Flouride	PC-5	2.149	9/13/2023	3ND	No	27.78	Kapla...	0.007498	Param
Flouride	**PC-6**	**2.149**	**9/13/2023**	**3.59**	**Yes**	**27.78**	**Kapla...**	**0.007498**	**Param**
Flouride	AMW-	2.149	9/13/2023	0.972	No	27.78	Kapla...	0.007498	Param
Flouride	AMW-	2.149	9/13/2023	3ND	No	27.78	Kapla...	0.007498	Param
Flouride	SMW-2	2.149	9/13/2023	3ND	No	27.78	Kapla...	0.007498	Param
Iron	PC-5	0.1	9/13/2023	0.1ND	No	100	n/a	0.005432	NP
Iron	PC-6	0.1	9/13/2023	0.1ND	No	100	n/a	0.005432	NP
Iron	AMW-	0.1	9/13/2023	0.1ND	No	100	n/a	0.005432	NP
Iron	AMW-	0.1	9/13/2023	0.1ND	No	100	n/a	0.005432	NP
Iron	SMW-2	0.1	9/13/2023	0.1ND	No	100	n/a	0.005432	NP
Lead	PC-5	0.006	9/13/2023	0.006ND	No	100	n/a	0.005432	NP
Lead	PC-6	0.006	9/13/2023	0.006ND	No	100	n/a	0.005432	NP
Lead	AMW-	0.006	9/13/2023	0.006ND	No	100	n/a	0.005432	NP
Lead	AMW-	0.006	9/13/2023	0.006ND	No	100	n/a	0.005432	NP
Lead	SMW-2	0.006	9/13/2023	0.006ND	No	100	n/a	0.005432	NP
Magnesium	PC-5	377	9/13/2023	154	No	0	n/a	0.005432	NP
Magnesium	PC-6	377	9/13/2023	81.1	No	0	n/a	0.005432	NP
Magnesium	AMW-	377	9/13/2023	70.1	No	0	n/a	0.005432	NP
Magnesium	AMW-	377	9/13/2023	178	No	0	n/a	0.005432	NP
Magnesium	SMW-2	377	9/13/2023	166	No	0	n/a	0.005432	NP
Manganese	**PC-5**	**2.33**	**9/13/2023**	**18.5**	**Yes**	**41.18**	**n/a**	**0.005984**	**NP**
Manganese	PC-6	2.33	9/13/2023	0.0113	No	41.18	n/a	0.005984	NP
Manganese	AMW-	2.33	9/13/2023	0.01ND	No	41.18	n/a	0.005984	NP
Manganese	**AMW-**	**2.33**	**9/13/2023**	**3.5**	**Yes**	**41.18**	**n/a**	**0.005984**	**NP**
Manganese	SMW-2	2.33	9/13/2023	0.482	No	41.18	n/a	0.005984	NP
Molybdenum	**PC-5**	**0.00512**	**9/13/2023**	**0.00582**	**Yes**	**93.33**	**n/a**	**0.007649**	**NP**
Molybdenum	**PC-6**	**0.00512**	**9/13/2023**	**0.00611**	**Yes**	**93.33**	**n/a**	**0.007649**	**NP**
Molybdenum	AMW-	0.00512	9/13/2023	0.005ND	No	93.33	n/a	0.007649	NP
Molybdenum	AMW-	0.00512	9/13/2023	0.005ND	No	93.33	n/a	0.007649	NP
Molybdenum	**SMW-2**	**0.00512**	**9/13/2023**	**0.00521**	**Yes**	**93.33**	**n/a**	**0.007649**	**NP**
Potassium	PC-5	22.3	9/13/2023	18.7	No	0	n/a	0.009876	NP
Potassium	PC-6	22.3	9/13/2023	7.29	No	0	n/a	0.009876	NP
Potassium	AMW-	22.3	9/13/2023	3.25	No	0	n/a	0.009876	NP
Potassium	**AMW-**	**22.3**	**9/13/2023**	**30.1**	**Yes**	**0**	**n/a**	**0.009876**	**NP**
Potassium	SMW-2	22.3	9/13/2023	16.6	No	0	n/a	0.009876	NP
Selenium	PC-5	0.0913	9/13/2023	0.01ND	No	41.18	n/a	0.005984	NP
Selenium	PC-6	0.0913	9/13/2023	0.0598	No	41.18	n/a	0.005984	NP
Selenium	AMW-	0.0913	9/13/2023	0.0175	No	41.18	n/a	0.005984	NP
Selenium	AMW-	0.0913	9/13/2023	0.01ND	No	41.18	n/a	0.005984	NP
Selenium	SMW-2	0.0913	9/13/2023	0.01ND	No	41.18	n/a	0.005984	NP
Sodium	PC-5	2650	9/13/2023	269	No	0	n/a	0.005432	NP
Sodium	PC-6	2650	9/13/2023	462	No	0	n/a	0.005432	NP
Sodium	AMW-	2650	9/13/2023	142	No	0	n/a	0.005432	NP

Sodium	AMW-	2650	9/13/2023	1500	No	0	n/a	0.005432	NP
Sodium	SMW-2	2650	9/13/2023	1600	No	0	n/a	0.005432	NP
Sulfate	PC-5	6510	9/13/2023	1890	No	0	n/a	0.005432	NP
Sulfate	PC-6	6510	9/13/2023	1370	No	0	n/a	0.005432	NP
Sulfate	AMW-	6510	9/13/2023	874	No	0	n/a	0.005432	NP
Sulfate	AMW-	6510	9/13/2023	3820	No	0	n/a	0.005432	NP
Sulfate	SMW-2	6510	9/13/2023	3000	No	0	n/a	0.005432	NP

5.6.3 Site-Wide False Positive Rate

Per the regulations, the levels of confidence for prediction limits must be protective of human health and the environment. Per the Unified Guidance, an annual site-wide false positive rate (SWFPR) of 0.1 should be sought when computing prediction limits for the purpose of compliance comparisons. To achieve this goal, kappa (κ) values from tables in the Unified Guidance will be used to calculate parametric prediction limits. Type 1 error rate (α) values for non-parametric prediction limits are obtained from Table 19-20 in the Unified Guidance. These κ and α values take into account the number of well-constituent pairs of concern, the number of sampling events per year, and the retesting protocol used by the facility so that the cumulative UPL false positive rate is approximately 10% per year across the entire facility.

While the test-wise false positive rate of parametric prediction limits can be fine-tuned (adjusted) to achieve the target SWFPR, the false positive rate associated with non-parametric prediction limits is generally much greater than desired and cannot be controlled as easily, often resulting in an inflated SWFPR. The annual test-wise false positive rate of non-parametric prediction limits is predominantly controlled by the size of the background dataset used, but it is also affected by the choice of which background measurement is used as the limit and the re-testing plan used. Using the highest recorded background measurement as the UPL will result in a lower alpha than using the second highest. A higher 1-of n re-testing plan will also reduce the test-wise false positive rate as well as the SWFPR. For this reason, the choice of using the highest or second highest background observation for non-parametric UPLs will depend on the size of the background dataset for each well-constituent pair.

5.7 Retesting and Resampling Program

In accordance with the GMP a 1 of 2 retesting program shall be implemented. The verification resampling program is as follows. If an analytical result is found to be statistically significant, it will be considered an initial statistical exceedance pending the results of a verification resample to be collected during the next regularly scheduled monitoring event, or within 180 days of the date on the analytical report that identified the requirement for verification sampling, whichever

comes first. The facility will be considered in compliance if the original result is not confirmed by the verification resample (i.e., the resample result is less than the statistical limit). However, if the verification resample confirms the apparent exceedance, a final verification resample will be collected immediately for the analyte in question (within 7 days of completing the statistical evaluation). If this final verification resample does not confirm the two prior results, the facility will be considered in compliance and detection monitoring will continue. This "pass one of two resamples" approach is one of the preferred methods described in Section 5.1.3.4 of ASTM (2005). If the final verification resample confirms the apparent exceedance, the procedure specified in Section 5.3 of the GMP will be implemented. Results will not be rejected on the basis of verification resampling. Instead, non-verified exceedances will be included in the background pool annually, unless the result is shown to be a laboratory, field or other error. Results that are errors will be R-qualified to remove them from future statistical evaluations. A table will be maintained identifying all rejected results and the table will be included in the annual monitoring report.

6.0 Conclusions

Groundwater elevations changes between January 2022 and December 2023 ranged from +1.32 feet in AMW-1 and PC-1 to -2.72 feet in DH-96. The resulting groundwater flow direction for the site remains virtually unchanged with only slightly different gradients.

This is the first monitoring report where statistical analysis has been conducted. The statistical analysis found 12 initial SSIs in the downgradient wells which will be dis(confirmed) in the next monitoring report. In the 12 SSIs there are five constituents that are typically observed in groundwater that is contaminated with coal ash. They are Barium, Boron, Fluoride, Manganese, and Molybdenum. In AEC's experience, Barium concentrations can vary significantly spatially so the SSIs for Barium may be from natural conditions. The initial SSIs for Boron in PC-6 and Molybdenum in PC-5, PC-6, and SMW-2 are only slightly elevated, (within 20%) above their respective UPLs. The initial SSIs for Fluoride in PC-6 and Manganese in PC-5 and AMW-2 are well above their respective UPLs and may be indicative of contamination, especially Manganese in PC-5. The observed value marked as an initial SSI for manganese in PC-5 is approximately eight times larger than its UPL.

ATTACHMENT 1

FIELD FORMS

ATTACHMENT 1.1

MARCH 2023 FORMS (WATER LEVELS)

Coors Energy Water Levels

DATE: 03/06/2023 TIME: 930 – 1230

SAMPLING PERSONNEL: SD/SJE

WEATHER/SITE CONDITIONS: Cold, Clear, Very Windy

INSTRUMENT MODEL: Solinst Water Level Meter Model 101

Well Name	Previous Depth (12/02/2022)	Depth to Water (ft.)	Depth to Well (ft.)
PC-1	20.29'	20.46	52.71
PC-2	36.40'	35.99	77.25
PC-5	32.66'	32.66	35.00
PC-6	27.93'	28.12	50.47
AMW-1	28.26'	28.48	59.29
AMW-2	23.48'	23.63	51.1
SMW-1	22.84'	22.81	85.94
SMW-2	33.05'	33.13	96.97
FPW	14.07'	13.90	59.00
DH-96	7.27'	7.56	53.53
DH-122	NM	13.50	52.51

Notes: Probe cleaned with distilled water between each well.
DH-122. fence was placed between the well and the road. Fence jumped, WL taken.
SMW-2 appears to have been damaged by wildlife. Electrical connector to power the pump is chewed up and the tubing was not around the well.

ATTACHMENT 1.2

APRIL 2023 FORMS

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: AMW-1						
Sampled by: SD				**Date:** 4/17/2023		
Weather during sampling: Sunny, Warm, 70F				**Date Sampled:** 4/17/2023		
Well Condition: Good				**Time Sampled:** 1200		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 52.71' (Measured 3/06/2023)						
Depth to Groundwater from Measuring Point: 28.47'						
Height of Water Column: 24.24'						
Single Casing/Tubing Volume of Water: 24.25 gal						
Volume of Water to Purge Prior to Sampling: 72.75 gal						
Volume of Water Actually Purged Prior to Sampling: 74 gal				**Flow Rate:** 1.5 gal/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 12V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 12V Controller			
FIELD PARAMETERS						
	Units	**1 (30g)**	**2 (60g)**	**3 (90g)**	**4**	**5**
pH	**pH units**	7.48	7.55	7.57		
Temperature	**°F**	64.0	62.5	61.5		
Conductance	**mS/cm**	1.87	1.93	1.91		
Turbidity	**NTU/FTU**	--	--	--		
Color of Groundwater	Brownish to light brown					
Odor	none					
Appearance	Silty					

NOTES:
5" Well → CV = 1 g/ft

Purge started 1040
Flow rate slowed
Purge ended 1150
Sampled collected 1200

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: AMW-2						
Sampled by: SD				**Date:** 4/17/2023		
Weather during sampling: Mostly overcast, 63F				**Date Sampled:** 4/18/2023		
Well Condition: Good				**Time Sampled:** 1015		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 51.10' (measured 03/06/2023)						
Depth to Groundwater from Measuring Point: 23.70'						
Height of Water Column: 31.90'						
Single Casing/Tubing Volume of Water: 47.85 gal						
Volume of Water to Purge Prior to Sampling: 143.55 gal						
Volume of Water Actually Purged Prior to Sampling: ~50 gallons				**Flow Rate:** 1.1 gal/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 12V Battery (truck)			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 12V Battery (truck)			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	7.01	6.94	6.83		
Temperature	**°F**	58.3	58.3	58.3		
Conductance	**mS/cm**	6.77	6.77	6.77		
Turbidity	**NTU/FTU**	--				
Color of Groundwater	Clear					
Odor	None					
Appearance	Clean					

NOTES:
6" Well → CV = 1.5 g/ft
45' Cord

Purge Started 0950
Purged Dry 1041

Sample collected following day to allow for recharge
DUP taken

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: AMW-2						
Sampled by: SD				**Date:** 4/17/2023		
Weather during sampling: Mostly overcast, 63F				**Date Sampled:** 4/18/2023		
Well Condition: Good				**Time Sampled:** 1015		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 51.10' (measured 03/06/2023)						
Depth to Groundwater from Measuring Point: 23.70'						
Height of Water Column: 31.90'						
Single Casing/Tubing Volume of Water: 47.85 gal						
Volume of Water to Purge Prior to Sampling: 143.55 gal						
Volume of Water Actually Purged Prior to Sampling: ~50 gallons				**Flow Rate:** 1.1 gal/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 12V Battery (truck)			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 12V Battery (truck)			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	7.01	6.94	6.83		
Temperature	**°F**	58.3	58.3	58.3		
Conductance	**mS/cm**	6.77	6.77	6.77		
Turbidity	**NTU/FTU**	--				
Color of Groundwater	Clear					
Odor	None					
Appearance	Clean					

NOTES:
6" Well → CV = 1.5 g/ft
45' Cord

Purge Started 0950
Purged Dry 1041

Sample collected following day to allow for recharge
DUP taken

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: DH-96						
Sampled by: SD				**Date:** 4/18/2023		
Weather during sampling: Sunny, 68°F				**Date Sampled:** 4/18/2023		
Well Condition: Good				**Time Sampled:** 1500		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 53.53' (Measured 06/06/2023)						
Depth to Groundwater from Measuring Point: 7.3'						
Height of Water Column: 46.23'						
Single Casing/Tubing Volume of Water: 46.23 gal						
Volume of Water to Purge Prior to Sampling: 138.69 gal						
Volume of Water Actually Purged Prior to Sampling: ~145g				**Flow Rate:** 2.5 gpm		
Method of Purging/Equipment: 12V Pump			**Voltage:** 12V Battery			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 12V Battery			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	7.64				
Temperature	**°F**	59.0				
Conductance	**mS/cm**	1.37				
Turbidity	**NTU/FTU**	--	--	--	--	
Color of Groundwater	Clear					
Odor	None					
Appearance	Clear					

NOTES:
5" Well → CV = 1 g/ft
38' Cord

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: DH-122						
Sampled by: SD				**Date:** 4/18/2023		
Weather during sampling: Sunny, 68F				**Date Sampled:** 4/18/2023		
Well Condition: Good				**Time Sampled:** 1500		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 52.51' (Measured 03/06/2023)						
Depth to Groundwater from Measuring Point: 13.41'						
Height of Water Column: 39.10'						
Single Casing/Tubing Volume of Water: 39.10 gal						
Volume of Water to Purge Prior to Sampling: 117.3 gal						
Volume of Water Actually Purged Prior to Sampling: 118 gal				**Flow Rate:** 2.5 gal/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 13V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 11V Controller			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	7.61				
Temperature	**°F**	61.0				
Conductance	**mS/cm**	2.16				
Turbidity	**NTU/FTU**	--	--	--	--	
Color of Groundwater	Clear					
Odor	Odorless					
Appearance	Clear					

