ND	2.5		µg/L	1	7/13/2021 1:31:00 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **CAS**

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: Pit 8 Wells
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 10:00:00 AM
Lab ID: 2106C57-009 **Matrix:** AQUEOUS **Received Date:** 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **CAS**
Conductivity	410	10		µmhos/c	1	6/29/2021 1:15:23 PM
SM4500-H+B / 9040C: PH						Analyst: **CAS**
pH	8.75		*H	pH units	1	6/29/2021 1:15:23 PM
SM2320B: ALKALINITY						Analyst: **CAS**
Bicarbonate (As CaCO3)	190.0	20.00		mg/L Ca	1	6/29/2021 1:15:23 PM
Carbonate (As CaCO3)	11.20	2.000		mg/L Ca	1	6/29/2021 1:15:23 PM
Total Alkalinity (as CaCO3)	201.2	20.00		mg/L Ca	1	6/29/2021 1:15:23 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	244	20.0		mg/L	1	6/30/2021 6:12:00 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: Pit 8 Wells Diss
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 10:00:00 AM
Lab ID: 2106C57-010
Matrix: AQUEOUS
Received Date: 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	6/23/2021 11:55:00 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: DR Arroyo
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 10:00:00 AM
Lab ID: 2106C57-011
Matrix: AQUEOUS
Received Date: 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Fluoride	0.52	0.10		mg/L	1	6/24/2021 12:19:42 AM
Chloride	0.99	0.50		mg/L	1	6/24/2021 12:19:42 AM
Sulfate	11	0.50		mg/L	1	6/24/2021 12:19:42 AM
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**
Aluminum	ND	0.020		mg/L	1	6/24/2021 12:44:52 PM
Barium	0.16	0.0020		mg/L	1	6/24/2021 12:44:52 PM
Boron	0.086	0.040		mg/L	1	6/24/2021 12:44:52 PM
Cadmium	ND	0.0020		mg/L	1	6/24/2021 12:44:52 PM
Calcium	2.9	1.0		mg/L	1	6/24/2021 12:44:52 PM
Chromium	ND	0.0060		mg/L	1	6/24/2021 12:44:52 PM
Cobalt	ND	0.0060		mg/L	1	6/24/2021 12:44:52 PM
Iron	ND	0.020		mg/L	1	6/24/2021 12:44:52 PM
Magnesium	ND	1.0		mg/L	1	6/24/2021 12:44:52 PM
Manganese	0.0034	0.0020		mg/L	1	6/24/2021 12:44:52 PM
Molybdenum	ND	0.0080		mg/L	1	6/24/2021 12:44:52 PM
Nickel	ND	0.010		mg/L	1	6/25/2021 11:08:51 AM
Potassium	ND	1.0		mg/L	1	6/24/2021 12:44:52 PM
Silver	ND	0.0050		mg/L	1	6/24/2021 12:44:52 PM
Sodium	90	1.0		mg/L	1	6/24/2021 12:44:52 PM
Vanadium	ND	0.050		mg/L	1	6/24/2021 12:44:52 PM
Zinc	0.036	0.010		mg/L	1	6/25/2021 11:08:51 AM
EPA METHOD 200.7: METALS						Analyst: **ELS**
Iron	ND	0.050		mg/L	1	6/25/2021 10:42:05 AM
Manganese	0.0068	0.0020		mg/L	1	6/25/2021 10:42:05 AM
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**
Arsenic	ND	0.0010		mg/L	1	7/7/2021 12:24:00 PM
Copper	ND	0.0010		mg/L	1	7/1/2021 8:05:22 PM
Lead	ND	0.00050		mg/L	1	6/25/2021 8:39:49 PM
Selenium	ND	0.0010		mg/L	1	6/25/2021 8:39:49 PM
EPA METHOD 245.1: MERCURY						Analyst: **ags**
Mercury	ND	0.00020		mg/L	1	6/30/2021 12:26:18 PM
SODIUM ADSORPTION RATIO						Analyst: **ELS**
Sodium Absorption Ratio	13	0			1	6/25/2021 7:50:00 AM
TOTAL PHENOLICS BY SW-846 9067						Analyst: **JPM**
Phenolics	ND	2.5		µg/L	1	7/13/2021 1:31:00 PM
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **CAS**

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: DR Arroyo
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 10:00:00 AM
Lab ID: 2106C57-011
Matrix: AQUEOUS
Received Date: 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
SM2510B: SPECIFIC CONDUCTANCE						Analyst: **CAS**
Conductivity	390	10		µmhos/c	1	6/29/2021 1:27:13 PM
SM4500-H+B / 9040C: PH						Analyst: **CAS**
pH	8.52		*H	pH units	1	6/29/2021 1:27:13 PM
SM2320B: ALKALINITY						Analyst: **CAS**
Bicarbonate (As CaCO3)	185.2	20.00		mg/L Ca	1	6/29/2021 1:27:13 PM
Carbonate (As CaCO3)	5.280	2.000		mg/L Ca	1	6/29/2021 1:27:13 PM
Total Alkalinity (as CaCO3)	190.5	20.00		mg/L Ca	1	6/29/2021 1:27:13 PM
SM2540C MOD: TOTAL DISSOLVED SOLIDS						Analyst: **KS**
Total Dissolved Solids	233	20.0		mg/L	1	6/30/2021 6:12:00 PM

