



Nicki Poulos  
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**Mountain Coal Company, LLC**  
A subsidiary of Arch Resources, Inc.  
West Elk Mine  
5174 Highway 133  
Somerset, CO 81434

January 3, 2022

Mr. Leigh Simmons  
Colorado Division of Reclamation, Mining and Safety  
Office of Mined Land Reclamation  
1313 Sherman Street, Room 215  
Denver, CO 80203

**Re: Mountain Coal Company, LLC - West Elk Mine, CDRMS Permit No. C-1980-007  
Pond and Mine Site Quarterly Self-Inspection Reports –4<sup>th</sup> Quarter 2021**

Dear Mr. Simmons:

Attached are Mountain Coal Company, LLC's (MCC) Pond, Refuse Pile and Mine Site quarterly self-inspection reports for the 4<sup>th</sup> Quarter of 2021.

The RPEE compaction tests and Professional Engineer Certification are also attached.

Should you have questions or require additional information, please contact me at (970) 929-2219.

Sincerely,

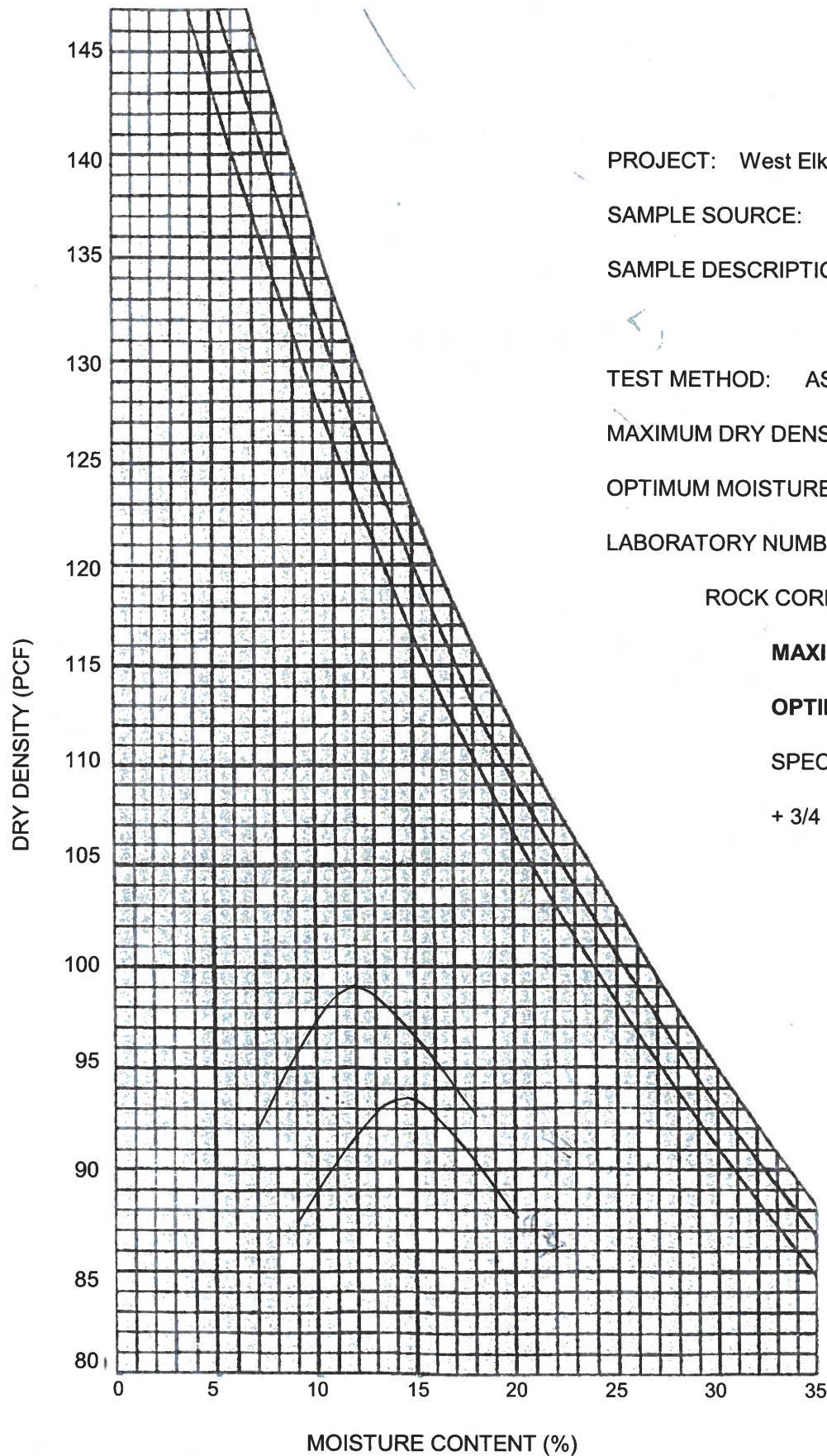
A handwritten signature in cursive script that reads "Nicki Poulos".