NOTES:
5" Well → CV = 1 g/ft
35' Cord

Started purge 1345
Purge completed 1530

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: SMW-1						
Sampled by: SD				**Date:** 4/18/2023		
Weather during sampling:				**Date Sampled:** 4/18/2023		
Well Condition: good				**Time Sampled:** 1415		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 85.94' (03/06/2023)						
Depth to Groundwater from Measuring Point: 22.56						
Height of Water Column:						
Single Casing/Tubing Volume of Water:						
Volume of Water to Purge Prior to Sampling:						
Volume of Water Actually Purged Prior to Sampling:				**Flow Rate:**		
Method of Purging/Equipment:			**Voltage:**			
Method of Sampling/Equipment:			**Voltage:**			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**					
Temperature	**°F**					
Conductance	**mS/cm**					
Turbidity	**NTU/FTU**					
Color of Groundwater						
Odor						
Appearance						
NOTES:						

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY		**LOCATION: Keenesburg Mine, Keenesburg, Colorado**				
WELL NAME: SMW-2						
Sampled by: SD				**Date:** 4/18/2023		
Weather during sampling: Sunny, no breeze, 75F				**Date Sampled:** 4/18/2023		
Well Condition: Good				**Time Sampled:** 1350		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 96.97' (Measured 03/06/2023)						
Depth to Groundwater from Measuring Point: 32.34'						
Height of Water Column: 64.63'						
Single Casing/Tubing Volume of Water: 53.64 gallons						
Volume of Water to Purge Prior to Sampling: 160.92 gallons						
Volume of Water Actually Purged Prior to Sampling: 156 gallons				**Flow Rate:** 1.3 gal / min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 15V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 12V Controller			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	6.69				
Temperature	**°F**	72.2				
Conductance	**mS/cm**	3.35				
Turbidity	**NTU/FTU**	--	--	--		
Color of Groundwater	Clear					
Odor	None					
Appearance	Clear					

NOTES:
4.5" Well → Single Casing = 0.83 g/ft

Started purge 1105.
Purged at 1305

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: FPW						
Sampled by: SD				**Date:** 4/17/2023		
Weather during sampling: Cloudy, 63F				**Date Sampled:** 4/17/2023		
Well Condition: Good				**Time Sampled:** 1320		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 59.30'(Measured 03/06/2023)						
Depth to Groundwater from Measuring Point: 14.44'						
Height of Water Column: 44.86'						
Single Casing/Tubing Volume of Water: 134.58 gal						
Volume of Water to Purge Prior to Sampling: 403.74 gal						
Volume of Water Actually Purged Prior to Sampling: 410 gal				**Flow Rate:** 6.5 L/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 12V			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 12V			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	7.62	7.64	7.65		
Temperature	**°F**	68.1	66.0	65.4		
Conductance	**mS/cm**	1.35	1.34	1.34		
Turbidity	**NTU/FTU**	--				
Color of Groundwater	Yellow-brown tinge					
Odor	Slight odor, earthy					
Appearance	Clear					

NOTES:
8" Well → CV = 3 g/ft
WL 15.5' after purge
4 hours until purged

Order of sampling from SAP:
1 – FPW
2 – DH-122
3 – DH-96
4 – AMW-1
5 – SMW-2
6 – AMW-2

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: PC-1						
Sampled by: SD				**Date:** 4/17/2023		
Weather during sampling: Partly cloudy, slight breeze, 65F				**Date Sampled:** 4/18/2023		
Well Condition: Good				**Time Sampled:** 1045		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 52.71'						
Depth to Groundwater from Measuring Point: 20.38'						
Height of Water Column: 28.33'						
Single Casing/Tubing Volume of Water: 4.73 gallons						
Volume of Water to Purge Prior to Sampling: 14.2 gallons						
Volume of Water Actually Purged Prior to Sampling: 15 gallons				**Flow Rate:** 1.5 gal/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 15V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 11V Controller			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	7.35				
Temperature	**°F**	58.5				
Conductance	**mS/cm**	3.44				
Turbidity	**NTU/FTU**	--	--			
Color of Groundwater	Greyish brown					
Odor	None					
Appearance	Silty					

NOTES:
2-inch well → Water Column * 0.167 = Casing Volume
45' Cord → 15V Controller for purge

Started purge 4/17 at 10:38am
Sampled on 4/18

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: PC-2						
Sampled by: SD				**Date:** 4/17/2023		
Weather during sampling: Day 1 Sunny 67F; Day 2 cloudy 65F				**Date Sampled:** 4/18/2023		
Well Condition: Good				**Time Sampled:** 0930		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 77.25'						
Depth to Groundwater from Measuring Point: 36.95'						
Height of Water Column: 40.25'						
Single Casing/Tubing Volume of Water: 6.3g						
Volume of Water to Purge Prior to Sampling: 19g						
Volume of Water Actually Purged Prior to Sampling: ~6g				**Flow Rate:** 0.75 gpm		
Method of Purging/Equipment: 12V Pump			**Voltage:** 14 V			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 14 V			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	6.87	6.52	6.78		
Temperature	**°F**	56.4	56.5	56.5		
Conductance	**mS/cm**	10.02	10.03	10.02		
Turbidity	**NTU/FTU**					
Color of Groundwater	Clear					
Odor	None					
Appearance	Clear					

NOTES:
2-inch well
70' Cord
Purged dry after ~ 15 minutes
Recovered for sampling following day (4/18/23)

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: PC-5						
Sampled by: SD				**Date:** 4/17/2023		
Weather during sampling: Windy, Partly Cloudy, 65F				**Date Sampled:** 4/18/2023		
Well Condition: Good				**Time Sampled:** 1400		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 35.00'						
Depth to Groundwater from Measuring Point: 32.40'						
Height of Water Column: 2.6'						
Single Casing/Tubing Volume of Water: 2.9g						
Volume of Water to Purge Prior to Sampling: 8.8g						
Volume of Water Actually Purged Prior to Sampling: 9g				**Flow Rate:** 1.25 gpm		
Method of Purging/Equipment: 12V Pump			**Voltage:** 14V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 10V Controller			
FIELD PARAMETERS						
	Units	**1 (3g)**	**2 (6g)**	**3 (9g)**	**4**	**5**
pH	**pH units**	6.63	6.86	6.65		
Temperature	**°F**	69.0	69.5	69.5		
Conductance	**mS/cm**	3.38	3.38	3.38		
Turbidity	**NTU/FTU**	--	--	--		
Color of Groundwater	Light grey					
Odor	None					
Appearance	Slightly slity					

NOTES:
Single Casing Volume = Height of Water Column x 0.167

Started purge 1345
Stopped 1400

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: PC-6						
Sampled by: SD				**Date:** 4/17/2023		
Weather during sampling: Sunny, clear, slight breeze 75F				**Date Sampled:** 4/17/2023		
Well Condition: Good				**Time Sampled:** 1500		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well from Measuring Point: 50.47'						
Depth to Groundwater from Measuring Point: 28.13'						
Height of Water Column: 21.34'						
Single Casing/Tubing Volume of Water: 3.5g						
Volume of Water to Purge Prior to Sampling: 10.5g						
Volume of Water Actually Purged Prior to Sampling: 11g				**Flow Rate:** 1.5 gpm		
Method of Purging/Equipment: 12V Pump			**Voltage:** 14V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 10V Controller			
FIELD PARAMETERS						
	Units	**1 (4g)**	**2 (8g)**	**3 (12g)**	**4**	**5**
pH	**pH units**	7.22	7.28	7.30		
Temperature	**°F**	59.6	58.8	57.8		
Conductance	**mS/cm**	2.42	2.48	2.50		
Turbidity	**NTU/FTU**	--	--	--		
Color of Groundwater	Clear					
Odor	None					
Appearance	Clean					

NOTES:

Started purge 1415
Purge ended 1435

ATTACHMENT 1.3

SEPTEMBER 2023 FORMS

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: AMW-1						
Sampled by: RDS/SJE				**Date: 9/12/13**		
Weather during sampling: Clear, Calm, 70-80°F				**Date Sampled: 9/12/13**		
Well Condition: Good				**Time Sampled:**		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 52.71' (3/06/2023)						
Depth to Groundwater from Measuring Point: 26.62'						
Height of Water Column: 26.09'						
Single Casing/Tubing Volume of Water: 26.09 Gal						
Volume of Water to Purge Prior to Sampling: 78.27 Gal						
Volume of Water Actually Purged Prior to Sampling: ≈80 Gal				**Flow Rate:** 1.81 Gal/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 14V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 12V Controller			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	7.69	7.74	7.77		
Temperature	**°F**	60.5	60.3	61.4		
Conductance	**mS/cm**	1.80	1.77	1.77		
Turbidity	**NTU/FTU**	--	--	--		
Color of Groundwater	Tan					
Odor	None					
Appearance	Slightly hazy					

NOTES: 5" Well → CV = 1 g/ft
Dup Collected
Start pump 11:07, sample 11:49
Field parameters taken every 14 mins for each casing volume purged

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY		**LOCATION: Keenesburg Mine, Keenesburg, Colorado**				
WELL NAME: AMW-2						
Sampled by: RDS/SJE				**Date: 9/12/23**		
Weather during sampling: Calm, Partly Cloudy, Cool				**Date Sampled: 9/13/23**		
Well Condition: Good				**Time Sampled: 9:00**		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 51.10' (3/06/2023)						
Depth to Groundwater from Measuring Point: 23.23'						
Height of Water Column:						
Single Casing/Tubing Volume of Water:						
Volume of Water to Purge Prior to Sampling:						
Volume of Water Actually Purged Prior to Sampling:				**Flow Rate:** L/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 12V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 8.5V Controller			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	6.82				
Temperature	**°F**	59.3				
Conductance	**mS/cm**	6.66				
Turbidity	**NTU/FTU**	--				
Color of Groundwater	Almost clear					
Odor	None					
Appearance	Some particulates					

NOTES:
6" Well → CV = 1.5 g/ft
Purged dry 9/12. Sampled 9/13

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: DH-96						
Sampled by: RDS/SJE				**Date: 9/13/23**		
Weather during sampling: Clear, Calm, 70-80°F				**Date Sampled: 9/13/23**		
Well Condition: Good				**Time Sampled: 14:45**		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 53.53' (3/06/2023)						
Depth to Groundwater from Measuring Point: 6.63'						
Height of Water Column: 46.90'						
Single Casing/Tubing Volume of Water: 46.90 Gal						
Volume of Water to Purge Prior to Sampling: 140.7 Gal						
Volume of Water Actually Purged Prior to Sampling: ≈145 Gal				**Flow Rate:** 1.9 Gal/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 14V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 12V Controller			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	7.40	7.44	7.44		
Temperature	**°F**	61.4	61.4	61.4		
Conductance	**mS/cm**	1.71	1.70	1.72		
Turbidity	**NTU/FTU**	--	--	--		
Color of Groundwater	Clear					
Odor	None					
Appearance	Clean					

NOTES:
5" Well → CV = 1 g/ft
Start pump 12:48
Field Parameters taken every 25 minutes for each casing volume purged
Elbow missing for tubing

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: DH-122						
Sampled by: RDS/SJE				**Date: 9/13/23**		
Weather during sampling: Clear, Calm, 70-80°F				**Date Sampled: 9/13/23**		
Well Condition: Good				**Time Sampled: 15:45**		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 52.51' (3/06/2023)						
Depth to Groundwater from Measuring Point: 12.73'						
Height of Water Column: 39.78'						
Single Casing/Tubing Volume of Water: 39.78 Gal						
Volume of Water to Purge Prior to Sampling: 119.2 Gal						
Volume of Water Actually Purged Prior to Sampling: ≈120 Gal				**Flow Rate:** 1.84 Gal/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 12V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 7.5 Controller			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	7.47	7.59	7.59		
Temperature	**°F**	69.1	62.1	61.5		
Conductance	**mS/cm**	2.04	2.14	2.16		
Turbidity	**NTU/FTU**	--	--	--		
Color of Groundwater	Clear					
Odor	None					
Appearance	Clean					

NOTES:

5" Well → CV = 1 g/ft

Cover Bucket Broken

Start pump 14:25

Field Parameters taken every 22 minutes for each casing volume purged

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY		**LOCATION: Keenesburg Mine, Keenesburg, Colorado**				
WELL NAME: FPW						
Sampled by: RDS/SJE				**Date: 9/12/23**		
Weather during sampling: Calm, Wind 0-5 mph, 70-80˚F				**Date Sampled: 9/12/23**		
Well Condition: Good				**Time Sampled: 13:00**		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 59.30' (3/06/2023)						
Depth to Groundwater from Measuring Point: 12.69'						
Height of Water Column: 46.61'						
Single Casing/Tubing Volume of Water: 139.8 Gal						
Volume of Water to Purge Prior to Sampling: 419.5 Gal						
Volume of Water Actually Purged Prior to Sampling: ≈ 420 Gal				**Flow Rate:** 1.71 Gal/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 12V Battery			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 12V Battery			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	7.37				
Temperature	**°F**	62.5				
Conductance	**mS/cm**	1.44				
Turbidity	**NTU/FTU**	--				
Color of Groundwater	Clear					
Odor	None					
Appearance	Clean					

NOTES:
8" Well → CV = 3 g/ft
Order of sampling from SAP:
1 – FPW
2 – DH-122
3 – DH-96
4 – AMW-1
5 – SMW-2
6 – AMW-2
Start pump 8:40
Checked 12:45, Flow rate was steady
Sampled 13:00

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY		**LOCATION: Keenesburg Mine, Keenesburg, Colorado**				
WELL NAME: PC-1						
Sampled by: RDS/SJE				**Date: 9/12/23**		
Weather during sampling: Calm, Overcast, Cool				**Date Sampled: 9/13/23**		
Well Condition: Good				**Time Sampled: 8:45**		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 52.71' (3/06/2023)						
Depth to Groundwater from Measuring Point: 18.61'						
Height of Water Column:						
Single Casing/Tubing Volume of Water:						
Volume of Water to Purge Prior to Sampling:						
Volume of Water Actually Purged Prior to Sampling:				**Flow Rate:** L/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 12V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 7.5V Controller			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	7.49				
Temperature	**°F**	57.9				
Conductance	**mS/cm**	3.27				
Turbidity	**NTU/FTU**	--				
Color of Groundwater	White hue					
Odor	None					
Appearance	Slight turbidity					

NOTES:
45' cord

Purged dry on 9/12. Sampled 9/13

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY		**LOCATION: Keenesburg Mine, Keenesburg, Colorado**				
WELL NAME: PC-2						
Sampled by: RDS/SJE				**Date: 9/12/23**		
Weather during sampling: Clear, Calm, 70-80˚F				**Date Sampled: 9/13/23**		
Well Condition: Good				**Time Sampled: 9:30**		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 77.25' (3/06/2023)						
Depth to Groundwater from Measuring Point: 36.07						
Height of Water Column:						
Single Casing/Tubing Volume of Water:						
Volume of Water to Purge Prior to Sampling:						
Volume of Water Actually Purged Prior to Sampling:				**Flow Rate:** L/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 16V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 15.5V Controller			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	68.3				
Temperature	**°F**	62.1				
Conductance	**mS/cm**	9.93				
Turbidity	**NTU/FTU**	--				
Color of Groundwater	Clear					
Odor	None					
Appearance	Clean					