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

Qualifiers:

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

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Lee Ranch Coal Co
Client Sample ID: DR Arroyo Diss
Project: Lee Ranch Groundwater
Collection Date: 6/22/2021 10:00:00 AM
Lab ID: 2106C57-012
Matrix: AQUEOUS
Received Date: 6/23/2021 4:35:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed
EPA METHOD 300.0: ANIONS						Analyst: **JMT**
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	6/24/2021 12:44:24 AM

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

Qualifiers:

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

ANALYTICAL REPORT

July 07, 2021

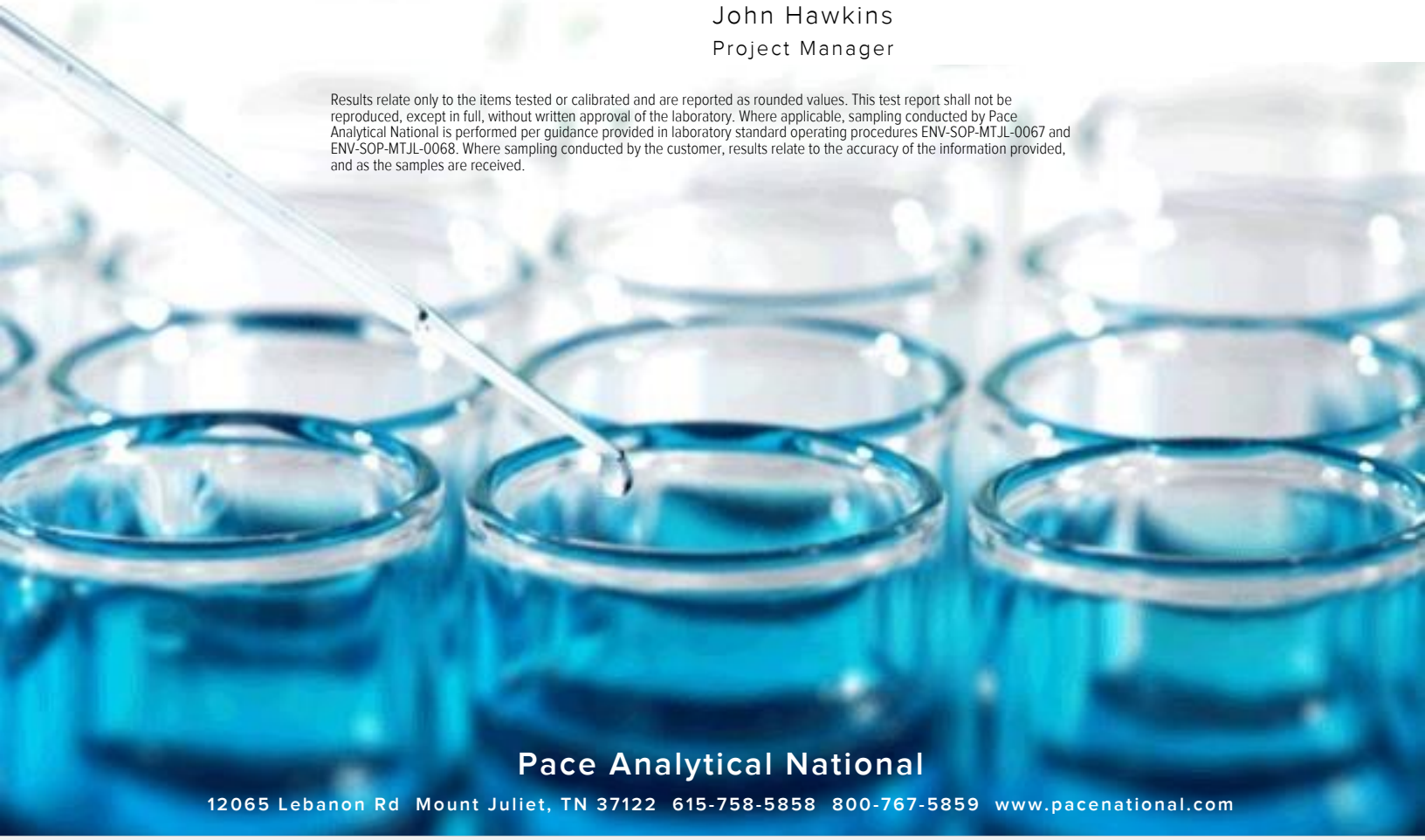
Hall Environmental Analysis Laboratory

Sample Delivery Group:	L1371076
Samples Received:	06/25/2021
Project Number:	
Description:	

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

Entire Report Reviewed By:

John Hawkins
Project Manager



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

TABLE OF CONTENTS

SAMPLE SUMMARY

2106C57-001E FOUR CORNER USE IN WELL L1371076-01 WW

Collected by	Collected date/time	Received date/time
	06/22/21 08:00	06/25/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1700395	1	07/05/21 17:25	07/05/21 20:22	KEG	Mt. Juliet, TN

2106C57-003E PLD3 L1371076-02 WW

Collected by	Collected date/time	Received date/time
	06/22/21 08:50	06/25/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1700395	1	07/05/21 17:25	07/05/21 20:24	KEG	Mt. Juliet, TN

2106C57-005E PLD4 L1371076-03 WW

Collected by	Collected date/time	Received date/time
	06/22/21 09:30	06/25/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1700395	1	07/05/21 17:25	07/05/21 20:25	KEG	Mt. Juliet, TN

2106C57-007E PLD5 L1371076-04 WW

Collected by	Collected date/time	Received date/time
	06/22/21 08:30	06/25/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1700395	1	07/05/21 17:25	07/05/21 20:55	KEG	Mt. Juliet, TN

2106C57-009E PIT 8 WELLS L1371076-05 WW

Collected by	Collected date/time	Received date/time
	06/22/21 10:00	06/25/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1700395	1	07/05/21 17:25	07/05/21 20:56	KEG	Mt. Juliet, TN

2106C57-011E DR ARROYO L1371076-06 WW

Collected by	Collected date/time	Received date/time
	06/22/21 10:00	06/25/21 09:00

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Wet Chemistry by Method 4500CN E-2011	WG1700395	1	07/05/21 17:25	07/05/21 20:57	KEG	Mt. Juliet, TN

CASE NARRATIVE

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

John Hawkins
Project Manager

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	0.0146	J3	0.00500	1	07/05/2021 20:22	WG1700395

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	07/05/2021 20:24	WG1700395

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	07/05/2021 20:25	WG1700395

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	07/05/2021 20:55	WG1700395

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	07/05/2021 20:56	WG1700395

Wet Chemistry by Method 4500CN E-2011

Analyte	Result	Qualifier	RDL	Dilution	Analysis	Batch
	mg/l		mg/l		date / time	
Cyanide	ND		0.00500	1	07/05/2021 20:57	WG1700395

QUALITY CONTROL SUMMARY

L1371076-01,02,03,04,05,06

Method Blank (MB)

(MB) R3675771-1 07/05/21 20:16

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

L1371076-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1371076-01 07/05/21 20:22 • (DUP) R3675771-2 07/05/21 20:23

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Cyanide	0.0146	0.0277	1	61.9	J3	20

Laboratory Control Sample (LCS)

(LCS) R3675771-3 07/05/21 20:52

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Cyanide	0.100	0.0896	89.6	87.1-120	

L1372407-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1372407-04 07/05/21 20:54 • (MS) R3675771-4 07/05/21 20:58 • (MSD) R3675771-5 07/05/21 20:59

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Cyanide	0.100	0.0576	0.139	0.143	81.4	85.4	1	90.0-110	J6	J6	2.84	20

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
J3	The associated batch QC was outside the established quality control range for precision.
J6	The sample matrix interfered with the ability to make any accurate determination; spike value is low.

ACCREDITATIONS & LOCATIONS

Pace Analytical National 12065 Lebanon Rd Mount Juliet, TN 37122

Alabama	40660	Nebraska	NE-OS-15-05
Alaska	17-026	Nevada	TN000032021-1
Arizona	AZ0612	New Hampshire	2975
Arkansas	88-0469	New Jersey–NELAP	TN002
California	2932	New Mexico [1]	TN00003
Colorado	TN00003	New York	11742
Connecticut	PH-0197	North Carolina	Env375
Florida	E87487	North Carolina [1]	DW21704
Georgia	NELAP	North Carolina [3]	41
Georgia [1]	923	North Dakota	R-140
Idaho	TN00003	Ohio–VAP	CL0069
Illinois	200008	Oklahoma	9915
Indiana	C-TN-01	Oregon	TN200002
Iowa	364	Pennsylvania	68-02979
Kansas	E-10277	Rhode Island	LAO000356
Kentucky [1 6]	KY90010	South Carolina	84004002
Kentucky [2]	16	South Dakota	n/a
Louisiana	AI30792	Tennessee [1 4]	2006
Louisiana	LA018	Texas	T104704245-20-18
Maine	TN00003	Texas [5]	LAB0152
Maryland	324	Utah	TN000032021-11
Massachusetts	M-TN003	Vermont	VT2006
Michigan	9958	Virginia	110033
Minnesota	047-999-395	Washington	C847
Mississippi	TN00003	West Virginia	233
Missouri	340	Wisconsin	998093910
Montana	CERT0086	Wyoming	A2LA
A2LA – ISO 17025	1461.01	AIHA-LAP,LLC EMLAP	100789
A2LA – ISO 17025 [5]	1461.02	DOD	1461.01
Canada	1461.01	USDA	P330-15-00234
EPA–Crypto	TN00003		