Nicki Poulos  
Environmental Engineer

Enclosures: Inspection Reports – 4<sup>th</sup> Quarter 2021  
Compaction Test Results  
PE Certification

cc: J. Wilczek- MCC  
Availability of Records File





PROJECT: West Elk Mine

SAMPLE SOURCE: Somerset, Co

SAMPLE DESCRIPTION: Coal Gob, Black

TEST METHOD: ASTM D698C

MAXIMUM DRY DENSITY: 93.5 pcf

OPTIMUM MOISTURE CONTENT: 14.5 %

LABORATORY NUMBER: 4326

ROCK CORRECTION:

**MAXIMUM DRY DENSITY: 99.0 pcf**

**OPTIMUM MOISTURE CONTENT: 12.0%**

SPECIFIC GRAVITY: 1.87

+ 3/4 INCH = 26.6 % TOTAL WEIGHT

2.8

2.7

2.6

Zero Air Voids for  
Specific Gravity

Lambert and Associates

Project No. M21049MT

Date: Dec 2, 2021

Figure: 1

## RELATIVE COMPACTION TEST RESULTS

**PROJECT:** West Elk Mine RPEE 2021

**PROJECT NUMBER:** M21049MT

**DATE:** December 2, 2021

**LOCATION:** Somerset, CO

**ENGINEERING TECHNICIAN:** Al Woods

**CLIENT:** Mountain Coal Company

**NUCLEAR GAUGE USED:** 14

	TEST LOCATION	DEPTH OR ELEVATION	PROBE DEPTH (IN)	LABORATORY PROCTOR DENSITY (PCF)	OPTIMUM MOISTURE CONTENT (%)	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	RELATIVE COMPACTION (%)	SOIL TYPE
64	RPEE, stake # 1		8"	99.0	12.0	91.4	8.5	92	Coal gob
65	RPEE, stake # 2		8"	99.0	12.0	98.2	7.7	99	Coal gob
66	RPEE, stake # 3		8"	99.0	12.0	91.9	7.8	93	Coal gob
67	RPEE, stake # 4		8"	99.0	12.0	91.9	10.3	93	Coal gob
68	RPEE, stake # 5		8"	99.0	12.0	95.4	9.3	96	Coal gob
69	RPEE, stake # 6		8"	99.0	12.0	91.0	8.0	92	Coal gob

**REMARKS:** The test results indicate only the density and moisture content for the location and elevation tested only.

**Lambert and Associates**

**PROJECT NUMBER:** M21049MT



**Mountain Coal Company, LLC- West Elk Mine**  
**Quarterly Self Mine Site Inspection Report**  
**Somerset, Colorado Gunnison County**