NOTES:
Purged dry 9/12. Sampled 9/13

AEC *AMERICAN ENVIRONMENTAL CONSULTING, LLC*

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY			**LOCATION: Keenesburg Mine, Keenesburg, Colorado**			
WELL NAME: PC-5						
Sampled by: RDS/SJE				**Date: 9/13/23**		
Weather during sampling: Clear, Calm, 70-80°F				**Date Sampled: 9/13/23**		
Well Condition: Good				**Time Sampled: 12:30**		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 52.60' (9/13/2023)						
Depth to Groundwater from Measuring Point: 32.48'						
Height of Water Column: 20.12'						
Single Casing/Tubing Volume of Water: 3.36 gal						
Volume of Water to Purge Prior to Sampling: 10.08 gal						
Volume of Water Actually Purged Prior to Sampling: ≈11 gal				**Flow Rate:** 0.62 Gal/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 12V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 12V Controller			
FIELD PARAMETERS						
	Units	**1 (3.5 gal)**	**2(7 gal)**	**3(10.5 gal)**	**4**	**5**
pH	**pH units**	6.67	6.65	6.65		
Temperature	**°F**	62.3	63.1	65.2		
Conductance	**mS/cm**	3.45	3.39	3.43		
Turbidity	**NTU/FTU**	--	--	--		
Color of Groundwater	Tannish					
Odor	None					
Appearance	Slightly Opaque					

NOTES:
Single Casing Volume = Height of Water Column x 0.167
Measured well depth since previous measurement was erroneous.
Filled 3.5 gal bucket for each casing purge

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY		**LOCATION: Keenesburg Mine, Keenesburg, Colorado**				
WELL NAME: PC-6						
Sampled by: RDS/SJE				**Date: 9/12/23**		
Weather during sampling: Clear, 0-5 mph wind, 70-80°F				**Date Sampled: 9/12/23**		
Well Condition: Good				**Time Sampled:**		
EVACUATION DATA						
Description of Measuring Point: Top of PVC						
Depth of Well From Measuring Point: 50.47' (3/06/2023)						
Depth to Groundwater from Measuring Point: 26.21'						
Height of Water Column: 24.26'						
Single Casing/Tubing Volume of Water: 4.05 Gal						
Volume of Water to Purge Prior to Sampling: 12.15 Gal						
Volume of Water Actually Purged Prior to Sampling: ≈18 Gal				**Flow Rate:** 1.5 Gal/min		
Method of Purging/Equipment: 12V Pump			**Voltage:** 14V Controller			
Method of Sampling/Equipment: 12V Pump			**Voltage:** 14V Controller			
FIELD PARAMETERS						
	Units	**1**	**2**	**3**	**4**	**5**
pH	**pH units**	9.19	7.42	7.43	7.45	
Temperature	**°F**	67.5	61.0	59.8	59.3	
Conductance	**mS/cm**	2.42	2.59	2.64	2.65	
Turbidity	**NTU/FTU**	--	--	--	--	
Color of Groundwater	Whiteish, slight haze					
Odor	None					
Appearance	Slightly Turbid					

NOTES:
Field Parameters taken every 3 minutes
4th Field Parameter taken for stability

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC

GROUNDWATER SAMPLING FIELD DATA FORM

OWNER: COORS ENERGY	**LOCATION: Keenesburg Mine, Keenesburg, Colorado**
WELL NAME: SMW-2	
Sampled by: RDS/SJE	**Date: 9/13/23**
Weather during sampling: Clear, Calm, 65-75°F	**Date Sampled: 9/13/23**
Well Condition: Good	**Time Sampled:** 11:45

EVACUATION DATA

Description of Measuring Point: Top of PVC	
Depth of Well From Measuring Point: 96.97' (3/06/2023)	
Depth to Groundwater from Measuring Point: 32.78'	
Height of Water Column: 64.19'	
Single Casing/Tubing Volume of Water: 53.13 Gal	
Volume of Water to Purge Prior to Sampling: 159.83 Gal	
Volume of Water Actually Purged Prior to Sampling: ≈160 Gal	**Flow Rate:** 1.36 Gal/min
Method of Purging/Equipment: 12V Pump	**Voltage:** 15V Controller
Method of Sampling/Equipment: 12V Pump	**Voltage:** 12V Controller

FIELD PARAMETERS

	Units	1	2	3	4	5
pH	**pH units**	8.85	7.84	6.97		
Temperature	**°F**	61.5	62.4	61.2		
Conductance	**mS/cm**	6.85	6.80	6.84		
Turbidity	**NTU/FTU**	--	--	--		
Color of Groundwater	Clear					
Odor	Light fishy/smokey smell					
Appearance	Clean					

NOTES:

4.5" Well → Single Casing = 0.83 g/ft

Start Pump 9:40

Field parameters taken every 39 minutes for each casing volume purged

Elbow piece missing for tubing

ATTACHMENT 1.4

DECEMBER 2023 FORMS (WATER LEVELS)

Coors Energy Water Levels

DATE: 12/18/23 TIME: 3:00-4:00 pm

SAMPLING PERSONNEL: RDS

WEATHER/SITE CONDITIONS: Clear, Calm, Aprox. 50 F

INSTRUMENT MODEL: SOLINIST Model 101

Well Name	Previous Depth (09/12/2023)	Depth to Water (ft.)	Depth to Well (ft.)
PC-1	18.61	18.97	52.71
PC-2	36.07	36.19	77.25
PC-5	32.48	32.49	52.60
PC-6	26.21	26.75	50.47
AMW-1	26.62	26.94	52.71
AMW-2	23.23	23.38	51.10
SMW-1	22.60	23.02	85.94
SMW-2	32.78	33.29	96.97
FPW	12.90	13.21	59.30
DH-96	6.63	9.99	53.53
DH-122	12.73	12.70	52.51

Notes: Probe cleaned with distilled water between each well.

ATTACHMENT 1.5

HISTORIC GROUNDWATER

Historical Static Ground Water Data

2019

Date	12/18/2019
Well ID	Depth in Feet
PC-1	23.88
PC-2	39.85
PC-5	34.12
PC-6	27.09
AMW-1	NM
AMW-2	25.6
SMW-1	NM
SMW-2	NM
FPW	NM
DH-96	NM
DH-122	NM

2020

Date	4/24/2020	9/22/2020
Well ID	Depth in Feet	Depth in Feet
PC-1	23.48	22.97
PC-2	37.96	37.78
PC-5	33.7	33.61
PC-6	27.37	26.78
AMW-1	28	27.76
AMW-2	25.8	25.59
SMW-1	NM	NM
SMW-2	34.25	34.18
FPW	NM	NM
DH-96	NM	NM
DH-122	NM	NM

2021

Date	2/9/2021	4/19/2021	9/28-30/21
Well ID	Depth in Feet	Depth in Feet	Depth in Feet
PC-1	22.62	22.47	21.55
PC-2	37.41	37.14	37.3
PC-5	33.34	33.38	33.15
PC-6	27	27.31	27.08
AMW-1	27.76	28.13	27.36
AMW-2	24.99	25.09	25.41
SMW-1	23.61	23.6	23.42
SMW-2	33.86	33.87	33.5
FPW	12.27	11.9	14.64
DH-96	5.11	4.35	6.97
DH-122	13	12.93	13.08

2022

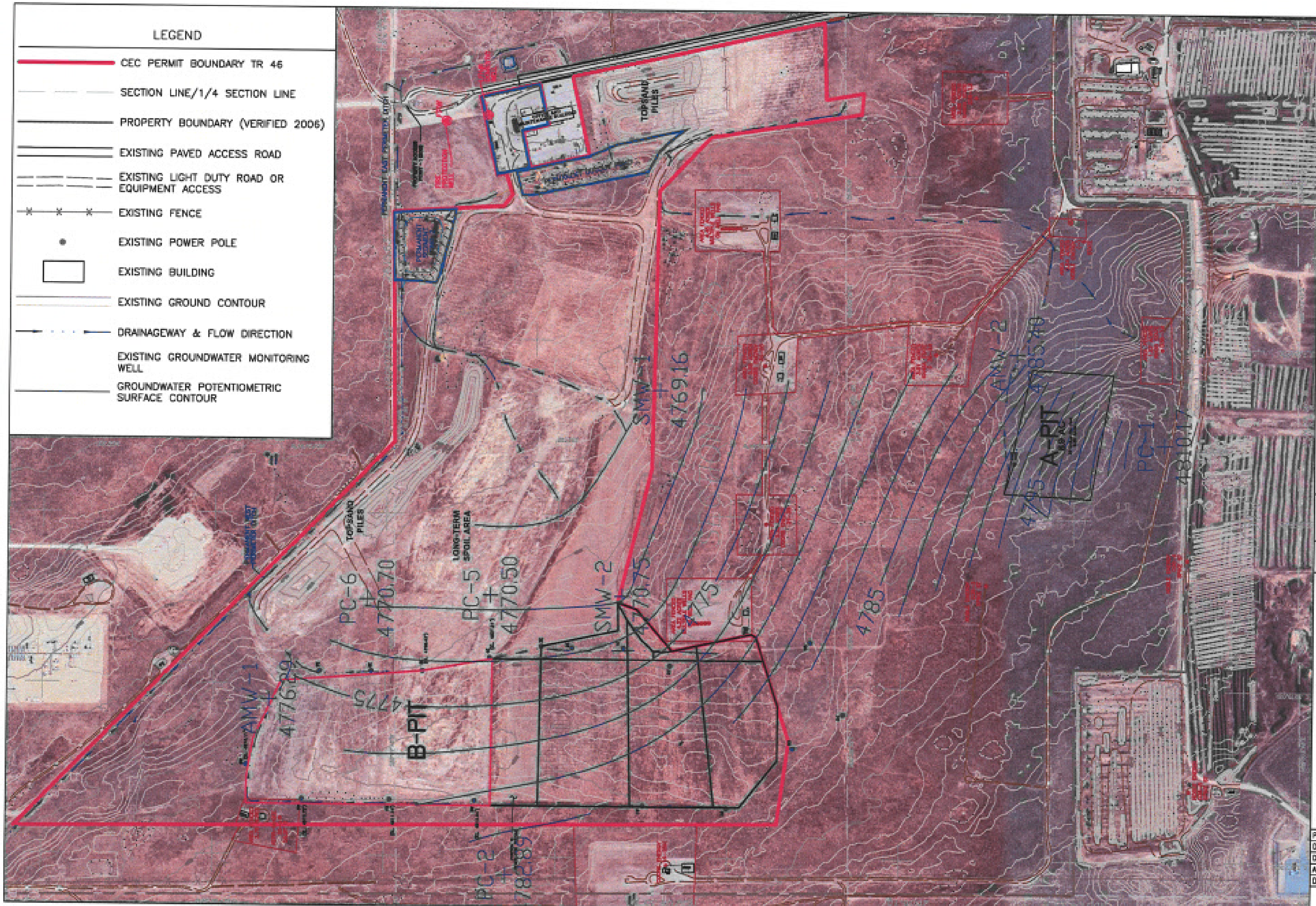
Date	1/12/2022	4/29/2022	9/27/2022	12/2/2022
Well ID	Depth in Feet	Depth in Feet	Depth in Feet	Depth in Feet
PC-1	21.28	21.42	20.97	20.29
PC-2	37.11	36.69	26.53	36.4
PC-5	33	33.37	32.81	32.66
PC-6	27.09	28.1	27.82	27.93
AMW-1	27.35	28.33	28.2	28.26
AMW-2	24.38	23.8	24.79	23.48
SMW-1	23.48	23	23.81	22.84
SMW-2	33.74	33.23	33.45	33.05
FPW	13.16	13.64	13.96	14.07
DH-96	6.46	6.75	7.55	7.27
DH-122	13	13.61	14.09	NM

2023

Date	3/6/2023	4/17-18/23	9/12-13/23	12/18/2023
Well ID	Depth in Feet	Depth in Feet	Depth in Feet	Depth in Feet
PC-1	20.46	20.38	18.61	18.97
PC-2	35.99	36.95	36.07	36.19
PC-5	32.66	32.4	32.48	32.49
PC-6	28.12	28.13	26.21	26.75
AMW-1	28.48	28.47	26.62	26.94
AMW-2	23.63	23.7	23.23	23.38
SMW-1	22.81	22.56	22.6	23.02
SMW-2	33.13	32.34	32.78	33.29
FPW	13.9	14.44	12.69	13.21
DH-96	7.56	7.3	6.63	9.99
DH-122	13.5	13.41	12.73	12.7

ATTACHMENT 2

QUARTERLY POTENTIOMETRIC SURFACE CONTOUR MAPS



AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC.

8191 Southpark Lane, Suite 107, Littleton, CO 80120
phone 303-948-7733 fax 303-948-7739

0 500'

