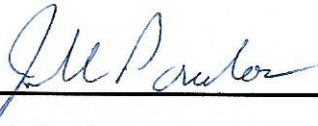


REFUSE PILE EXPANSION EAST CERTIFICATION

I, John C. Poulos, Colorado Registered P.E. No. 46025, hereby certify to the best of my knowledge and belief, the preparation of the Refuse Pile Expansion East (RPEE), including topsoil and subsoil salvage, underdrain and drainage ditch construction, and placement and compaction of fill lifts, was completed during the 1st Quarter of 2020 in accordance with the approved designs for the Refuse Pile Expansion East (RPEE), see the attached compaction test results.



John C. Poulos, Colorado P.E. No. 46025



Quarterly Pond Inspection Report Somerset, Gunnison County, Colorado

Inspector: Edward Ogrodny

Pond Identification	FW-2 (formerly MB-1)		MB-3	MB-4	MB-5E	
Type of Pond	North Fresh Water	South Fresh Water	Sediment	Sediment	North Sediment	South Sediment
Sediment Level %	NA	NA	<10%	<10%	<5%	~5%
Water Level (Approx.)	90%	90%	~30%	~30%	~30%	~25%
Discharge at Time of Inspection (Y/N)	NA	NA	N	N	N	N

[illegible]

Quarterly Pond Inspection Report Somerset, Gunnison County, Colorado

Inspector: Edward Ogrodny_____

Pond Identification	FW-1	SG-1	RPE		NSSA	Deep well
Type of Pond	Fresh Water	Sediment	West Sediment	East Sediment	Sediment	Fault Water
Sediment Level %	NA	~15%	<5%	<5%	0	NA
Water Level (Approx.)	90%	<20%	~15%	~15%	Empty	~20%
Discharge at Time of Inspection (Y/N)	NA	N	N	N	N	N

Features	Problem	Maintenance Needed	Repairs Needed	Comments			
Erosional:	Yes	No	Yes	No	Yes	No	
Rills & Gullies on Embankment		√		√		√	
Inadequate Vegetation		√		√		√	
Outlet Channel		√		√		√	
Erosion							
Burrows		√		√		√	
Other		√		√		√	
Structural:	Yes	No	Yes	No	Yes	No	
Differential Settling		√		√		√	
Cracks or slides		√		√		√	
Seepage		√		√		√	
Other		√		√		√	
Appurtenant Structures:	Yes	No	Yes	No	Yes	No	
Defective Spillways		√		√		√	
De-watering Device Clogged		√		√		√	
Faulty Gates, Baffles, Pumps		√		√		√	
Other		√		√		√	
Additional Comments: 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.							
Action Required or Needed: Plan to clean pond SG-1.							

MOUNTAIN COAL COMPANY, LLC

WEST ELK MINE

Quarterly Stockpile and/or Site Inspection Report Somerset, Gunnison County, Colorado

Date: 3/26/2020

Quarter: 1st of 2020

Location: Mine Supply Storage

Inspector: Edward Ogrodny

Features	Problems?		Maintenance?		Repairs?		Comments
	Yes	No	Yes	No	Yes	No	
Erosion:							
Rills & Gullies		√		√		√	
Vegetation		√		√		√	
Other		√		√		√	
Drainage:							
Ditches & Channels		√		√		√	Maintenance ongoing as needed
Berms		√		√		√	
Linings		√		√		√	
Temporary Structures		√		√		√	
Culverts		√		√		√	
Other		√		√		√	
Structural:							
Sideslopes & Stability		√		√		√	
Cracks or settling		√		√		√	
Compaction	NA	NA	NA	NA	NA	NA	
Seepage		√		√		√	
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey	NA	NA	NA	NA	NA	NA	
Monitoring - Visual		√		√		√	
Other		√		√		√	
Reclamation:							
Seedbed Material		√		√		√	
Subsoil		√		√		√	
Vegetation		√		√		√	
Mulch		√		√		√	
Other		√		√		√	
General Compliance & Miscellaneous:							
Signs & Markers		√		√		√	
Spontaneous Combustion	NA	NA	NA	NA	NA	NA	
Roads		√		√		√	Maintenance ongoing as needed
Other		√		√		√	
<u>Additional Comments:</u> Maintenance of ditches, roads, and facilities ongoing as needed.							
<u>Action Required or Needed:</u>							