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

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

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

CHAIN OF CUSTODY RECORD

PAGE: 1 OF: 1

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

A073 L1371076

ITEM	SAMPLE	CLIENT SAMPLE ID	BOTTLE TYPE	MATRIX	COLLECTION DATE	# CONTAINERS	ANALYTICAL COMMENTS	
1	2106C57-001E	Four Corner Use In Well	500AMBHDP F-NAOH	Aqueous	6/22/2021 8:00:00 AM	1	Total Cyanide	-01
2	2106C57-003E	PLD3	500AMBHDP F-NAOH	Aqueous	6/22/2021 8:50:00 AM	1	Total Cyanide	-02
3	2106C57-005E	PLD4	500AMBHDP F-NAOH	Aqueous	6/22/2021 9:30:00 AM	1	Total Cyanide	-03
4	2106C57-007E	PLD5	500AMBHDP F-NAOH	Aqueous	6/22/2021 8:30:00 AM	1	Total Cyanide	-04
5	2106C57-009E	Pit 8 Wells	500AMBHDP F-NAOH	Aqueous	6/22/2021 10:00:00 AM	1	Total Cyanide	-05
6	2106C57-011E	DR Arroyo	500AMBHDP F-NAOH	Aqueous	6/22/2021 10:00:00 AM	1	Total Cyanide	-06

Sample Receipt Checklist

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

SPECIAL INSTRUCTIONS / COMMENTS:

Please include the LAB ID and the CLIENT SAMPLE ID on all final reports. Please e-mail results to lab@hallenvironmental.com. Please return all coolers and blue ice. Thank you.

Relinquished By: TDS	Date: 6/24/2021	Time: 8:32 AM	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By:	Date:	Time:
Relinquished By:	Date:	Time:	Received By: Hanley/Mn	Date: 062521	Time: 0900

TAT: Standard ☑ RUSH Next BD ☐ 2nd BD ☐ 3rd BD ☐

REPORT TRANSMITTAL DESIRED:

☐ HARDCOPY (extra cost) ☐ FAX ☐ EMAIL ☐ ONLINE

FOR LAB USE ONLY

Temp of samples 1.6 to 1.6 (1.5 C) Attempt to Cool ? _____

Comments: _____

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**
14-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A79359**	RunNo: **79359**
Prep Date:	Analysis Date: **6/25/2021**	SeqNo: **2788205** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.050								
Manganese	ND	0.0020								
Nickel	ND	0.010								
Zinc	ND	0.010								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A79359**	RunNo: **79359**
Prep Date:	Analysis Date: **6/25/2021**	SeqNo: **2788207** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.050	0.02000	0	123	50	150			
Manganese	ND	0.0020	0.002000	0	92.3	50	150			
Nickel	ND	0.010	0.005000	0	59.7	50	150			
Zinc	0.013	0.010	0.01000	0	128	50	150			

Sample ID: **2106C57-011CMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **DR Arroyo**	Batch ID: **A79359**	RunNo: **79359**
Prep Date:	Analysis Date: **6/25/2021**	SeqNo: **2788310** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.050	0.5000	0	98.0	70	130			
Manganese	0.47	0.0020	0.5000	0.006806	92.4	70	130			

Sample ID: **2106C57-011CMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Metals**
Client ID: **DR Arroyo**	Batch ID: **A79359**	RunNo: **79359**
Prep Date:	Analysis Date: **6/25/2021**	SeqNo: **2788312** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.50	0.050	0.5000	0	99.0	70	130	1.04	20	
Manganese	0.49	0.0020	0.5000	0.006806	96.0	70	130	3.72	20	

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A79359**	RunNo: **79359**
Prep Date:	Analysis Date: **6/25/2021**	SeqNo: **2788338** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.050	0.5000	0	97.8	85	115			
Manganese	0.48	0.0020	0.5000	0	95.7	85	115			
Nickel	0.46	0.010	0.5000	0	92.0	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**
14-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: **MB-60909**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **60909**	RunNo: **79359**
Prep Date: **6/24/2021**	Analysis Date: **6/25/2021**	SeqNo: **2788346** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.050								
Manganese	ND	0.0020								

Sample ID: **LLLCS-60909**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **60909**	RunNo: **79359**
Prep Date: **6/24/2021**	Analysis Date: **6/25/2021**	SeqNo: **2788348** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.050	0.02000	0	117	50	150			
Manganese	0.0023	0.0020	0.002000	0	115	50	150			