REV. NO.	DATE	REVISION DESCRIPTION
0	02/22/24	ISSUED FOR REPORT

REVISIONS

1st QUARTER 2023 GROUNDWATER ELEVATION AND POTENTIOMETRIC SURFACE MAP

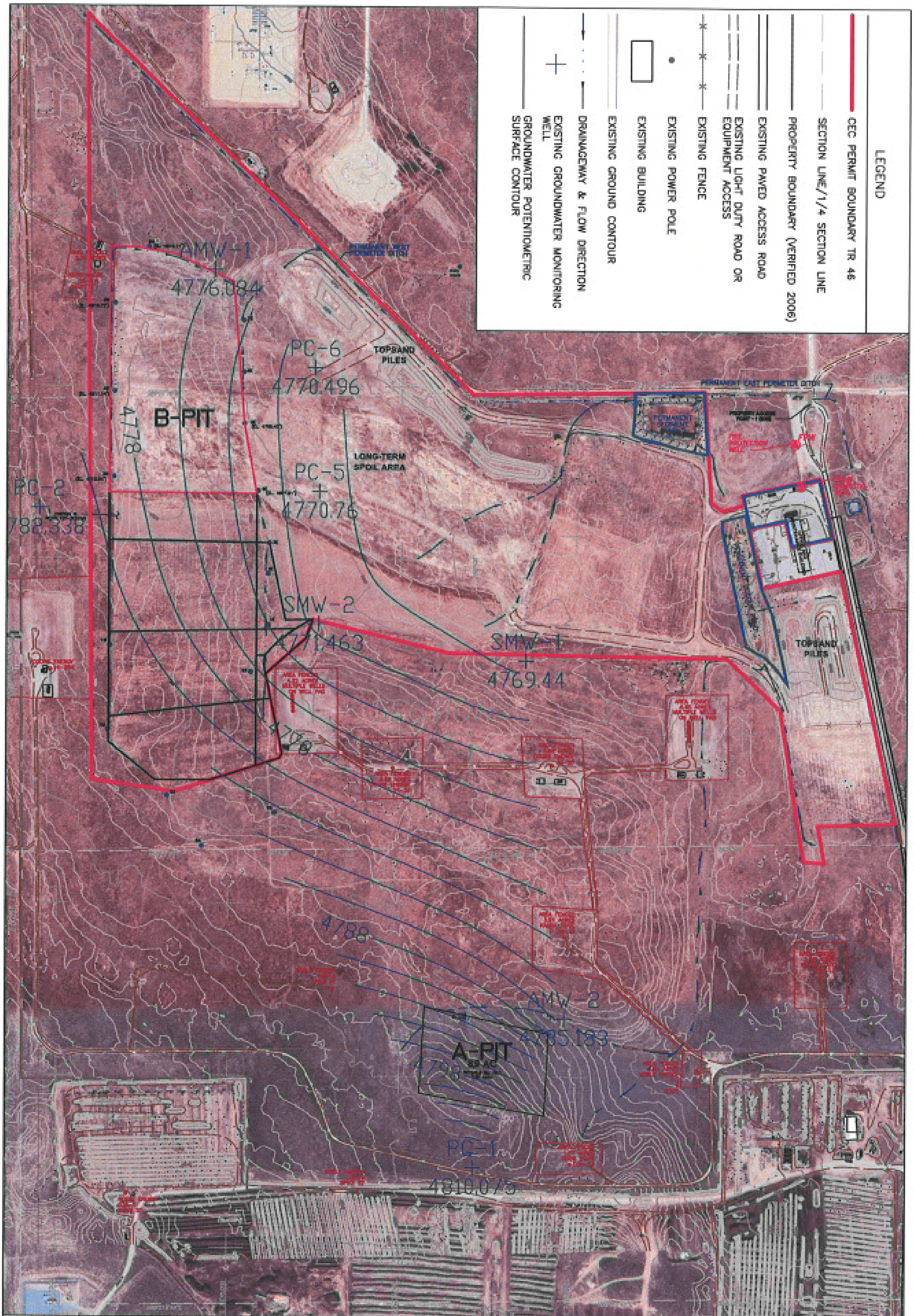
COORS ENERGY COMPANY

KEENESBURG, COLORADO

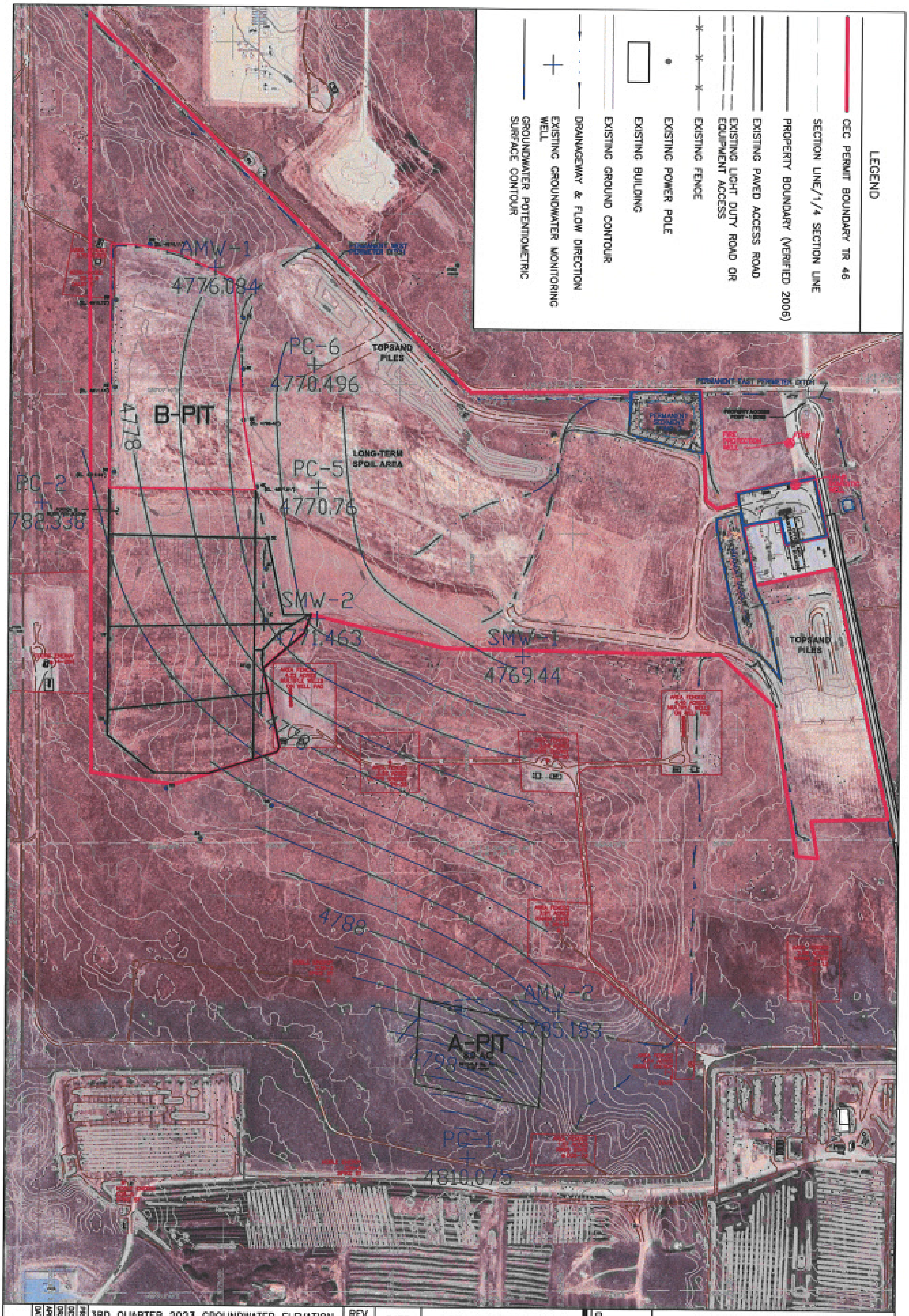
2023 1st Qtr GW Elevation
Approximate Contour Mapping

PROJECT NO:	--
DESIGNED BY:	AEC
DRAWN BY:	MBT
APPROVED BY:	CJA
DATE:	02/22/24

FIGURE 2-1 OF 2-4



PROJECT NO: —	2ND QUARTER 2023 GROUNDWATER ELEVATION AND POTENTIOMETRIC SURFACE MAP	REV. NO. / DATE / REVISION DESCRIPTION	**AEC** AMERICAN ENVIRONMENTAL CONSULTING, LLC.
DESIGNED BY: AEC	COORS ENERGY COMPANY	0 / 02/22/24 / ISSUED FOR REPORT	8191 Southpark Lane, Suite 107, Littleton, CO 80120
DRAWN BY: RBS	KEENESBURG, COLORADO	REVISIONS	phone 303-948-7733 fax 303-948-7739
APPROVED BY: CJA	2023 2nd Qtr GW Elevation Approximate Contour Map.dwg		
DATE: 02/22/24			
FIGURE 2-2 OF 2-4			



3RD QUARTER 2023 GROUNDWATER ELEVATION AND POTENTIOMETRIC SURFACE MAP	REV. NO.	DATE	REVISION DESCRIPTION
COORS ENERGY COMPANY	0	02/22/24	ISSUED FOR REPORT
KEENESBURG, COLORADO — 2023 3rd Qtr GW Elevation Approximate Contour Map.dwg			REVISIONS

PROJECT NO: --
DESIGNED BY: AEC
DRAWN BY: RDS
APPROVED BY: CJA
DATE: 02/22/24

FIGURE 2-3 OF 2-4

0 500'

AEC AMERICAN ENVIRONMENTAL CONSULTING, LLC.

8191 Southpark Lane, Suite 107, Littleton, CO 80120
phone 303-948-7733 fax 303-948-7739

4TH QUARTER 2023 GROUNDWATER ELEVATION AND POTENTIOMETRIC SURFACE MAP
COORS ENERGY COMPANY
KEENESBURG, COLORADO
2033 4th Qtr GW Elevation Approximate Contour Map Modified
REVISIONS
REV. NO.
DATE
REVISION DESCRIPTION
0
02/22/24
ISSUED FOR REPORT
PROJECT NO.
DESIGNED BY: AEC
DRAWN BY: RDS
APPROVED BY: CJA
DATE: 02/22/24
FIGURE 2-4 OF 2-4
AEC
AMERICAN ENVIRONMENTAL CONSULTING, LLC.
8191 Southpark Lane, Suite 107, Littleton, CO 80120
Phone 303-948-7733 Fax 303-948-7739
0
500'
LEGEND
CEC PERMIT BOUNDARY TR 46
SECTION LINE/1/4 SECTION LINE
PROPERTY BOUNDARY (VERIFIED 2006)
EXISTING PAVED ACCESS ROAD
EXISTING LIGHT DUTY ROAD OR EQUIPMENT ACCESS
EXISTING FENCE
EXISTING POWER POLE
EXISTING BUILDING
EXISTING GROUND CONTOUR
DRAINAGEWAY & FLOW DIRECTION
EXISTING GROUNDWATER MONITORING WELL
GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR
A-PIT
B-PIT
LONG-TERM SPOIL AREA
TOPSAND PILES
PERMANENT CAST PERIMETER BERM
AMW-1
AMW-2
SMW-1
SMW-2
PC-1
PC-2
PC-5
PC-6
4811.485
4795.503
4788
4768.98
4770.513
4770.67
4774.876
4777.014
4783.098

ATTACHMENT 2.1

PRE-MINING POTENTIOMETRIC SURFACE CONTOUR MAP

PRE-EXISTING GROUNDWATER POTENTIOMETRIC SURFACE MAP
COORS ENERGY COMPANY
KEENESBURG, COLORADO
PREEXISTING GW Contour Mapping
PROJECT NO: -
DESIGNED BY: AEC
DRAWN BY: RSG
APPROVED BY: CJA
DATE: 05/22/24
FIGURE 2-5 OF 2-5
REV. NO.
DATE
REVISION DESCRIPTION
0
03/22/24
ISSUED FOR REPORT
REVISIONS
0
500'
AMERICAN ENVIRONMENTAL CONSULTING, LLC.
8191 Southpark Lane, Suite 107, Littleton, CO 80120
Phone 303-948-7733 Fax 303-948-7739
LEGEND
CEC PERMIT BOUNDARY TR 46
SECTION LINE/1/4 SECTION LINE
PROPERTY BOUNDARY (VERIFIED 2006)
EXISTING PAVED ACCESS ROAD
EXISTING LIGHT DUTY ROAD OR EQUIPMENT ACCESS
EXISTING FENCE
EXISTING POWER POLE
EXISTING BUILDING
EXISTING GROUND CONTOUR
DRAINAGEWAY & FLOW DIRECTION
EXISTING GROUNDWATER MONITORING WELL
PRE-EXISTING GROUNDWATER POTENTIOMETRIC SURFACE CONTOUR
A-PIT
B-PIT
LONG-TERM SPOIL AREA
TOPSOIL PILES
SMW-1
SMW-2
AMW-1
AMW-2
PC-1
PC-2
PC-5
PC-6
4760
4765
4770
4775
4780
4785
4790

ATTACHMENT 3

LABORATORY ANALYTICAL REPORTS

ATTACHMENT 3.1

APRIL 2023 REPORT

ANALYTICAL REPORT

April 28, 2023

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

American Environmental - CO

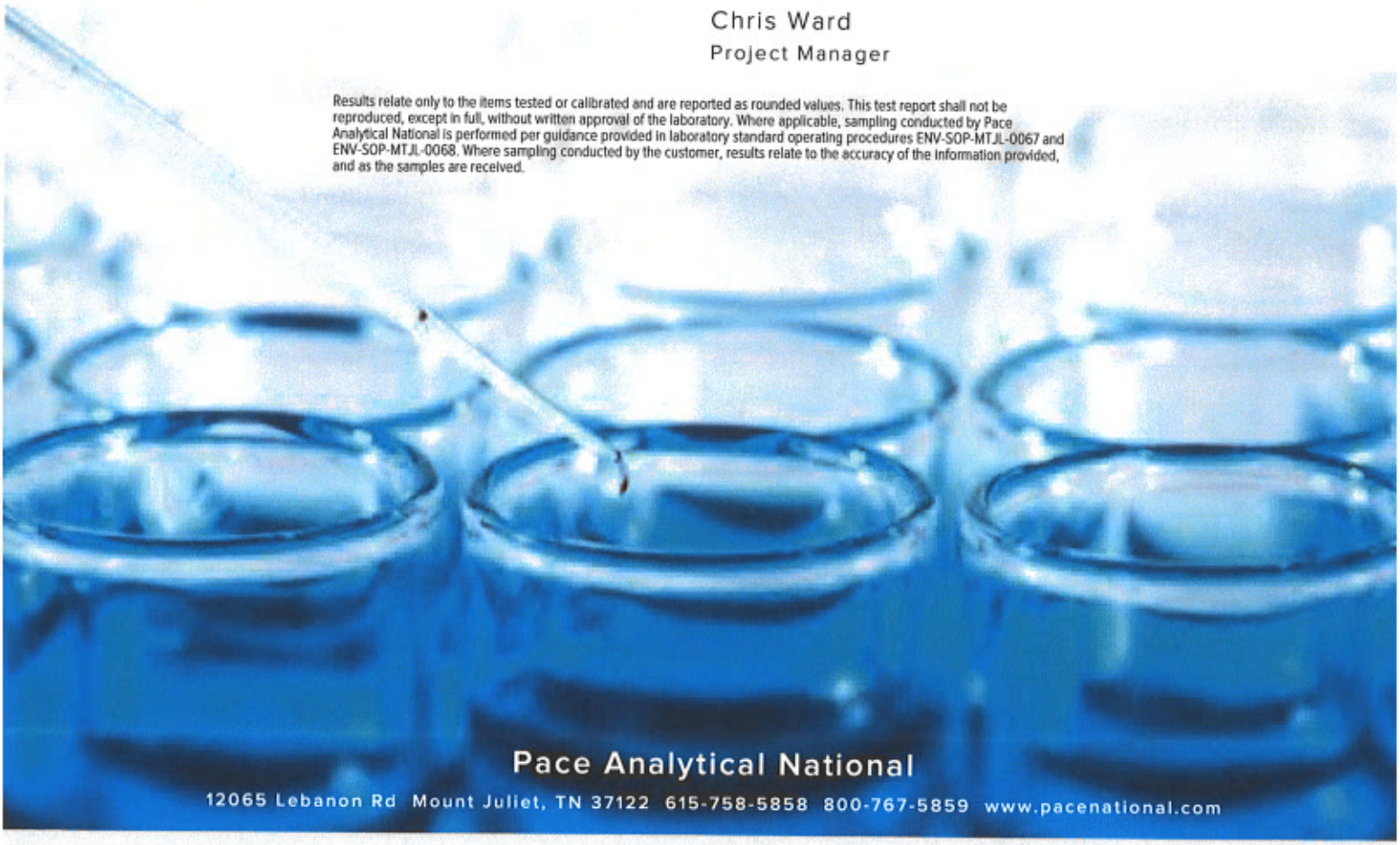
Sample Delivery Group:	L1607484
Samples Received:	04/20/2023
Project Number:	
Description:	Keenesburg Mine

Report To:

Skyler Elder
8191 Southpark Lane
Suite 107
Littleton, CO 80120

Entire Report Reviewed By: Chris Ward

Chris Ward
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

PC-1 L1607484-01 GW

Collected by | Collected date/time: 04/18/23 16:18 | Received date/time: 04/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2046379	1	04/27/23 13:03	04/27/23 13:03	SPL	Mt. Juliet, TN
Calculated Results	WG2046379	1	04/26/23 23:49	04/26/23 23:49	ABL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2047525	1	04/24/23 13:42	04/24/23 15:02	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2046185	1	04/21/23 12:38	04/21/23 12:38	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049229	10	04/26/23 23:04	04/26/23 23:04	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/26/23 23:49	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 13:03	SPL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 01:01	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 09:08	ABL	Mt. Juliet, TN

PC-2 L1607484-02 GW

Collected by | Collected date/time: 04/18/23 09:30 | Received date/time: 04/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2046379	1	04/27/23 13:05	04/27/23 13:05	SPL	Mt. Juliet, TN
Calculated Results	WG2046379	1	04/26/23 23:52	04/26/23 23:52	ABL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2047525	1	04/24/23 13:42	04/24/23 15:02	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2046185	1	04/21/23 12:44	04/21/23 12:44	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049229	10	04/26/23 23:36	04/26/23 23:36	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049229	100	04/26/23 23:52	04/26/23 23:52	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/26/23 23:52	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	5	04/25/23 12:07	04/27/23 13:05	SPL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 01:29	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	5	04/26/23 10:44	04/27/23 09:36	ABL	Mt. Juliet, TN