12/30/2021

Date

Topsoil pile by ST 1-3

Location

4th Qtr

Quarter/Year

N. Poulos

Inspector

Features	Problems		Maintenance		Repairs		Comments
<b>Erosion:</b>	Yes	No	Yes	No	Yes	No	
Rills and Gullies		X		X		X	
Vegetation		X		X		X	
Other		X		X		X	
<b>Drainage:</b>	Yes	No	Yes	No	Yes	No	
Ditches and Channels		X		X		X	
Berms		X		X		X	
Linings		X		X		X	
Temp. Structures		X		X		X	
Culverts		X		X		X	
Other		X		X		X	
<b>Structural:</b>	Yes	No	Yes	No	Yes	No	
Side slopes and Stability		X		X		X	
Cracks or Settling		X		X		X	
Seepage		X		X		X	
Monitoring-Visual		X		X		X	
Other		X		X		X	
<b>Reclamation:</b>	Yes	No	Yes	No	Yes	No	
Seedbed Material		X		X		X	
Subsoil		X		X		X	
Vegetation		X		X		X	
Mulch		X		X		X	
Other		X		X		X	
<b>General Compliance &amp; Miscellaneous</b>	Yes	No	Yes	No	Yes	No	
Signs and Markers		X		X		X	
Other		X		X		X	
<b>Additional Comments:</b>							
Snow covered piles. Dozer working on moving ST-1 pile							

**Mountain Coal Company, LLC- West Elk Mine**  
**Quarterly Self Mine Site Inspection Report**  
**Somerset, Colorado Gunnison County**

12/30/2021

Date

General Mine Site

Location

4th Qtr

Quarter/Year

N. Poulos

Inspector

Features	Problems		Maintenance		Repairs		Comments
<b>Erosion:</b>	Yes	No	Yes	No	Yes	No	
Rills and Gullies		X		X		X	
Vegetation		X		X		X	
Other		X		X		X	
<b>Drainage:</b>	Yes	No	Yes	No	Yes	No	
Ditches and Channels		X		X		X	
Berms		X		X		X	
Linings		X		X		X	
BMPs		X		X		X	
Culverts		X		X		X	
Other		X		X		X	
<b>Structural:</b>	Yes	No	Yes	No	Yes	No	
Side slopes and Stability		X		X		X	
Cracks or Settling		X		X		X	
Seepage		X		X		X	
Monitoring-Survey		X		X		X	
Other		X		X		X	
<b>Reclamation:</b>	Yes	No	Yes	No	Yes	No	
Seedbed Material		X		X		X	
Subsoil		X		X		X	
Vegetation		X		X		X	
Mulch		X		X		X	
Other		X		X		X	
<b>Miscellaneous</b>	Yes	No	Yes	No	Yes	No	
Signs and Markers		X		X		X	
Spontaneous Combustion		X		X		X	
Roads		X		X		X	
Other		X		X		X	
<b>Additional Comments:</b>							
Very snow covered. Roads were plowed and no visable issues							
<b>Action Required or Needed:</b>							





**Mountain Coal Company, LLC- West Elk Mine**  
**Quarterly Self Mine Site Inspection Report**  
**Somerset, Colorado Gunnison County**

12/30/2021

Date

RPE & RPEE

Location

4th Qtr

Quarter/Year

N. Poulos

Inspector

Features	Problems		Maintenance		Repairs		Comments
<b>Erosion:</b>	Yes	No	Yes	No	Yes	No	
Rills and Gullies		X		X		X	
Vegetation		X		X		X	
Other		X		X		X	
<b>Drainage:</b>	Yes	No	Yes	No	Yes	No	
Ditches and Channels		X		X		X	
Berms		X		X		X	
Linings		X		X		X	
BMPs		X		X		X	
Culverts		X		X		X	
Other		X		X		X	
<b>Structural:</b>	Yes	No	Yes	No	Yes	No	
Side slopes and Stability		X		X		X	
Compaction		X		X		X	
Underdrains		X		X		X	
Cracks or Settling		X		X		X	
Seepage		X		X		X	
Monitoring-Survey		X		X		X	
Other		X		X		X	
<b>Reclamation:</b>	Yes	No	Yes	No	Yes	No	
Seedbed Material		X		X		X	
Subsoil		X		X		X	
Vegetation		X		X		X	
Mulch		X		X		X	
Other		X		X		X	
<b>Miscellaneous</b>	Yes	No	Yes	No	Yes	No	
Signs and Markers		X		X		X	
Spontaneous Combustion		X		X		X	
Roads		X		X		X	
Other		X		X		X	
<b>Additional Comments:</b>							
Very snow covered. Roads were plowed and no visible issues. Truck hauling from bottom pile to the top has been running smoothly							
<b>Action Required or Needed:</b>							