Sample ID: **LCS-60909**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **60909**	RunNo: **79359**
Prep Date: **6/24/2021**	Analysis Date: **6/25/2021**	SeqNo: **2788350** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.52	0.050	0.5000	0	104	85	115			
Manganese	0.49	0.0020	0.5000	0	97.9	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**
14-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B79326**	RunNo: **79326**
Prep Date:	Analysis Date: **6/24/2021**	SeqNo: **2786678** 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								
Potassium	ND	1.0								
Silver	ND	0.0050								
Sodium	ND	1.0								
Vanadium	ND	0.050								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B79326**	RunNo: **79326**
Prep Date:	Analysis Date: **6/24/2021**	SeqNo: **2786696** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	94.9	50	150			
Barium	ND	0.0020	0.002000	0	86.9	50	150			
Boron	ND	0.040	0.04000	0	90.9	50	150			
Cadmium	ND	0.0020	0.002000	0	77.0	50	150			
Calcium	ND	1.0	0.5000	0	99.9	50	150			
Chromium	0.0069	0.0060	0.006000	0	114	50	150			
Cobalt	0.0061	0.0060	0.006000	0	102	50	150			
Iron	0.020	0.020	0.02000	0	101	50	150			
Magnesium	ND	1.0	0.5000	0	97.9	50	150			
Manganese	ND	0.0020	0.002000	0	88.4	50	150			
Molybdenum	0.0097	0.0080	0.008000	0	121	50	150			
Potassium	ND	1.0	0.5000	0	84.8	50	150			
Silver	ND	0.0050	0.005000	0	84.9	50	150			
Sodium	ND	1.0	0.5000	0	89.8	50	150			
Vanadium	ND	0.050	0.01000	0	99.7	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
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**

14-Jul-21

Client: Lee Ranch Coal Co

Project: Lee Ranch Groundwater

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B79326**	RunNo: **79326**
Prep Date:	Analysis Date: **6/24/2021**	SeqNo: **2786697** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			
Barium	0.48	0.0020	0.5000	0	95.5	85	115			
Boron	0.48	0.040	0.5000	0	96.1	85	115			
Cadmium	0.47	0.0020	0.5000	0	94.8	85	115			
Calcium	49	1.0	50.00	0	97.2	85	115			
Chromium	0.45	0.0060	0.5000	0	90.9	85	115			
Cobalt	0.46	0.0060	0.5000	0	91.6	85	115			
Iron	0.49	0.020	0.5000	0	98.2	85	115			
Magnesium	49	1.0	50.00	0	97.5	85	115			
Manganese	0.46	0.0020	0.5000	0	92.4	85	115			
Molybdenum	0.49	0.0080	0.5000	0	97.7	85	115			
Potassium	47	1.0	50.00	0	94.5	85	115			
Silver	0.089	0.0050	0.1000	0	89.4	85	115			
Sodium	49	1.0	50.00	0	98.6	85	115			
Vanadium	0.48	0.050	0.5000	0	96.2	85	115			

Sample ID: **2106C57-001DMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Four Corner Use In**	Batch ID: **B79326**	RunNo: **79326**
Prep Date:	Analysis Date: **6/24/2021**	SeqNo: **2786700** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.57	0.020	0.5000	0	115	70	130			
Barium	0.51	0.0020	0.5000	0.03282	96.4	70	130			
Boron	0.69	0.040	0.5000	0.1852	101	70	130			
Cadmium	0.48	0.0020	0.5000	0	95.3	70	130			
Calcium	81	1.0	50.00	32.61	97.7	70	130			
Chromium	0.46	0.0060	0.5000	0	92.4	70	130			
Cobalt	0.46	0.0060	0.5000	0	92.3	70	130			
Iron	0.48	0.020	0.5000	0	96.3	70	130			
Magnesium	71	1.0	50.00	21.19	98.8	70	130			
Manganese	0.48	0.0020	0.5000	0.007898	94.1	70	130			
Molybdenum	0.49	0.0080	0.5000	0	97.3	70	130			
Potassium	51	1.0	50.00	2.177	98.4	70	130			
Silver	0.091	0.0050	0.1000	0	90.6	70	130			
Vanadium	0.50	0.050	0.5000	0	99.6	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**
14-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: **2106C57-001DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Four Corner Use In** Batch ID: **B79326** RunNo: **79326**
Prep Date: Analysis Date: **6/24/2021** SeqNo: **2786701** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.57	0.020	0.5000	0	115	70	130	0.0591	20	
Barium	0.51	0.0020	0.5000	0.03282	95.3	70	130	1.04	20	
Boron	0.68	0.040	0.5000	0.1852	99.8	70	130	0.646	20	
Cadmium	0.47	0.0020	0.5000	0	94.2	70	130	1.16	20	
Calcium	81	1.0	50.00	32.61	96.8	70	130	0.561	20	
Chromium	0.46	0.0060	0.5000	0	91.0	70	130	1.43	20	
Cobalt	0.46	0.0060	0.5000	0	91.3	70	130	1.09	20	
Iron	0.51	0.020	0.5000	0	102	70	130	5.95	20	
Magnesium	70	1.0	50.00	21.19	97.8	70	130	0.739	20	
Manganese	0.48	0.0020	0.5000	0.007898	93.7	70	130	0.446	20	
Molybdenum	0.48	0.0080	0.5000	0	96.0	70	130	1.27	20	
Potassium	51	1.0	50.00	2.177	97.3	70	130	1.07	20	
Silver	0.089	0.0050	0.1000	0	89.2	70	130	1.47	20	
Vanadium	0.50	0.050	0.5000	0	99.1	70	130	0.522	20	