PC-5 L1607484-03 GW

Collected by | Collected date/time: 04/17/23 14:00 | Received date/time: 04/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2046379	1	04/27/23 13:09	04/27/23 13:09	SPL	Mt. Juliet, TN
Calculated Results	WG2046379	1	04/26/23 23:56	04/26/23 23:56	ABL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2046071	1	04/20/23 23:54	04/21/23 09:39	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2046185	1	04/21/23 12:49	04/21/23 12:49	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049229	10	04/27/23 00:08	04/27/23 00:08	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/26/23 23:56	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 13:09	SPL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 01:33	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 09:39	ABL	Mt. Juliet, TN

PC-6 L1607484-04 GW

Collected by | Collected date/time: 04/17/23 15:00 | Received date/time: 04/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2046379	1	04/27/23 13:12	04/27/23 13:12	SPL	Mt. Juliet, TN
Calculated Results	WG2046379	1	04/26/23 23:59	04/26/23 23:59	ABL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2046071	1	04/20/23 23:54	04/21/23 09:39	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2046185	1	04/21/23 12:54	04/21/23 12:54	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049229	10	04/27/23 00:40	04/27/23 00:40	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/26/23 23:59	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 13:12	SPL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 01:36	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 09:42	ABL	Mt. Juliet, TN

SAMPLE SUMMARY

AMW-1 L1607484-05 GW

Collected by | Collected date/time: 04/17/23 12:00 | Received date/time: 04/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2046379	1	04/27/23 13:20	04/27/23 13:20	SPL	Mt. Juliet, TN
Calculated Results	WG2046379	1	04/27/23 00:07	04/27/23 00:07	ABL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2046071	1	04/20/23 23:54	04/21/23 09:39	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2046185	1	04/21/23 13:00	04/21/23 13:00	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049229	10	04/27/23 01:43	04/27/23 01:43	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049229	100	04/27/23 01:59	04/27/23 01:59	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 00:07	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 13:20	SPL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 01:38	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 09:45	ABL	Mt. Juliet, TN

AMW-2 L1607484-06 GW

Collected by | Collected date/time: 04/18/23 10:15 | Received date/time: 04/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2046379	1	04/27/23 13:33	04/27/23 13:33	SPL	Mt. Juliet, TN
Calculated Results	WG2046379	1	04/27/23 00:10	04/27/23 00:10	ABL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2047525	1	04/24/23 13:42	04/24/23 15:02	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2046185	1	04/21/23 13:06	04/21/23 13:06	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049229	10	04/27/23 02:15	04/27/23 02:15	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049229	100	04/27/23 02:31	04/27/23 02:31	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 00:10	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	5	04/25/23 12:07	04/27/23 13:33	SPL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 01:42	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	5	04/26/23 10:44	04/27/23 09:47	ABL	Mt. Juliet, TN

SMW-2 L1607484-07 GW

Collected by | Collected date/time: 04/18/23 13:50 | Received date/time: 04/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2046379	1	04/27/23 13:37	04/27/23 13:37	SPL	Mt. Juliet, TN
Calculated Results	WG2046379	1	04/27/23 00:14	04/27/23 00:14	ABL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2047525	1	04/24/23 13:42	04/24/23 15:02	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2046185	1	04/21/23 13:11	04/21/23 13:11	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049229	10	04/27/23 02:47	04/27/23 02:47	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 00:14	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 13:37	SPL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 01:45	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 09:51	ABL	Mt. Juliet, TN

DUP L1607484-08 GW

Collected by | Collected date/time: 04/18/23 10:30 | Received date/time: 04/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2046379	1	04/27/23 13:39	04/27/23 13:39	SPL	Mt. Juliet, TN
Calculated Results	WG2046379	1	04/27/23 00:17	04/27/23 00:17	ABL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2047525	1	04/24/23 13:42	04/24/23 15:02	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2046185	1	04/21/23 13:26	04/21/23 13:26	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049229	10	04/27/23 03:19	04/27/23 03:19	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049229	100	04/27/23 03:35	04/27/23 03:35	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 00:17	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	5	04/25/23 12:07	04/27/23 13:39	SPL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 01:48	ABL	Mt. Juliet, TN

SAMPLE SUMMARY

DUP L1607484-08 GW

Collected by | Collected date/time 04/18/23 10:30 | Received date/time 04/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Metals (ICP) by Method 6010B	WG2048066	5	04/26/23 10:44	04/27/23 09:54	ABL	Mt. Juliet, TN

FPW L1607484-09 GW

Collected by | Collected date/time 04/17/23 13:30 | Received date/time 04/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2046379	1	04/27/23 13:42	04/27/23 13:42	SPL	Mt. Juliet, TN
Calculated Results	WG2046379	1	04/27/23 00:20	04/27/23 00:20	ABL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2046071	1	04/20/23 23:54	04/21/23 09:39	AS	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2046185	1	04/21/23 13:31	04/21/23 13:31	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049837	1	04/27/23 17:32	04/27/23 17:32	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049837	5	04/27/23 17:46	04/27/23 17:46	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 00:20	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 13:42	SPL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 01:51	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 09:56	ABL	Mt. Juliet, TN

DH-96 L1607484-10 GW

Collected by | Collected date/time 04/18/23 15:00 | Received date/time 04/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2046379	1	04/27/23 13:45	04/27/23 13:45	SPL	Mt. Juliet, TN
Calculated Results	WG2046379	1	04/27/23 00:22	04/27/23 00:22	ABL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2047525	1	04/24/23 13:42	04/24/23 15:02	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2046185	1	04/21/23 13:36	04/21/23 13:36	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049837	1	04/27/23 18:27	04/27/23 18:27	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049837	10	04/27/23 18:41	04/27/23 18:41	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 00:22	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 13:45	SPL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 01:54	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 09:59	ABL	Mt. Juliet, TN

DH-122 L1607484-11 GW

Collected by | Collected date/time 04/18/23 15:30 | Received date/time 04/20/23 09:15

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2046379	1	04/27/23 13:48	04/27/23 13:48	SPL	Mt. Juliet, TN
Calculated Results	WG2046379	1	04/27/23 00:25	04/27/23 00:25	ABL	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2047525	1	04/24/23 13:42	04/24/23 15:02	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2046531	1	04/21/23 17:44	04/21/23 17:44	ARD	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049837	1	04/27/23 18:54	04/27/23 18:54	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2049837	10	04/27/23 19:08	04/27/23 19:08	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 00:25	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2046379	1	04/25/23 12:07	04/27/23 13:48	SPL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 01:57	ABL	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2048066	1	04/26/23 10:44	04/27/23 10:02	ABL	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.

Chris Ward

Chris Ward
Project Manager

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	4.25		1	04/27/2023 13:03	WG2046379

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	1600		2.50	1	04/26/2023 23:49	WG2046379

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	3150		50.0	1	04/24/2023 15:02	WG2047525

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	290		20.0	1	04/21/2023 12:38	WG2046185
Alkalinity,Carbonate	ND		20.0	1	04/21/2023 12:38	WG2046185

Sample Narrative:
L1607484-01 WG2046185: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	20.5	B	10.0	10	04/26/2023 23:04	WG2049229
Fluoride	1.56		1.50	10	04/26/2023 23:04	WG2049229
Sulfate	1880		50.0	10	04/26/2023 23:04	WG2049229

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	04/27/2023 01:01	WG2048066
Arsenic,Dissolved	ND		0.0100	1	04/27/2023 01:01	WG2048066
Barium,Dissolved	0.0120		0.00500	1	04/27/2023 01:01	WG2048066
Boron,Dissolved	0.513		0.200	1	04/27/2023 01:01	WG2048066
Cadmium,Dissolved	ND		0.00200	1	04/27/2023 01:01	WG2048066
Calcium	483		1.00	1	04/26/2023 23:49	WG2046379
Calcium,Dissolved	449	O1 V	1.00	1	04/27/2023 01:01	WG2048066
Iron,Dissolved	ND		0.100	1	04/27/2023 01:01	WG2048066
Lead,Dissolved	ND		0.00600	1	04/27/2023 01:01	WG2048066
Magnesium	96.5		1.00	1	04/26/2023 23:49	WG2046379
Magnesium,Dissolved	89.4	O1	1.00	1	04/27/2023 01:01	WG2048066
Manganese,Dissolved	ND		0.0100	1	04/27/2023 01:01	WG2048066
Molybdenum,Dissolved	ND		0.00500	1	04/27/2023 01:01	WG2048066
Potassium,Dissolved	10.4		2.00	1	04/27/2023 01:01	WG2048066
Selenium,Dissolved	0.0870		0.0100	1	04/27/2023 09:08	WG2048066
Sodium	391		3.00	1	04/27/2023 13:03	WG2046379
Sodium,Dissolved	363	O1 V	3.00	1	04/27/2023 09:08	WG2048066

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	21.4		1	04/27/2023 13:05	WG2046379

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	2620		2.50	1	04/26/2023 23:52	WG2046379

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	10700		200	1	04/24/2023 15:02	WG2047525

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	898		20.0	1	04/21/2023 12:44	WG2046185
Alkalinity,Carbonate	ND		20.0	1	04/21/2023 12:44	WG2046185

Sample Narrative:
L1607484-02 WG2046185: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	830		10.0	10	04/26/2023 23:36	WG2049229
Fluoride	ND		1.50	10	04/26/2023 23:36	WG2049229
Sulfate	4880		500	100	04/26/2023 23:52	WG2049229

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	04/27/2023 01:29	WG2048066
Arsenic,Dissolved	ND		0.0100	1	04/27/2023 01:29	WG2048066
Barium,Dissolved	0.0139		0.00500	1	04/27/2023 01:29	WG2048066
Boron,Dissolved	0.261		0.200	1	04/27/2023 01:29	WG2048066
Cadmium,Dissolved	ND		0.00200	1	04/27/2023 01:29	WG2048066
Calcium	440		1.00	1	04/26/2023 23:52	WG2046379
Calcium,Dissolved	372		1.00	1	04/27/2023 01:29	WG2048066
Iron,Dissolved	ND		0.100	1	04/27/2023 01:29	WG2048066
Lead,Dissolved	ND		0.00600	1	04/27/2023 01:29	WG2048066
Magnesium	370		1.00	1	04/26/2023 23:52	WG2046379
Magnesium,Dissolved	307		1.00	1	04/27/2023 01:29	WG2048066
Manganese,Dissolved	1.61		0.0100	1	04/27/2023 01:29	WG2048066
Molybdenum,Dissolved	ND		0.00500	1	04/27/2023 01:29	WG2048066
Potassium,Dissolved	18.4		2.00	1	04/27/2023 01:29	WG2048066
Selenium,Dissolved	ND		0.0100	1	04/27/2023 01:29	WG2048066
Sodium	2520		15.0	5	04/27/2023 13:05	WG2046379
Sodium,Dissolved	2010		15.0	5	04/27/2023 09:36	WG2048066

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.58		1	04/27/2023 13:09	WG2046379

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	2140		2.50	1	04/26/2023 23:56	WG2046379

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	3290		50.0	1	04/21/2023 09:39	WG2046071

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	588		20.0	1	04/21/2023 12:49	WG2046185
Alkalinity,Carbonate	ND		20.0	1	04/21/2023 12:49	WG2046185

Sample Narrative:

L1607484-03 WG2046185: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	139		10.0	10	04/27/2023 00:08	WG2049229
Fluoride	ND		1.50	10	04/27/2023 00:08	WG2049229
Sulfate	1890		50.0	10	04/27/2023 00:08	WG2049229

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	04/27/2023 01:33	WG2048066
Arsenic,Dissolved	ND		0.0100	1	04/27/2023 01:33	WG2048066
Barium,Dissolved	0.0387		0.00500	1	04/27/2023 01:33	WG2048066
Boron,Dissolved	ND		0.200	1	04/27/2023 01:33	WG2048066
Cadmium,Dissolved	ND		0.00200	1	04/27/2023 01:33	WG2048066
Calcium	582		1.00	1	04/26/2023 23:56	WG2046379
Calcium,Dissolved	615		1.00	1	04/27/2023 01:33	WG2048066
Iron,Dissolved	ND		0.100	1	04/27/2023 01:33	WG2048066
Lead,Dissolved	ND		0.00600	1	04/27/2023 01:33	WG2048066
Magnesium	167		1.00	1	04/26/2023 23:56	WG2046379
Magnesium,Dissolved	172		1.00	1	04/27/2023 01:33	WG2048066
Manganese,Dissolved	19.0		0.0100	1	04/27/2023 01:33	WG2048066
Molybdenum,Dissolved	ND		0.00500	1	04/27/2023 01:33	WG2048066
Potassium,Dissolved	20.2		2.00	1	04/27/2023 01:33	WG2048066
Selenium,Dissolved	0.0140		0.0100	1	04/27/2023 01:33	WG2048066
Sodium	274		3.00	1	04/27/2023 13:09	WG2046379
Sodium,Dissolved	283		3.00	1	04/27/2023 09:39	WG2048066

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	6.89		1	04/27/2023 13:12	WG2046379

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	808		2.50	1	04/26/2023 23:59	WG2046379

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	2440		50.0	1	04/21/2023 09:39	WG2046071

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	315		20.0	1	04/21/2023 12:54	WG2046185
Alkalinity,Carbonate	ND		20.0	1	04/21/2023 12:54	WG2046185

Sample Narrative:

L1607484-04 WG2046185: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	54.2		10.0	10	04/27/2023 00:40	WG2049229
Fluoride	2.14		1.50	10	04/27/2023 00:40	WG2049229
Sulfate	1080		50.0	10	04/27/2023 00:40	WG2049229

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	04/27/2023 01:36	WG2048066
Arsenic,Dissolved	ND		0.0100	1	04/27/2023 01:36	WG2048066
Barium,Dissolved	0.0116		0.00500	1	04/27/2023 01:36	WG2048066
Boron,Dissolved	0.542		0.200	1	04/27/2023 01:36	WG2048066
Cadmium,Dissolved	ND		0.00200	1	04/27/2023 01:36	WG2048066
Calcium	181		1.00	1	04/26/2023 23:59	WG2046379
Calcium,Dissolved	162		1.00	1	04/27/2023 01:36	WG2048066
Iron,Dissolved	ND		0.100	1	04/27/2023 01:36	WG2048066
Lead,Dissolved	ND		0.00600	1	04/27/2023 01:36	WG2048066
Magnesium	86.2		1.00	1	04/26/2023 23:59	WG2046379
Magnesium,Dissolved	78.1		1.00	1	04/27/2023 01:36	WG2048066
Manganese,Dissolved	0.0160		0.0100	1	04/27/2023 01:36	WG2048066
Molybdenum,Dissolved	0.00555	B	0.00500	1	04/27/2023 01:36	WG2048066
Potassium,Dissolved	6.85		2.00	1	04/27/2023 01:36	WG2048066
Selenium,Dissolved	0.0692		0.0100	1	04/27/2023 01:36	WG2048066
Sodium	450		3.00	1	04/27/2023 13:12	WG2046379
Sodium,Dissolved	403		3.00	1	04/27/2023 09:42	WG2048066

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.90		1	04/27/2023 13:20	WG2046379

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	1010		2.50	1	04/27/2023 00:07	WG2046379

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1650		25.0	1	04/21/2023 09:39	WG2046071

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	210		20.0	1	04/21/2023 13:00	WG2046185
Alkalinity,Carbonate	ND		20.0	1	04/21/2023 13:00	WG2046185
Alkalinity,Hydroxide	ND		20.0	1	04/21/2023 13:00	WG2046185