12/30/2021  
Date  
Sylvester Gulch Facilities Area  
Location

4th Qtr
Quarter/Year
N. Poulos
Inspector

Features	Problems		Maintenance		Repairs		Comments
<b>Erosion:</b>	Yes	No	Yes	No	Yes	No	
Rills and Gullies		X		X		X	
Vegetation		X		X		X	
Other		X		X		X	
<b>Drainage:</b>	Yes	No	Yes	No	Yes	No	
Ditches and Channels		X		X		X	
Berms		X		X		X	
Linings		X		X		X	
BMPs		X		X		X	
Culverts		X		X		X	
Other		X		X		X	
<b>Structural:</b>	Yes	No	Yes	No	Yes	No	
Side slopes and Stability		X		X		X	
Cracks or Settling		X		X		X	
Seepage		X		X		X	
Monitoring-Survey		X		X		X	
Other		X		X		X	
<b>Reclamation:</b>	Yes	No	Yes	No	Yes	No	
Seedbed Material		X		X		X	
Subsoil		X		X		X	
Vegetation		X		X		X	
Mulch		X		X		X	
Other		X		X		X	
<b>General Compliance &amp; Miscellaneous</b>	Yes	No	Yes	No	Yes	No	
Signs and Markers		X		X		X	
Roads		X		X		X	
Other		X		X		X	
<b>Additional Comments:</b>							
Snowy. No issues were visible							
<b>Action Required or Needed:</b>							

**Mountain Coal Company, LLC- West Elk Mine**  
**Quarterly Self Mine Site Inspection Report**  
**Somerset, Colorado Gunnison County**

12/30/2021

Date

North Soils Storage Area (NSSA)

Location

4th Qtr

Quarter/Year

N. Poulos

Inspector

Features	Problems		Maintenance		Repairs		Comments
<b>Erosion:</b>	Yes	No	Yes	No	Yes	No	
Rills and Gullies		X		X		X	
Vegetation		X	X			X	Weeds are coming in
Other		X		X		X	
<b>Drainage:</b>	Yes	No	Yes	No	Yes	No	
Ditches and Channels		X		X		X	
Berms		X		X		X	
Linings		X		X		X	
BMPs		X		X		X	
Culverts		X		X		X	
Other		X		X		X	
<b>Structural:</b>	Yes	No	Yes	No	Yes	No	
Side slopes and Stability		X		X		X	
Cracks or Settling		X		X		X	
Seepage		X		X		X	
Other		X		X		X	
<b>Reclamation:</b>	Yes	No	Yes	No	Yes	No	
Seedbed Material		X		X		X	
Subsoil		X		X		X	
Vegetation		X		X		X	
Mulch		X		X		X	
Other		X		X		X	
<b>General Compliance &amp; Miscellaneous</b>	Yes	No	Yes	No	Yes	No	
Signs and Markers		X		X		X	
Roads		X		X		X	
Other		X		X		X	
<b>Additional Comments:</b>							
Snowed in. No access							
<b>Action Required or Needed:</b>							

**Mountain Coal Company, LLC- West Elk Mine**  
**Quarterly Self Mine Site Inspection Report**  
**Somerset, Colorado Gunnison County**

12/30/2021

Date

Lower Rufuse Pile (Prep Plant)