Sample ID: **2106C57-001DMS** SampType: **MS** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Four Corner Use In** Batch ID: **B79326** RunNo: **79326**
Prep Date: Analysis Date: **6/24/2021** SeqNo: **2786703** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	400	5.0	250.0	125.0	110	70	130			

Sample ID: **2106C57-001DMSD** SampType: **MSD** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Four Corner Use In** Batch ID: **B79326** RunNo: **79326**
Prep Date: Analysis Date: **6/24/2021** SeqNo: **2786704** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Sodium	390	5.0	250.0	125.0	107	70	130	1.88	20	

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW** Batch ID: **A79359** RunNo: **79359**
Prep Date: Analysis Date: **6/25/2021** SeqNo: **2788409** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	ND	0.020								
Manganese	ND	0.0020								
Nickel	ND	0.010								
Zinc	ND	0.010								

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**
14-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A79359**	RunNo: **79359**
Prep Date:	Analysis Date: **6/25/2021**	SeqNo: **2788410** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.025	0.020	0.02000	0	123	50	150			
Manganese	ND	0.0020	0.002000	0	92.3	50	150			
Nickel	ND	0.010	0.005000	0	59.7	50	150			
Zinc	0.013	0.010	0.01000	0	128	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A79359**	RunNo: **79359**
Prep Date:	Analysis Date: **6/25/2021**	SeqNo: **2788411** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Iron	0.49	0.020	0.5000	0	97.8	85	115			
Manganese	0.48	0.0020	0.5000	0	95.7	85	115			
Nickel	0.46	0.010	0.5000	0	92.0	85	115			
Zinc	0.50	0.010	0.5000	0	101	85	115			

Sample ID: **2106C57-001DMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Four Corner Use In**	Batch ID: **A79359**	RunNo: **79359**
Prep Date:	Analysis Date: **6/25/2021**	SeqNo: **2788413** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nickel	0.45	0.010	0.5000	0	89.9	70	130			
Zinc	0.61	0.010	0.5000	0.1016	102	70	130			

Sample ID: **2106C57-001DMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Four Corner Use In**	Batch ID: **A79359**	RunNo: **79359**
Prep Date:	Analysis Date: **6/25/2021**	SeqNo: **2788414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nickel	0.45	0.010	0.5000	0	89.3	70	130	0.644	20	
Zinc	0.61	0.010	0.5000	0.1016	101	70	130	0.870	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**
14-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B79406**	RunNo: **79406**
Prep Date:	Analysis Date: **6/25/2021**	SeqNo: **2791112** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	ND	0.00050								
Selenium	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B79406**	RunNo: **79406**
Prep Date:	Analysis Date: **6/25/2021**	SeqNo: **2791113** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.00053	0.00050	0.0005000	0	106	50	150			
Selenium	ND	0.0010	0.001000	0	65.3	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B79406**	RunNo: **79406**
Prep Date:	Analysis Date: **6/25/2021**	SeqNo: **2791114** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	0.013	0.00050	0.01250	0	103	85	115			
Selenium	0.025	0.0010	0.02500	0	98.9	85	115			

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D79527**	RunNo: **79527**
Prep Date:	Analysis Date: **7/1/2021**	SeqNo: **2797060** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								
Copper	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D79527**	RunNo: **79527**
Prep Date:	Analysis Date: **7/1/2021**	SeqNo: **2797061** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	92.4	50	150			
Copper	ND	0.0010	0.001000	0	90.4	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **D79527**	RunNo: **79527**
Prep Date:	Analysis Date: **7/1/2021**	SeqNo: **2797062** Units: **mg/L**

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

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**
14-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: **LCS** SampType: **LCS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW** Batch ID: **D79527** RunNo: **79527**
Prep Date: Analysis Date: **7/1/2021** SeqNo: **2797062** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.022	0.0010	0.02500	0	87.1	85	115			
Copper	0.023	0.0010	0.02500	0	90.0	85	115			

Sample ID: **2106C57-003DMSLL** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PLD3** Batch ID: **D79527** RunNo: **79527**
Prep Date: Analysis Date: **7/1/2021** SeqNo: **2797067** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.023	0.0010	0.02500	0.001278	87.8	70	130			

Sample ID: **2106C57-003DMSDL** SampType: **MSD** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PLD3** Batch ID: **D79527** RunNo: **79527**
Prep Date: Analysis Date: **7/1/2021** SeqNo: **2797068** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.023	0.0010	0.02500	0.001278	85.3	70	130	2.77	20	

Sample ID: **2106C57-005DMSLL** SampType: **MS** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PLD4** Batch ID: **D79527** RunNo: **79527**
Prep Date: Analysis Date: **7/1/2021** SeqNo: **2797070** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Copper	0.024	0.0010	0.02500	0.002944	83.9	70	130			