Sample Narrative:
L1607484-05 WG2046185: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	307		10.0	10	04/27/2023 01:43	WG2049229
Fluoride	9.10		1.50	10	04/27/2023 01:43	WG2049229
Sulfate	8180		500	100	04/27/2023 01:59	WG2049229

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	04/27/2023 01:38	WG2048066
Arsenic,Dissolved	ND		0.0100	1	04/27/2023 01:38	WG2048066
Barium,Dissolved	0.0296		0.00500	1	04/27/2023 01:38	WG2048066
Boron,Dissolved	ND		0.200	1	04/27/2023 01:38	WG2048066
Cadmium,Dissolved	ND		0.00200	1	04/27/2023 01:38	WG2048066
Calcium	272		1.00	1	04/27/2023 00:07	WG2046379
Calcium,Dissolved	263		1.00	1	04/27/2023 01:38	WG2048066
Iron,Dissolved	ND		0.100	1	04/27/2023 01:38	WG2048066
Lead,Dissolved	ND		0.00600	1	04/27/2023 01:38	WG2048066
Magnesium	79.2		1.00	1	04/27/2023 00:07	WG2046379
Magnesium,Dissolved	78.1		1.00	1	04/27/2023 01:38	WG2048066
Manganese,Dissolved	0.0296		0.0100	1	04/27/2023 01:38	WG2048066
Molybdenum,Dissolved	ND		0.00500	1	04/27/2023 01:38	WG2048066
Potassium,Dissolved	3.44		2.00	1	04/27/2023 01:38	WG2048066
Selenium,Dissolved	0.0265		0.0100	1	04/27/2023 01:38	WG2048066
Sodium	139		3.00	1	04/27/2023 13:20	WG2046379
Sodium,Dissolved	140		3.00	1	04/27/2023 09:45	WG2048066

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	14.1		1	04/27/2023 13:33	WG2046379

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	1910		2.50	1	04/27/2023 00:10	WG2046379

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	6970		100	1	04/24/2023 15:02	WG2047525

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	771		20.0	1	04/21/2023 13:06	WG2046185
Alkalinity,Carbonate	ND		20.0	1	04/21/2023 13:06	WG2046185
Alkalinity,Hydroxide	ND		20.0	1	04/21/2023 13:06	WG2046185

Sample Narrative:
L1607484-06 WG2046185: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	368		10.0	10	04/27/2023 02:15	WG2049229
Fluoride	ND		1.50	10	04/27/2023 02:15	WG2049229
Sulfate	3420		500	100	04/27/2023 02:31	WG2049229

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	04/27/2023 01:42	WG2048066
Arsenic,Dissolved	ND		0.0100	1	04/27/2023 01:42	WG2048066
Barium,Dissolved	0.0204		0.00500	1	04/27/2023 01:42	WG2048066
Boron,Dissolved	0.241		0.200	1	04/27/2023 01:42	WG2048066
Cadmium,Dissolved	ND		0.00200	1	04/27/2023 01:42	WG2048066
Calcium	458		1.00	1	04/27/2023 00:10	WG2046379
Calcium,Dissolved	459		1.00	1	04/27/2023 01:42	WG2048066
Iron,Dissolved	ND		0.100	1	04/27/2023 01:42	WG2048066
Lead,Dissolved	ND		0.00600	1	04/27/2023 01:42	WG2048066
Magnesium	186		1.00	1	04/27/2023 00:10	WG2046379
Magnesium,Dissolved	187		1.00	1	04/27/2023 01:42	WG2048066
Manganese,Dissolved	3.46		0.0100	1	04/27/2023 01:42	WG2048066
Molybdenum,Dissolved	ND		0.00500	1	04/27/2023 01:42	WG2048066
Potassium,Dissolved	28.4		2.00	1	04/27/2023 01:42	WG2048066
Selenium,Dissolved	0.0119		0.0100	1	04/27/2023 01:42	WG2048066
Sodium	1420		15.0	5	04/27/2023 13:33	WG2046379
Sodium,Dissolved	1420		15.0	5	04/27/2023 09:47	WG2048066

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	2.63		1	04/27/2023 13:37	WG2046379

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	2130		2.50	1	04/27/2023 00:14	WG2046379

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	3580		50.0	1	04/24/2023 15:02	WG2047525

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	595		20.0	1	04/21/2023 13:11	WG2046185
Alkalinity,Carbonate	ND		20.0	1	04/21/2023 13:11	WG2046185
Alkalinity,Hydroxide	ND		20.0	1	04/21/2023 13:11	WG2046185

Sample Narrative:
L1607484-07 WG2046185: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	137		10.0	10	04/27/2023 02:47	WG2049229
Fluoride	ND		1.50	10	04/27/2023 02:47	WG2049229
Sulfate	1900		50.0	10	04/27/2023 02:47	WG2049229

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	04/27/2023 01:45	WG2048066
Arsenic,Dissolved	ND		0.0100	1	04/27/2023 01:45	WG2048066
Barium,Dissolved	0.0388		0.00500	1	04/27/2023 01:45	WG2048066
Boron,Dissolved	ND		0.200	1	04/27/2023 01:45	WG2048066
Cadmium,Dissolved	ND		0.00200	1	04/27/2023 01:45	WG2048066
Calcium	578		1.00	1	04/27/2023 00:14	WG2046379
Calcium,Dissolved	592		1.00	1	04/27/2023 01:45	WG2048066
Iron,Dissolved	ND		0.100	1	04/27/2023 01:45	WG2048066
Lead,Dissolved	ND		0.00600	1	04/27/2023 01:45	WG2048066
Magnesium	167		1.00	1	04/27/2023 00:14	WG2046379
Magnesium,Dissolved	174		1.00	1	04/27/2023 01:45	WG2048066
Manganese,Dissolved	17.4		0.0100	1	04/27/2023 01:45	WG2048066
Molybdenum,Dissolved	ND		0.00500	1	04/27/2023 01:45	WG2048066
Potassium,Dissolved	19.5		2.00	1	04/27/2023 01:45	WG2048066
Selenium,Dissolved	0.0121		0.0100	1	04/27/2023 01:45	WG2048066
Sodium	279		3.00	1	04/27/2023 13:37	WG2046379
Sodium,Dissolved	287		3.00	1	04/27/2023 09:51	WG2048066

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	14.4		1	04/27/2023 13:39	WG2046379

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	1930		2.50	1	04/27/2023 00:17	WG2046379

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	5480		100	1	04/24/2023 15:02	WG2047525

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	789		20.0	1	04/21/2023 13:26	WG2046185
Alkalinity,Carbonate	ND		20.0	1	04/21/2023 13:26	WG2046185
Alkalinity,Hydroxide	ND		20.0	1	04/21/2023 13:26	WG2046185

Sample Narrative:
L1607484-08 WG2046185: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	351		10.0	10	04/27/2023 03:19	WG2049229
Fluoride	ND		1.50	10	04/27/2023 03:19	WG2049229
Sulfate	3170		500	100	04/27/2023 03:35	WG2049229

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Antimony,Dissolved	ND		0.0100	1	04/27/2023 01:48	WG2048066
Arsenic,Dissolved	ND		0.0100	1	04/27/2023 01:48	WG2048066
Barium,Dissolved	0.0202		0.00500	1	04/27/2023 01:48	WG2048066
Boron,Dissolved	0.243		0.200	1	04/27/2023 01:48	WG2048066
Cadmium,Dissolved	ND		0.00200	1	04/27/2023 01:48	WG2048066
Calcium	464		1.00	1	04/27/2023 00:17	WG2046379
Calcium,Dissolved	477		1.00	1	04/27/2023 01:48	WG2048066
Iron,Dissolved	ND		0.100	1	04/27/2023 01:48	WG2048066
Lead,Dissolved	ND		0.00600	1	04/27/2023 01:48	WG2048066
Magnesium	187		1.00	1	04/27/2023 00:17	WG2046379
Magnesium,Dissolved	193		1.00	1	04/27/2023 01:48	WG2048066
Manganese,Dissolved	3.56		0.0100	1	04/27/2023 01:48	WG2048066
Molybdenum,Dissolved	ND		0.00500	1	04/27/2023 01:48	WG2048066
Potassium,Dissolved	29.4		2.00	1	04/27/2023 01:48	WG2048066
Selenium,Dissolved	ND		0.0100	1	04/27/2023 01:48	WG2048066
Sodium	1450		15.0	5	04/27/2023 13:39	WG2046379
Sodium,Dissolved	1460		15.0	5	04/27/2023 09:54	WG2048066

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	1.30		1	04/27/2023 13:42	WG2046379

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	607		2.50	1	04/27/2023 00:20	WG2046379

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	992		20.0	1	04/21/2023 09:39	WG2046071

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	222		20.0	1	04/21/2023 13:31	WG2046185
Alkalinity,Carbonate	ND		20.0	1	04/21/2023 13:31	WG2046185
Alkalinity,Hydroxide	ND		20.0	1	04/21/2023 13:31	WG2046185

Sample Narrative:
L1607484-09 WG2046185: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	64.9		1.00	1	04/27/2023 17:32	WG2049837
Fluoride	1.04		0.150	1	04/27/2023 17:32	WG2049837
Sulfate	213		25.0	5	04/27/2023 17:46	WG2049837

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	04/27/2023 01:51	WG2048066
Barium,Dissolved	0.0860		0.00500	1	04/27/2023 01:51	WG2048066
Cadmium,Dissolved	ND		0.00200	1	04/27/2023 01:51	WG2048066
Calcium	164		1.00	1	04/27/2023 00:20	WG2046379
Calcium,Dissolved	169		1.00	1	04/27/2023 01:51	WG2048066
Iron,Dissolved	ND		0.100	1	04/27/2023 01:51	WG2048066
Lead,Dissolved	ND		0.00600	1	04/27/2023 01:51	WG2048066
Magnesium	47.8		1.00	1	04/27/2023 00:20	WG2046379
Magnesium,Dissolved	50.0		1.00	1	04/27/2023 01:51	WG2048066
Manganese,Dissolved	ND		0.0100	1	04/27/2023 01:51	WG2048066
Molybdenum,Dissolved	ND		0.00500	1	04/27/2023 01:51	WG2048066
Selenium,Dissolved	ND		0.0100	1	04/27/2023 01:51	WG2048066
Sodium	73.5		3.00	1	04/27/2023 13:42	WG2046379
Sodium,Dissolved	74.0		3.00	1	04/27/2023 09:56	WG2048066

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.39		1	04/27/2023 13:45	WG2046379

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	496		2.50	1	04/27/2023 00:22	WG2046379

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1300		25.0	1	04/24/2023 15:02	WG2047525

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	300		20.0	1	04/21/2023 13:36	WG2046185
Alkalinity,Carbonate	ND		20.0	1	04/21/2023 13:36	WG2046185
Alkalinity,Hydroxide	ND		20.0	1	04/21/2023 13:36	WG2046185

Sample Narrative:
L1607484-10 WG2046185: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	33.7		1.00	1	04/27/2023 18:27	WG2049837
Fluoride	2.50		0.150	1	04/27/2023 18:27	WG2049837
Sulfate	773		50.0	10	04/27/2023 18:41	WG2049837

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	04/27/2023 01:54	WG2048066
Barium,Dissolved	0.0104		0.00500	1	04/27/2023 01:54	WG2048066
Cadmium,Dissolved	ND		0.00200	1	04/27/2023 01:54	WG2048066
Calcium	111		1.00	1	04/27/2023 00:22	WG2046379
Calcium,Dissolved	112		1.00	1	04/27/2023 01:54	WG2048066
Iron,Dissolved	ND		0.100	1	04/27/2023 01:54	WG2048066
Lead,Dissolved	ND		0.00600	1	04/27/2023 01:54	WG2048066
Magnesium	53.0		1.00	1	04/27/2023 00:22	WG2046379
Magnesium,Dissolved	52.3		1.00	1	04/27/2023 01:54	WG2048066
Manganese,Dissolved	0.519		0.0100	1	04/27/2023 01:54	WG2048066
Molybdenum,Dissolved	0.00712	B	0.00500	1	04/27/2023 01:54	WG2048066
Selenium,Dissolved	ND		0.0100	1	04/27/2023 01:54	WG2048066
Sodium	276		3.00	1	04/27/2023 13:45	WG2046379
Sodium,Dissolved	267		3.00	1	04/27/2023 09:59	WG2048066

Calculated Results

Analyte	Result	Qualifier	Dilution	Analysis date / time	Batch
Sodium Adsorption Ratio	5.12		1	04/27/2023 13:48	WG2046379

Calculated Results

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Hardness (calculated) as CaCO3	753		2.50	1	04/27/2023 00:25	WG2046379

Gravimetric Analysis by Method 2540 C-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Dissolved Solids	1740		50.0	1	04/24/2023 15:02	WG2047525

Wet Chemistry by Method 2320 B-2011

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Alkalinity,Bicarbonate	296		20.0	1	04/21/2023 17:44	WG2046531
Alkalinity,Carbonate	ND		20.0	1	04/21/2023 17:44	WG2046531
Alkalinity,Hydroxide	ND		20.0	1	04/21/2023 17:44	WG2046531

Sample Narrative:
L1607484-11 WG2046531: Endpoint pH 4.5 Headspace

Wet Chemistry by Method 9056A

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Chloride	127		1.00	1	04/27/2023 18:54	WG2049837
Fluoride	1.27		0.150	1	04/27/2023 18:54	WG2049837
Sulfate	974		50.0	10	04/27/2023 19:08	WG2049837

Metals (ICP) by Method 6010B

Analyte	Result mg/l	Qualifier	RDL mg/l	Dilution	Analysis date / time	Batch
Arsenic,Dissolved	ND		0.0100	1	04/27/2023 01:57	WG2048066
Barium,Dissolved	0.0208		0.00500	1	04/27/2023 01:57	WG2048066
Cadmium,Dissolved	ND		0.00200	1	04/27/2023 01:57	WG2048066
Calcium	192		1.00	1	04/27/2023 00:25	WG2046379
Calcium,Dissolved	198		1.00	1	04/27/2023 01:57	WG2048066
Iron,Dissolved	ND		0.100	1	04/27/2023 01:57	WG2048066
Lead,Dissolved	ND		0.00600	1	04/27/2023 01:57	WG2048066
Magnesium	66.1		1.00	1	04/27/2023 00:25	WG2046379
Magnesium,Dissolved	68.3		1.00	1	04/27/2023 01:57	WG2048066
Manganese,Dissolved	0.545		0.0100	1	04/27/2023 01:57	WG2048066
Molybdenum,Dissolved	0.00908	B	0.00500	1	04/27/2023 01:57	WG2048066
Selenium,Dissolved	ND		0.0100	1	04/27/2023 01:57	WG2048066
Sodium	322		3.00	1	04/27/2023 13:48	WG2046379
Sodium,Dissolved	322		3.00	1	04/27/2023 10:02	WG2048066

WG2046071

Gravimetric Analysis by Method 2540 C-2011

QUALITY CONTROL SUMMARY

L1607484-03,04,05,09

Method Blank (MB)

(MB) R3916180-1 04/21/23 09:39

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U	J	10.0	10.0

L1606151-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1606151-02 04/21/23 09:39 • (DUP) R3916180-3 04/21/23 09:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	667	675	1	1.19		5

L1606151-03 Original Sample (OS) • Duplicate (DUP)

(OS) L1606151-03 04/21/23 09:39 • (DUP) R3916180-4 04/21/23 09:39

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	687	719	1	4.55		5

Laboratory Control Sample (LCS)

(LCS) R3916180-2 04/21/23 09:39

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8420	95.7	77.3-123	

WG2047525

Gravimetric Analysis by Method 2540 C-2011

QUALITY CONTROL SUMMARY

L1607484-01,02,06,07,08,10,11

Method Blank (MB)