Location

4th Qtr

Quarter/Year

N. Poulos

Inspector

Features	Problems		Maintenance		Repairs		Comments
<b>Erosion:</b>	Yes	No	Yes	No	Yes	No	
Rills and Gullies		X		X		X	
Vegetation		X		X		X	
Other		X		X		X	
<b>Drainage:</b>	Yes	No	Yes	No	Yes	No	
Ditches and Channels		X		X		X	
Berms		X		X		X	
Linings		X		X		X	
BMPs		X		X		X	
Culverts		X		X		X	
Other		X		X		X	
<b>Structural:</b>	Yes	No	Yes	No	Yes	No	
Side slopes and Stability		X		X		X	
Compaction		X		X		X	
Underdrains		X		X		X	
Cracks or Settling		X		X		X	
Seepage		X		X		X	
Monitoring-Survey		X		X		X	
Other		X		X		X	
<b>Reclamation:</b>	Yes	No	Yes	No	Yes	No	
Seedbed Material		X		X		X	
Subsoil		X		X		X	
Vegetation		X		X		X	
Mulch		X		X		X	
Other		X		X		X	
<b>General Compliance &amp; Miscellaneous</b>	Yes	No	Yes	No	Yes	No	
Signs and Markers		X		X		X	
Spontaneous		X		X		X	
Roads		X		X		X	
Other		X		X		X	
<b>Additional Comments:</b>							
<b>Action Required or Needed:</b>							

**Mountain Coal Company, LLC- West Elk Mine**  
**Quarterly Self Mine Site Inspection Report**  
**Somerset, Colorado Gunnison County**

12/30/2021

Date

Upper Sly Gulch Road

Location

4th Qtr

Quarter/Year

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Inspector

Features	Problems		Maintenance		Repairs		Comments
<b>Erosion:</b>	Yes	No	Yes	No	Yes	No	
Rills and Gullies		X		X		X	
Vegetation		X		X		X	
Other		X		X		X	
<b>Drainage:</b>	Yes	No	Yes	No	Yes	No	
Ditches and Channels		X		X		X	
Berms		X		X		X	
Linings		X		X		X	
BMPs		X		X		X	
Culverts		X		X		X	
Other		X		X		X	
<b>Structural:</b>	Yes	No	Yes	No	Yes	No	
Side slopes and Stability		X		X		X	
Cracks or Settling		X		X		X	
Seepage		X		X		X	
Monitoring-Survey		X		X		X	
Other		X		X		X	
<b>Reclamation:</b>	Yes	No	Yes	No	Yes	No	
Seedbed Material		X		X		X	
Subsoil		X		X		X	
Vegetation		X		X		X	
Mulch		X		X		X	
Other		X		X		X	
<b>General Compliance &amp; Miscellaneous</b>	Yes	No	Yes	No	Yes	No	
Signs and Markers		X		X		X	
Roads		X		X		X	
Other		X		X		X	
<b>Additional Comments:</b>							
Snowed in. Not accessible by pickup							
Action Required or Needed:							

**Mountain Coal Company, LLC- West Elk Mine**  
**Quarterly Self Mine Site Inspection Report**  
**Somerset, Colorado Gunnison County**