Sample ID: **MB** SampType: **MBLK** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW** Batch ID: **B79615** RunNo: **79615**
Prep Date: Analysis Date: **7/7/2021** SeqNo: **2800263** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL** SampType: **LCSLL** TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC** Batch ID: **B79615** RunNo: **79615**
Prep Date: Analysis Date: **7/7/2021** SeqNo: **2800264** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	106	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
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**
14-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B79615**	RunNo: **79615**
Prep Date:	Analysis Date: **7/7/2021**	SeqNo: **2800265** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.9	85	115			

Sample ID: **2106C57-005DMSLL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PLD4**	Batch ID: **B79615**	RunNo: **79615**
Prep Date:	Analysis Date: **7/7/2021**	SeqNo: **2800268** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	105	70	130			

Sample ID: **2106C57-005DMSDL**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PLD4**	Batch ID: **B79615**	RunNo: **79615**
Prep Date:	Analysis Date: **7/7/2021**	SeqNo: **2800269** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	104	70	130	0.963	20	

Sample ID: **2106C57-007DMSLL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PLD5**	Batch ID: **B79615**	RunNo: **79615**
Prep Date:	Analysis Date: **7/7/2021**	SeqNo: **2800273** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	106	70	130			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**
14-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: **MB-60998** SampType: **MBLK** TestCode: **EPA Method 245.1: Mercury**
Client ID: **PBW** Batch ID: **60998** RunNo: **79504**
Prep Date: **6/29/2021** Analysis Date: **6/30/2021** SeqNo: **2795167** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020								

Sample ID: **LLLCS-60998** SampType: **LCSLL** TestCode: **EPA Method 245.1: Mercury**
Client ID: **BatchQC** Batch ID: **60998** RunNo: **79504**
Prep Date: **6/29/2021** Analysis Date: **6/30/2021** SeqNo: **2795168** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	ND	0.00020	0.0001500	0	55.9	50	150			

Sample ID: **LCS-60998** SampType: **LCS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **LCSW** Batch ID: **60998** RunNo: **79504**
Prep Date: **6/29/2021** Analysis Date: **6/30/2021** SeqNo: **2795169** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0046	0.00020	0.005000	0	91.7	85	115			

Sample ID: **2106C57-001CMS** SampType: **MS** TestCode: **EPA Method 245.1: Mercury**
Client ID: **Four Corner Use In** Batch ID: **60998** RunNo: **79504**
Prep Date: **6/29/2021** Analysis Date: **6/30/2021** SeqNo: **2795195** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0050	0.00020	0.005000	0	101	75	125			

Sample ID: **2106C57-001CMSD** SampType: **MSD** TestCode: **EPA Method 245.1: Mercury**
Client ID: **Four Corner Use In** Batch ID: **60998** RunNo: **79504**
Prep Date: **6/29/2021** Analysis Date: **6/30/2021** SeqNo: **2795196** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Mercury	0.0052	0.00020	0.005000	0	104	75	125	3.19	20	

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**
14-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R79319**	RunNo: **79319**
Prep Date:	Analysis Date: **6/23/2021**	SeqNo: **2786049** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	ND	0.10								
Chloride	ND	0.50								
Nitrogen, Nitrate (As N)	ND	0.10								
Sulfate	ND	0.50								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R79319**	RunNo: **79319**
Prep Date:	Analysis Date: **6/23/2021**	SeqNo: **2786050** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoride	0.50	0.10	0.5000	0	100	90	110			
Chloride	4.6	0.50	5.000	0	92.8	90	110			
Nitrogen, Nitrate (As N)	2.4	0.10	2.500	0	95.5	90	110			
Sulfate	9.4	0.50	10.00	0	94.1	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**

14-Jul-21

Client: Lee Ranch Coal Co

Project: Lee Ranch Groundwater

Sample ID: **MB-61154**	SampType: **MBLK**	TestCode: **Total Phenolics by SW-846 9067**
Client ID: **PBW**	Batch ID: **61154**	RunNo: **79604**
Prep Date: **7/7/2021**	Analysis Date: **7/7/2021**	SeqNo: **2799936** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics	ND	2.5								

Sample ID: **LCS-61154**	SampType: **LCS**	TestCode: **Total Phenolics by SW-846 9067**
Client ID: **LCSW**	Batch ID: **61154**	RunNo: **79604**
Prep Date: **7/7/2021**	Analysis Date: **7/7/2021**	SeqNo: **2799937** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics	19	2.5	20.00	0	95.5	54.7	121			

Sample ID: **MB-61270**	SampType: **MBLK**	TestCode: **Total Phenolics by SW-846 9067**
Client ID: **PBW**	Batch ID: **61270**	RunNo: **79759**
Prep Date: **7/13/2021**	Analysis Date: **7/13/2021**	SeqNo: **2805582** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics	ND	2.5								