(MB) R3917762-1 04/24/23 15:02

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Dissolved Solids	U		10.0	10.0

L1606564-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1606564-01 04/24/23 15:02 • (DUP) R3917762-3 04/24/23 15:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	194	204	1	5.03	J3	5

L1608341-22 Original Sample (OS) • Duplicate (DUP)

(OS) L1608341-22 04/24/23 15:02 • (DUP) R3917762-4 04/24/23 15:02

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Dissolved Solids	394	405	1	2.75		5

Laboratory Control Sample (LCS)

(LCS) R3917762-2 04/24/23 15:02

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Dissolved Solids	8800	8240	93.6	77.3-123	

WG2046185

Wet Chemistry by Method 2320 B-2011

QUALITY CONTROL SUMMARY

L1607484-01,02,03,04,05,06,07,08,09,10

Method Blank (MB)

(MB) R3915932-2 04/21/23 11:06

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity,Bicarbonate	U		8.45	20.0
Alkalinity,Carbonate	U		8.45	20.0
Alkalinity,Hydroxide	U		8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1605289-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1605289-01 04/21/23 11:29 • (DUP) R3915932-3 04/21/23 11:35

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	86.1	87.4	1	1.52		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1605289-02 Original Sample (OS) • Duplicate (DUP)

(OS) L1605289-02 04/21/23 13:41 • (DUP) R3915932-4 04/21/23 13:46

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	87.2	88.7	1	1.70		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

WG2046531

Wet Chemistry by Method 2320 B-2011

QUALITY CONTROL SUMMARY

L1607484-11

Method Blank (MB)

(MB) R3916540-2 04/21/23 15:22

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Alkalinity,Bicarbonate	U		8.45	20.0
Alkalinity,Carbonate	U		8.45	20.0
Alkalinity,Hydroxide	U		8.45	20.0

Sample Narrative:

BLANK: Endpoint pH 4.5

L1606411-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1606411-01 04/21/23 15:46 • (DUP) R3916540-3 04/21/23 15:51

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	58.4	60.9	1	4.05		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

L1606946-01 Original Sample (OS) • Duplicate (DUP)

(OS) L1606946-01 04/21/23 17:08 • (DUP) R3916540-4 04/21/23 17:12

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Alkalinity,Bicarbonate	752	765	1	1.60		20
Alkalinity,Carbonate	ND	ND	1	0.000		20
Alkalinity,Hydroxide	ND	ND	1	0.000		20

Sample Narrative:

OS: Endpoint pH 4.5 Headspace

DUP: Endpoint pH 4.5

WG2049229

Wet Chemistry by Method 9056A

QUALITY CONTROL SUMMARY

L1607484-01,02,03,04,05,06,07,08

Method Blank (MB)

(MB) R3918402-1 04/26/23 10:14

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	0.509	J	0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1607441-07 Original Sample (OS) • Duplicate (DUP)

(OS) L1607441-07 04/26/23 16:43 • (DUP) R3918402-3 04/26/23 16:58

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	131	131	1	0.120		15
Fluoride	0.201	0.199	1	1.10		15
Sulfate	34.2	34.2	1	0.0837		15

L1607441-08 Original Sample (OS) • Duplicate (DUP)

(OS) L1607441-08 04/27/23 03:51 • (DUP) R3918402-6 04/27/23 04:38

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	61.4	60.7	1	1.15		15
Fluoride	ND	ND	1	4.16		15
Sulfate	28.0	28.1	1	0.649		15

Laboratory Control Sample (LCS)

(LCS) R3918402-2 04/26/23 10:30

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	39.4	98.4	80.0-120	
Fluoride	8.00	7.92	99.0	80.0-120	
Sulfate	40.0	39.5	98.7	80.0-120	

WG2049229

Wet Chemistry by Method 9056A

QUALITY CONTROL SUMMARY

L1607484-01,02,03,04,05,06,07,08

L1607441-07 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607441-07 04/26/23 16:43 • (MS) R3918402-4 04/26/23 17:14 • (MSD) R3918402-5 04/26/23 17:30

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 %
Chloride	50.0	131	174	175	85.5	87.2	1	80.0-120			0.488	15
Fluoride	5.00	0.201	5.21	5.20	100	100	1	80.0-120			0.186	15
Sulfate	50.0	34.2	83.5	84.0	98.7	99.7	1	80.0-120			0.596	15

L1607441-08 Original Sample (OS) • Matrix Spike (MS)

(OS) L1607441-08 04/27/23 03:51 • (MS) R3918402-7 04/27/23 04:54

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MS Rec. %	Dilution	Rec. Limits %	MS Qualifier
Chloride	50.0	61.4	108	93.0	1	80.0-120	
Fluoride	5.00	ND	5.07	98.7	1	80.0-120	
Sulfate	50.0	28.0	77.4	98.8	1	80.0-120	

WG2049837

Wet Chemistry by Method 9056A

QUALITY CONTROL SUMMARY

L1607484-09,10,11

Method Blank (MB)

(MB) R3918526-1 04/27/23 15:10

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Chloride	U		0.379	1.00
Fluoride	U		0.0640	0.150
Sulfate	U		0.594	5.00

L1607533-04 Original Sample (OS) • Duplicate (DUP)

(OS) L1607533-04 04/27/23 16:38 • (DUP) R3918526-3 04/27/23 16:52

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	1910	1930	10	0.896		15
Fluoride	8.34	8.50	10	1.97		15
Sulfate	1450	1460	10	0.891		15

L1607533-09 Original Sample (OS) • Duplicate (DUP)

(OS) L1607533-09 04/27/23 22:59 • (DUP) R3918526-6 04/27/23 23:12

Analyte	Original Result mg/l	DUP Result mg/l	Dilution	DUP RPD %	DUP Qualifier	DUP RPD Limits %
Chloride	7290	7320	10	0.405	E	15
Fluoride	ND	ND	10	3.48		15
Sulfate	1340	1340	10	0.436		15

Laboratory Control Sample (LCS)

(LCS) R3918526-2 04/27/23 15:23

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Chloride	40.0	40.4	101	80.0-120	
Fluoride	8.00	8.31	104	80.0-120	
Sulfate	40.0	40.4	101	80.0-120	

WG2049837

Wet Chemistry by Method 9056A

QUALITY CONTROL SUMMARY

L1607484-09,10,11

L1607533-04 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607533-04 04/27/23 16:38 • (MS) R3918526-4 04/27/23 17:05 • (MSD) R3918526-5 04/27/23 17:19

Analyte	Spike Amount mg/l	Original Result mg/l	MS Result mg/l	MSD Result mg/l	MS Rec. %	MSD Rec. %	Dilution	Rec. Limits %	MS Qualifier	MSD Qualifier	RPD %	RPD Limits %
Chloride	50.0	1910	1870	1870	0.000	0.000	10	80.0-120	V	V	0.227	15
Fluoride	5.00	8.34	12.9	13.1	91.8	95.1	10	80.0-120			1.26	15
Sulfate	50.0	1450	1430	1430	0.000	0.000	10	80.0-120	V	V	0.239	15

L1607533-09 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607533-09 04/27/23 22:59 • (MS) R3918526-7 04/27/23 23:53 • (MSD) R3918526-8 04/28/23 00:06

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 %
Chloride	50.0	7290	6920	6910	0.000	0.000	10	80.0-120	E V	E V	0.123	15
Fluoride	5.00	ND	5.00	4.99	86.7	86.5	10	80.0-120			0.248	15
Sulfate	50.0	1340	1300	1300	0.000	0.000	10	80.0-120	V	V	0.00525	15

WG2046379

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1607484-01,02,03,04,05,06,07,08,09,10,11

Method Blank (MB)

(MB) R3917881-1 04/26/23 23:33

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Calcium	U		0.0793	1.00
Magnesium	U		0.0853	1.00

Method Blank (MB)

(MB) R3918373-1 04/27/23 12:46

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sodium	U		0.504	3.00

Laboratory Control Sample (LCS)

(LCS) R3917881-2 04/26/23 23:36

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Calcium	10.0	9.80	98.0	80.0-120	
Magnesium	10.0	9.73	97.3	80.0-120	

Laboratory Control Sample (LCS)

(LCS) R3918373-2 04/27/23 12:49

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sodium	10.0	9.56	95.6	80.0-120	

L1607433-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607433-02 04/26/23 23:38 • (MS) R3917881-4 04/26/23 23:44 • (MSD) R3917881-5 04/26/23 23:46

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 %
Calcium	10.0	46.4	55.6	55.2	91.9	88.3	1	75.0-125			0.645	20
Magnesium	10.0	7.29	17.1	17.0	98.3	97.0	1	75.0-125			0.741	20

WG2046379

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1607484-01,02,03,04,05,06,07,08,09,10,11

L1607433-02 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607433-02 04/27/23 12:52 • (MS) R3918373-4 04/27/23 12:57 • (MSD) R3918373-5 04/27/23 12:59

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 %
Sodium	10.0	4.50	14.1	14.2	96.0	97.4	1	75.0-125			0.971	20

WG2048066

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1607484-01,02,03,04,05,06,07,08,09,10,11

Method Blank (MB)

(MB) R3917882-1 04/27/23 00:56

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Antimony,Dissolved	U		0.00430	0.0100
Arsenic,Dissolved	U		0.00440	0.0100
Barium,Dissolved	U		0.000736	0.00500
Boron,Dissolved	U		0.0200	0.200
Cadmium,Dissolved	U		0.000479	0.00200
Calcium,Dissolved	U		0.0793	1.00
Iron,Dissolved	U		0.0180	0.100
Lead,Dissolved	U		0.00299	0.00600
Magnesium,Dissolved	U		0.0853	1.00
Manganese,Dissolved	U		0.000934	0.0100
Molybdenum,Dissolved	0.00127	J	0.00116	0.00500
Potassium,Dissolved	U		0.261	2.00
Selenium,Dissolved	U		0.00735	0.0100

Method Blank (MB)

(MB) R3918103-1 04/27/23 09:03

Analyte	MB Result mg/l	MB Qualifier	MB MDL mg/l	MB RDL mg/l
Sodium,Dissolved	U		0.504	3.00

Laboratory Control Sample (LCS)

(LCS) R3917882-2 04/27/23 00:58

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Antimony,Dissolved	1.00	1.07	107	80.0-120	
Arsenic,Dissolved	1.00	0.957	95.7	80.0-120	
Barium,Dissolved	1.00	1.07	107	80.0-120	
Boron,Dissolved	1.00	1.01	101	80.0-120	
Cadmium,Dissolved	1.00	0.946	94.6	80.0-120	
Calcium,Dissolved	10.0	10.1	101	80.0-120	
Iron,Dissolved	10.0	9.26	92.6	80.0-120	
Lead,Dissolved	1.00	1.01	101	80.0-120	
Magnesium,Dissolved	10.0	10.2	102	80.0-120	
Manganese,Dissolved	1.00	0.940	94.0	80.0-120	
Molybdenum,Dissolved	1.00	1.04	104	80.0-120	
Potassium,Dissolved	10.0	9.91	99.1	80.0-120	
Selenium,Dissolved	1.00	0.975	97.5	80.0-120	

WG2048066

Metals (ICP) by Method 6010B

QUALITY CONTROL SUMMARY

L1607484-01,02,03,04,05,06,07,08,09,10,11

Laboratory Control Sample (LCS)

(LCS) R3918103-2 04/27/23 09:05

Analyte	Spike Amount mg/l	LCS Result mg/l	LCS Rec. %	Rec. Limits %	LCS Qualifier
Sodium,Dissolved	10.0	9.60	96.0	80.0-120	

L1607484-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607484-01 04/27/23 01:01 • (MS) R3917882-4 04/27/23 01:07 • (MSD) R3917882-5 04/27/23 01:10

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 %
Antimony,Dissolved	1.00	ND	1.19	1.17	119	117	1	75.0-125			1.21	20
Arsenic,Dissolved	1.00	ND	1.05	1.04	105	104	1	75.0-125			0.738	20
Barium,Dissolved	1.00	0.0120	1.09	1.07	108	106	1	75.0-125			1.60	20
Boron,Dissolved	1.00	0.513	1.56	1.53	104	102	1	75.0-125			1.59	20
Cadmium,Dissolved	1.00	ND	1.04	1.01	104	101	1	75.0-125			2.60	20
Calcium,Dissolved	10.0	449	451	449	16.1	0.000	1	75.0-125	V	V	0.500	20
Iron,Dissolved	10.0	ND	9.34	9.03	93.1	90.1	1	75.0-125			3.36	20
Lead,Dissolved	1.00	ND	1.05	1.03	105	103	1	75.0-125			1.80	20
Magnesium,Dissolved	10.0	89.4	99.2	99.0	98.3	96.1	1	75.0-125			0.219	20
Manganese,Dissolved	1.00	ND	0.945	0.928	94.3	92.6	1	75.0-125			1.83	20
Molybdenum,Dissolved	1.00	ND	1.07	1.05	107	104	1	75.0-125			2.27	20
Potassium,Dissolved	10.0	10.4	20.6	20.1	102	96.6	1	75.0-125			2.69	20
Selenium,Dissolved	1.00	0.0749	1.22	1.21	115	113	1	75.0-125			1.17	20

L1607484-01 Original Sample (OS) • Matrix Spike (MS) • Matrix Spike Duplicate (MSD)

(OS) L1607484-01 04/27/23 09:08 • (MS) R3918103-4 04/27/23 09:14 • (MSD) R3918103-5 04/27/23 09:17

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 %
Sodium,Dissolved	10.0	363	366	368	34.7	54.4	1	75.0-125	V	V	0.535	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
B	The same analyte is found in the associated blank.
E	The analyte concentration exceeds the upper limit of the calibration range of the instrument established by the initial calibration (ICAL).
J	The identification of the analyte is acceptable; the reported value is an estimate.
J3	The associated batch QC was outside the established quality control range for precision.
O1	The analyte failed the method required serial dilution test and/or subsequent post-spike criteria. These failures indicate matrix interference.
V	The sample concentration is too high to evaluate accurate spike recoveries.

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	LAO00356
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.