12/30/2021

4th Qtr

Date

Quarter/Year

Deer Creek Shaft & Monument Dam Borrow Area

N. Poulos

Location

Inspector

Features	Problems		Maintenance		Repairs		Comments
<b>Erosion:</b>	Yes	No	Yes	No	Yes	No	
Rills and Gullies		X		X		X	
Vegetation		X		X		X	
Other		X		X		X	
<b>Drainage:</b>	Yes	No	Yes	No	Yes	No	
Ditches and Channels		X		X		X	
Berms		X		X		X	
Linings		X		X		X	
BMPs		X		X		X	
Culverts		X		X		X	
Other		X		X		X	
<b>Structural:</b>	Yes	No	Yes	No	Yes	No	
Side slopes and Stability		X		X		X	
Cracks or Settling		X		X		X	
Seepage		X		X		X	
Monitoring-Survey		X		X		X	
Other		X		X		X	
<b>Reclamation:</b>	Yes	No	Yes	No	Yes	No	
Seedbed Material		X		X		X	
Subsoil		X		X		X	
Vegetation		X		X		X	
Mulch		X		X		X	
Other		X		X		X	
<b>Miscellaneous</b>	Yes	No	Yes	No	Yes	No	
Signs and Markers		X		X		X	
Roads		X		X		X	
Other		X		X		X	
<b>Additional Comments:</b>							
Swoned in. Not accessable by pickup							
Action Required or Needed:							

Mountain Coal Company, LLC- West Elk Mine  
Quarterly Self Pond Inspection Report  
Somerset, Colorado Gunnison County

12/30/2021

Date

4th Qtr

Quarter/Year

N. Poulos

Inspector

Pond ID	FW-1	SG-1	RPE West	RPE East	NSSA	Deepwell
Pond Type	Fresh Water	Sediment	Sediment	Sediment	Sediment	Fault Water
Sediment Level %	N/A	5%	<15%	<15%	0	<5%
Water Level (Approx.)	90%	30%	20%	50%	0	20%
Discharge? Y/N	N/A	N	N	N	N	N

Features	Problems?*		Maintenance?*		Repairs?*		Comments
* If Yes add comments							
<b>Erosional:</b>	Yes	No	Yes	No	Yes	No	
Rill & Gullies		X		X		X	
Inadequate Vegetation		X		X		X	
Outlet Channel Erosion		X		X		X	
Burrows		X		X		X	
Other		X		X		X	
<b>Structural:</b>							
Differential Settling		X		X		X	
Cracks and Slides		X		X		X	
Seepage		X		X		X	
Other		X		X		X	
<b>Appurtenant Structures</b>							
Defective Spillways		X		X		X	
De-Watering Device clogged		X		X		X	
Faulty Gates, Baffles, Pumps		X		X		X	
Other		X		X		X	
<b>Additional Comments:</b>	Water is recycled from the sediment ponds for use as dust control on roadways, as well as pumped to the CPP (as needed) and/or into the sealed area of the mine for storage and later use per MCC's adjudicated water storage right						
<b>Action Needed:</b>							

Mountain Coal Company, LLC- West Elk Mine  
Quarterly Self Pond Inspection Report  
Somerset, Colorado Gunnison County

12/30/2021

Date

4th Qtr

Quarter/ Year

N. Poulos

Inspector

Pond ID	FW-2 North	FW-2 South	MB-3	MB-4	MB-5 North	MB-5 South
Pond Type	Fresh Water	Fresh Water	Sediment	Sediment	Sediment	Sediment
Sediment Level %	N/A	N/A	<15%	<5%	<10%	<15%
Water Level (Approx.)	Full	Full	15%	15%	15%	30%
Discharge? Y/N	N/A	N/A	N	N	N	N

Features	Problems?*		Maintenance?*		Repairs?*		Comments
* If Yes add comments							
<b>Erosional:</b>	Yes	No	Yes	No	Yes	No	
Rill & Gullies		X		X		X	
Inadequate Vegetation		X		X		X	
Outlet Channel Erosion		X		X		X	
Burrows		X		X		X	
Other		X		X		X	
<b>Structural:</b>							
Differential Settling		X		X		X	
Cracks and Slides		X		X		X	
Seepage		X		X		X	
Other		X		X		X	
<b>Appurtenant Structures</b>							
Defective Spillways		X		X		X	
De-Watering Device clogged		X		X		X	
Faulty Gates, Baffles, Pumps		X		X		X	
Other		X		X		X	
<b>Additional Comments:</b>	Water is recycled from the sediment ponds for use as dust control on roadways, as well as pumped to the CPP (as needed) and/or into the sealed area of the mine for storage and later use per MCC's adjudicated water storage right						
<b>Action Needed:</b>							