Sample ID: **LCS-61270**	SampType: **LCS**	TestCode: **Total Phenolics by SW-846 9067**
Client ID: **LCSW**	Batch ID: **61270**	RunNo: **79759**
Prep Date: **7/13/2021**	Analysis Date: **7/13/2021**	SeqNo: **2805583** Units: **µg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phenolics	19	2.5	20.00	0	95.5	54.7	121			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**
14-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: **lcs-1 100.1uS eC**	SampType: **lcs**	TestCode: **SM2510B: Specific Conductance**
Client ID: **LCSW**	Batch ID: **R79464**	RunNo: **79464**
Prep Date:	Analysis Date: **6/29/2021**	SeqNo: **2793496** Units: **µmhos/cm**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Conductivity	100	10	100.1	0	99.5	85	115			

Qualifiers:

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

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**
14-Jul-21

Client: Lee Ranch Coal Co
Project: Lee Ranch Groundwater

Sample ID: **mb-1 alk**	SampType: **mblk**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R79464**	RunNo: **79464**							
Prep Date:	Analysis Date: **6/29/2021**	SeqNo: **2793460**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **lcs-1 alk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R79464**	RunNo: **79464**							
Prep Date:	Analysis Date: **6/29/2021**	SeqNo: **2793461**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	73.52	20.00	80.00	0	91.9	90	110			

Sample ID: **mb-2 alk**	SampType: **mblk**	TestCode: **SM2320B: Alkalinity**							
Client ID: **PBW**	Batch ID: **R79464**	RunNo: **79464**							
Prep Date:	Analysis Date: **6/29/2021**	SeqNo: **2793483**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	ND	20.00								

Sample ID: **lcs-2 alk**	SampType: **lcs**	TestCode: **SM2320B: Alkalinity**							
Client ID: **LCSW**	Batch ID: **R79464**	RunNo: **79464**							
Prep Date:	Analysis Date: **6/29/2021**	SeqNo: **2793484**	Units: **mg/L CaCO3**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Alkalinity (as CaCO3)	74.84	20.00	80.00	0	93.5	90	110			

Qualifiers:

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

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2106C57**

14-Jul-21

Client: Lee Ranch Coal Co

Project: Lee Ranch Groundwater

Sample ID: **MB-61008**	SampType: **MBLK**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **PBW**	Batch ID: **61008**	RunNo: **79486**
Prep Date: **6/29/2021**	Analysis Date: **6/30/2021**	SeqNo: **2794322** 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-61008**	SampType: **LCS**	TestCode: **SM2540C MOD: Total Dissolved Solids**
Client ID: **LCSW**	Batch ID: **61008**	RunNo: **79486**
Prep Date: **6/29/2021**	Analysis Date: **6/30/2021**	SeqNo: **2794323** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Total Dissolved Solids	1010	20.0	1000	0	101	80	120			

Qualifiers:

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

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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

Sample Log-In Check List

Client Name: **Lee Acres Water Users** Work Order Number: **2106C57** RcptNo: 1

Received By: **Sean Livingston** **6/23/2021 4:35:00 PM** Sean Livingston

Completed By: **Desiree Dominguez** **6/23/2021 5:14:14 PM** DD

Reviewed By: IO 6-24-21

unpres / by: Tracy Casarrubias 6.23.21

Chain of Custody

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

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Approved by client.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: ~~30~~ 24, 6
(<2 or >12 unless noted)
Adjusted? NO
IO 6/24/21
Checked by: RLC 6/24/21

unpres. LB: SPA 6.23.21

Special Handling (if applicable)

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

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

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	8.0	Good				
2	11.0	Good				

Chain-of-Custody Record

Client: Lee Ranch

Mailing Address: PO Box 757 Grants, NM 87020

Phone #: 505 285 3062

email or Fax#: Mnewman@Peabodyenergy.com NYon@peabodyenergy.com

QA/QC Package:
☐ Standard

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
X Standard ☐ Rush_____

Project Name: Lee Ranch Groundwater

PO#: 453035065

Project Manager: Naudiea Yon

Sampler: Myron Newman

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 8.1-0.1=8.0°C 11.1-0.1=11.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix		Container Type and #	Preservative Type	HEAL No. 2106057
6/22/2021	800	WT	FOUR CORNER IN USE WELL			-001/002
6/22/2021	850	WT	PLD3			003/004
6/22/2021	930	WT	PLD4			005/006
6/22/2021	830	WT	PLD5			007/008
6/22/2021	1000	WT	PIT 8 WELLS			009/010 DAD 6.23.21
6/22/2021	1000	WT	DR. ARROYO			011/012

BTEX / MTBE / TMB's (8021)
TPH:8015D(GRO / DRO / MRO)
8081 Pesticides/8082 PCB's
EDB (Method 504.1)
PAHs by 8310 or 8270SIMS
RCRA 8 Metals
Cl, F, Br, NO_3, NO_2, PO_4, SO_4
8260 (VOA)
8270 (Semi-VOA)
Total Coliform (Present/Absen

See The Attached Parameters List

Date	Time	Relinquished by	Received by	Via	Date	Time
Date: 6/23/2021	Time: 1130	Relinquished by: Myron Newman / Nuadiea Yon	Sean Colton		6/23/21	16:35
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

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

LR Wells
Max: **32/yr.**

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 Plastic
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 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	