Company Name/Address:
American Environmental - CO
8191 Southpark Lane
Suite 107
Littleton, CO 80120

Billing Information:
Accounts Payable
8191 Southpark Lane
Suite 107
Littleton, CO 80120

Pres Chk

Chain of Custody Page ___ of ___

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PEOPLE ADVANCING SCIENCE

MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

Report to: Skyler Elder

Email To: selder@aecdenver.com;cahrendsen@aecdenver

Project Description: Keenesburg Mine

City/State Collected:

Please Circle: PT MT CT ET

Phone: 303-948-7733

Client Project #

Lab Project # AMEENVLCO-KEENESBURG

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Rush? (Lab MUST Be Notified)
___ Same Day ___ Five Day
___ Next Day ___ 5 Day (Rad Only)
___ Two Day ___ 10 Day (Rad Only)
___ Three Day

Quote #

Date Results Needed

Immediately Packed on Ice N ___ Y ___

SDG # L1607484
K039

Acctnum: AMEENVLCO
Template: T160430
Prelogin: P992722
PM: 824 - Chris Ward
PB: CP 4-11-23
Shipped Via: FedEX Ground

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALKBI,ALKCA 250mlHDPE-NoPres	Cl,F,SO4 125mlHDPE-NoPres	Diss Metals 250mlHDPE-NoPres	HARD 250mlHDPE-HNO3	SAR 250mlHDPE-HNO3	TDS 1L-HDPE-NoPres	V8260 40mlAmb-HCl-Blk	Remarks	Sample # (lab only)
PC-1		GW		4/19/23	1618	6	X	X	X	X	X	X			-01
PC-2		GW		4/18/23	0930	6	X	X	X	X	X	X			-02
PC-5		GW		4/17/2023	1400	6	X	X	X	X	X	X			-03
PC-6		GW		4/17/2023	1500	6	X	X	X	X	X	X			-04
AMW-1		GW		4/17/2023	1200	6	X	X	X	X	X	X			-05
AMW-2		GW		4/18/2023	1015	6	X	X	X	X	X	X			-06
SMW-2		GW		4/18/2023	1350	6	X	X	X	X	X	X			-07
DUP		GW		4/18/2023	1030	6	X	X	X	X	X	X			-08
FPW		GW		4/17/2023	1830	6	X	X	X	X	X	X			-09
		GW				2						X	X		-10

* Matrix:
SS - Soil AIR - Air F - Filter
GW - Groundwater B - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other ___

Remarks: Diss Metals=As,Ba,B,Ca,Cd,Fe,Kd,Mg,Mn,Na,Pb,Sb,Se
PC-1,PC-2PC-6,AMW-1,AMW-2,SMW-2: Fluoride, SBDICP, BDICP, KDICP
AMW-1,AMW-2,SMW-2,FPW,DH-96,DH-122: ALKOH, ALK

pH ___ Temp ___
Flow ___ Other ___

Samples returned via: __ UPS ✓ FedEx __ Courier ___

Tracking # 6337 2240 1010

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCL / MeoH TBR	
[signature]	4/18/2023				
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 2.9+0=2.9 °C Bottles Received:	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature) [signature] (2)	Date: 4/20/23 Time: 0915	Hold: Condition: NCF / OK

Company Name/Address:
American Environmental - CO

8191 Southpark Lane
Suite 107
Littleton. CO 80120

Billing Information:
Accounts Payable
8191 Southpark Lane
Suite 107
Littleton, CO 80120

Pres Chk

Report to:
Skyler Elder

Email To:
selder@aecdenver.com;cahrendsen@aecdenver

Project Description:
Keenesburg Mine

City/State Collected:

Please Circle: PT MT CT ET

Phone: **303-948-7733**

Client Project #

Lab Project #
AMEENVLCO-KEENESBURG

Collected by (print):

Site/Facility ID #

P.O. #

Collected by (signature):

Immediately Packed on Ice N____ Y____

Rush? (Lab MUST Be Notified)
____ Same Day ____ Five Day
____ Next Day ____ 5 Day (Rad Only)
____ Two Day ____ 10 Day (Rad Only)
____ Three Day

Quote #

Date Results Needed

Sample ID	Comp/Grab	Matrix *	Depth	Date	Time	No. of Cntrs	ALKBI,ALKCA 250mlHDPE-NoPres	Cl,F,SO4 125mlHDPE-NoPres	Diss Metals 250mlHDPE-NoPres	HARD 250mlHDPE-HNO3	SAR 250mlHDPE-HNO3	TDS 1L-HDPE-NoPres	V8260 40mlAmb-HCl-Blk					
							Analysis / Container / Preservative			2	2							
DH-96		GW		4/18/2023	1500	6	X	X	X	X	X	X						-10
DH-122		GW		4/18/2023	1530	6	X	X	X	X	X	X						-11
		GW				6	X	X	X	X	X	X						

Chain of Custody Page ___ of ___

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MT JULIET, TN

12065 Lebanon Rd Mount Juliet, TN 37122
Submitting a sample via this chain of custody constitutes acknowledgment and acceptance of the Pace Terms and Conditions found at: https://info.pacelabs.com/hubfs/pas-standard-terms.pdf

SDG # L607484

Table #

Acctnum: **AMEENVLCO**
Template:**T160430**
Prelogin: **P992722**
PM: **824 - Chris Ward**
PB: **LR 4-11-23**

Shipped Via: **FedEX Ground**

Remarks | Sample # (lab only)

* Matrix:
SS - Soil **AIR** - Air **F** - Filter
GW - Groundwater **B** - Bioassay
WW - WasteWater
DW - Drinking Water
OT - Other_____

Remarks:Diss Metals=As,Ba,B,Ca,Cd,Fe,Kd,Mg,Mn,Na,Pb,Sb,Se
PC-1,PC-2PC-6,AMW-1,AMW-2,SMW-2: Fluoride, SBDICP, BDICP, KDICP
AMW-1,AMW-2,SMW-2,FPW,DH-96,DH-122: ALKOH, ALK

pH _____ Temp _____
Flow _____ Other _____

Samples returned via:
__ UPS __ FedEx __ Courier _____

Tracking #

Sample Receipt Checklist

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

Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Trip Blank Received: Yes / No HCl / MeoH TBR	
	4/18/2023				
Relinquished by : (Signature)	Date:	Time:	Received by: (Signature)	Temp: 1.5+0.1 °C Bottles Received: 2+9+0=20	If preservation required by Login: Date/Time
Relinquished by : (Signature)	Date:	Time:	Received for lab by: (Signature)	Date: 4/20/23 Time: 0945	Hold: Condition: NCF / OK

L1607484

Tracking Numbers	NSLVI Temperature
6337 2240 1010	2.9+0=2.9
6357 9918 5350	2.6+0=2.6
6357 9918 5361	2.9+0=2.9

ATTACHMENT 3.2

SEPTEMBER 2023 REPORT

ANALYTICAL REPORT

September 22, 2023

American Environmental - CO

Sample Delivery Group:	L1655739
Samples Received:	09/14/2023
Project Number:	
Description:	Keenesburg Mine

Report To:

Skyler Elder
8191 Southpark Lane
Suite 107
Littleton, CO 80120

Entire Report Reviewed By: Chris Ward

Chris Ward
Project Manager

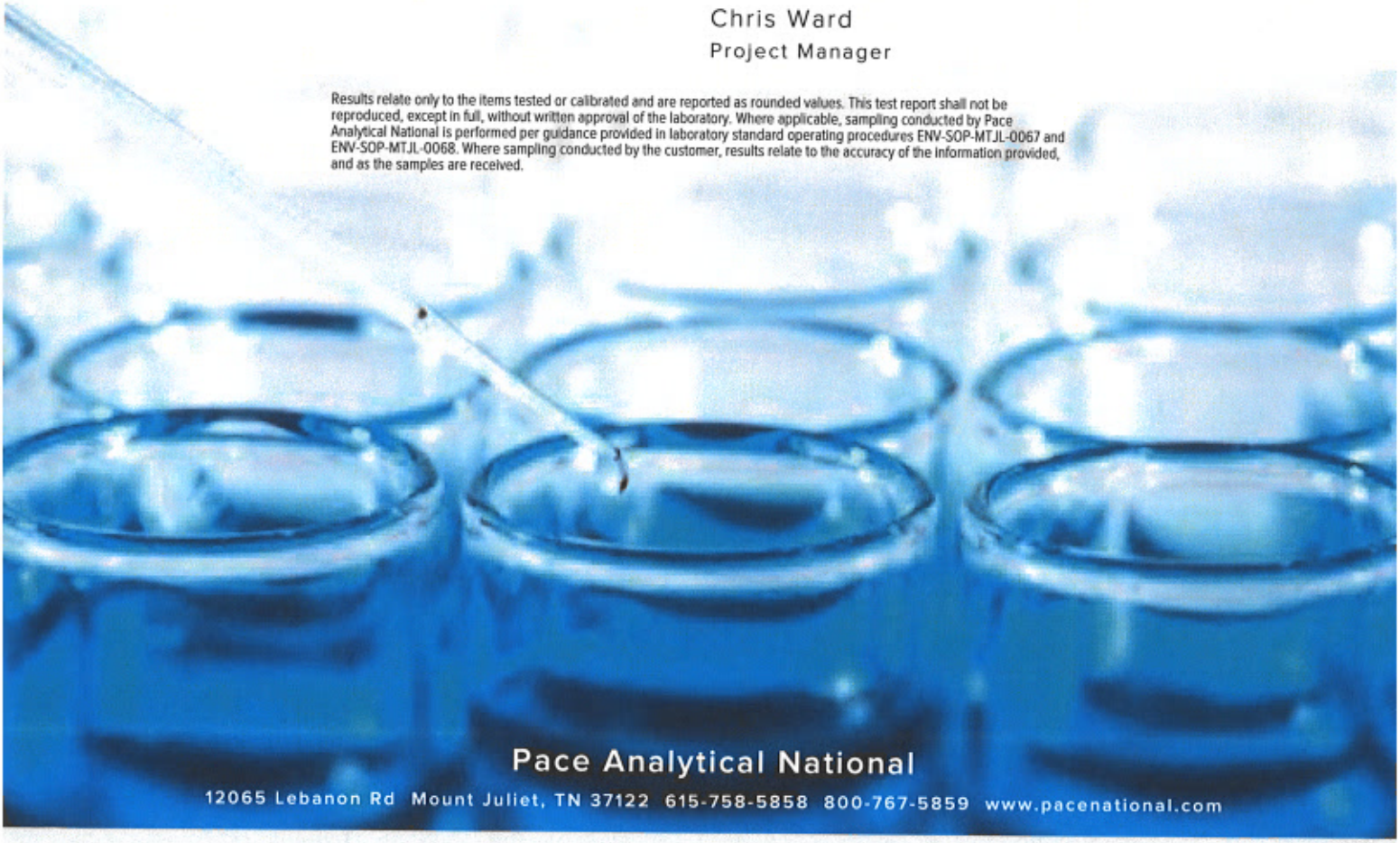

TABLE OF CONTENTS

SAMPLE SUMMARY

PC-1 L1655739-01 GW

Collected by: Ryan D. Smith | Collected date/time: 09/13/23 08:45 | Received date/time: 09/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2132924	1	09/19/23 23:22	09/19/23 23:22	ZSA	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2133245	1	09/17/23 17:34	09/17/23 21:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2134417	1	09/19/23 12:08	09/19/23 12:08	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	10	09/16/23 18:05	09/16/23 18:05	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	100	09/16/23 18:18	09/16/23 18:18	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132888	1	09/19/23 11:42	09/20/23 12:39	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132924	1	09/19/23 11:53	09/19/23 23:22	ZSA	Mt. Juliet, TN

PC-6 L1655739-02 GW

Collected by: Ryan D. Smith | Collected date/time: 09/12/23 12:30 | Received date/time: 09/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2132924	1	09/19/23 23:25	09/19/23 23:25	ZSA	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2133245	1	09/17/23 17:34	09/17/23 21:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2134417	1	09/19/23 10:25	09/19/23 10:25	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	10	09/16/23 18:32	09/16/23 18:32	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132888	1	09/19/23 11:42	09/20/23 12:42	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132924	1	09/19/23 11:53	09/19/23 23:25	ZSA	Mt. Juliet, TN

AMW-1 L1655739-03 GW

Collected by: Ryan D. Smith | Collected date/time: 09/12/23 12:00 | Received date/time: 09/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2132924	1	09/19/23 23:28	09/19/23 23:28	ZSA	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2133245	1	09/17/23 17:34	09/17/23 21:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2134419	1	09/18/23 15:18	09/18/23 15:18	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	1	09/16/23 18:59	09/16/23 18:59	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	10	09/16/23 19:13	09/16/23 19:13	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132888	1	09/19/23 11:42	09/20/23 12:46	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132924	1	09/19/23 11:53	09/19/23 23:28	ZSA	Mt. Juliet, TN

AMW-2 L1655739-04 GW

Collected by: Ryan D. Smith | Collected date/time: 09/13/23 09:00 | Received date/time: 09/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2132924	1	09/20/23 13:49	09/20/23 13:49	ZSA	Mt. Juliet, TN
Calculated Results	WG2132924	1	09/19/23 23:31	09/19/23 23:31	ZSA	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2133245	1	09/17/23 17:34	09/17/23 21:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2134419	1	09/18/23 15:10	09/18/23 15:10	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	10	09/16/23 19:26	09/16/23 19:26	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	100	09/16/23 19:40	09/16/23 19:40	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132888	1	09/19/23 11:42	09/20/23 12:49	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132888	5	09/19/23 11:42	09/22/23 12:26	CCE	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132924	1	09/19/23 11:53	09/19/23 23:31	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132924	5	09/19/23 11:53	09/20/23 13:49	ZSA	Mt. Juliet, TN

SAMPLE SUMMARY

DUP L1655739-05 GW

Collected by: Ryan D. Smith | Collected date/time: 09/12/23 12:00 | Received date/time: 09/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2132924	1	09/19/23 23:34	09/19/23 23:34	ZSA	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2133245	1	09/17/23 17:34	09/17/23 21:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2134419	1	09/18/23 15:23	09/18/23 15:23	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	1	09/16/23 19:53	09/16/23 19:53	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	10	09/16/23 20:07	09/16/23 20:07	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132888	1	09/19/23 11:42	09/20/23 12:52	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132924	1	09/19/23 11:53	09/19/23 23:34	ZSA	Mt. Juliet, TN

FPW L1655739-06 GW

Collected by: Ryan D. Smith | Collected date/time: 09/12/23 13:00 | Received date/time: 09/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2132924	1	09/19/23 23:37	09/19/23 23:37	ZSA	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2133245	1	09/17/23 17:34	09/17/23 21:52	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2134419	1	09/18/23 15:28	09/18/23 15:28	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	1	09/16/23 20:48	09/16/23 20:48	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	5	09/16/23 21:01	09/16/23 21:01	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132888	1	09/19/23 11:42	09/20/23 12:55	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2132924	1	09/19/23 11:53	09/19/23 23:37	ZSA	Mt. Juliet, TN

PC-2 L1655739-07 GW

Collected by: Ryan D. Smith | Collected date/time: 09/13/23 09:30 | Received date/time: 09/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2134579	1	09/20/23 12:40	09/20/23 12:40	ZSA	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2134259	1	09/18/23 10:31	09/18/23 17:16	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2134419	1	09/18/23 15:33	09/18/23 15:33	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	100	09/16/23 21:28	09/16/23 21:28	GEB	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133591	20	09/16/23 21:15	09/16/23 21:15	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2134562	1	09/20/23 19:39	09/21/23 10:06	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2134562	5	09/20/23 19:39	09/22/23 01:43	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2134579	5	09/19/23 09:58	09/20/23 12:40	ZSA	Mt. Juliet, TN

PC-5 L1655739-08 GW

Collected by: Ryan D. Smith | Collected date/time: 09/13/23 12:30 | Received date/time: 09/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2134579	1	09/22/23 11:48	09/22/23 11:48	CCE	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2134259	1	09/18/23 10:31	09/18/23 17:16	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2134419	1	09/18/23 15:37	09/18/23 15:37	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133641	10	09/16/23 17:40	09/16/23 17:40	GEB	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2134562	1	09/20/23 19:39	09/21/23 10:09	ZSA	Mt. Juliet, TN
Metals (ICP) by Method 6010B	WG2134579	5	09/19/23 09:58	09/22/23 11:48	CCE	Mt. Juliet, TN

SMW-2 L1655739-09 GW

Collected by: Ryan D. Smith | Collected date/time: 09/13/23 11:45 | Received date/time: 09/14/23 08:45

Method	Batch	Dilution	Preparation date/time	Analysis date/time	Analyst	Location
Calculated Results	WG2134579	1	09/20/23 12:43	09/20/23 12:43	ZSA	Mt. Juliet, TN
Gravimetric Analysis by Method 2540 C-2011	WG2134259	1	09/18/23 10:31	09/18/23 17:16	MMF	Mt. Juliet, TN
Wet Chemistry by Method 2320 B-2011	WG2134419	1	09/18/23 15:40	09/18/23 15:40	BJM	Mt. Juliet, TN
Wet Chemistry by Method 9056A	WG2133641	10	09/16/23 18:06	09/16/23 18:06	GEB	Mt. Juliet, TN