MOUNTAIN COAL COMPANY, LLC

WEST ELK MINE

**Quarterly Stockpile and/or Site Inspection Report
Somerset, Gunnison County, Colorado**

Date: 3/26/2020

Quarter: 1st of 2020

Location: Main Topsoil Stockpile

Inspector: Edward Ogrodny

Features	Problems?		Maintenance?		Repairs?		Comments
	Yes	No	Yes	No	Yes	No	
Erosion:							
Rills & Gullies		√		√		√	
Vegetation		√		√		√	
Other		√		√		√	
Drainage:							
Ditches & Channels		√		√		√	Maintenance ongoing as needed
Berms		√		√		√	
Linings		√		√		√	
Temporary Structures		√		√		√	
Culverts		√		√		√	
Other		√		√		√	
Structural:							
Sideslopes & Stability		√		√		√	
Cracks or settling		√		√		√	
Compaction		√		√		√	
Seepage		√		√		√	
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey	NA	NA	NA	NA	NA	NA	
Monitoring - Visual		√		√		√	
Other		√		√		√	
Reclamation:							
Seedbed Material		√		√		√	
Subsoil		√		√		√	
Vegetation		√		√		√	
Mulch		√		√		√	
Other		√		√		√	
General Compliance & Miscellaneous:							
Signs & Markers		√		√		√	
Spontaneous Combustion	NA	NA	NA	NA	NA	NA	
Roads	NA	NA	NA	NA	NA	NA	
Other		√		√		√	
<u>Additional Comments:</u> No issues							
<u>Action Required or Needed:</u>							

MOUNTAIN COAL COMPANY, LLC

WEST ELK MINE

**Quarterly Stockpile and/or Site Inspection Report
Somerset, Gunnison County, Colorado**

Date: 3/26/2020

Quarter: 1st of 2020

Location: General Mine Site

Inspector: Edward Ogrodny

Features	Problems?		Maintenance?		Repairs?		Comments
	Yes	No	Yes	No	Yes	No	
Erosion:							
Rills & Gullies		√		√		√	
Vegetation		√		√		√	
Other		√		√		√	
Drainage:							
Ditches & Channels		√		√		√	Maintenance ongoing as needed
Berms		√		√		√	
Linings		√		√		√	
Temporary Structures		√		√		√	
Culverts		√		√		√	
Other		√		√		√	
Structural:							
Sideslopes & Stability		√		√		√	
Cracks or settling		√		√		√	
Compaction		√		√		√	
Seepage		√		√		√	
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey		√	√			√	Some Monitoring mirrors need repaired
Monitoring - Visual		√		√		√	
Other		√		√		√	
Reclamation:							
Seedbed Material		√		√		√	
Subsoil		√		√		√	
Vegetation		√		√		√	
Mulch		√		√		√	
Other		√		√		√	
General Compliance & Miscellaneous:							
Signs & Markers		√		√		√	
Spontaneous Combustion		√		√		√	
z Roads		√		√		√	Maintenance ongoing as needed
Other		√		√		√	
<u>Additional Comments:</u> Maintenance of ditches, roads, and facilities ongoing as needed. Site Monitoring continues with monthly and quarterly surveys. Continue to monitor of slump area below MSB.							
<u>Action Required or Needed:</u> Survey mirrors that are broke, missing, or dirty need to be repaired.							

MOUNTAIN COAL COMPANY, LLC

WEST ELK MINE

**Quarterly Stockpile and/or Site Inspection Report
Somerset, Gunnison County, Colorado**

Date: 3/26/2020

Quarter: 1st of 2020

Location: Material Storage Bench, Topsoil Stockpile #5

Inspector: Edward Ogrodny

Features	Problems?		Maintenance?		Repairs?		Comments
	Yes	No	Yes	No	Yes	No	
Erosion:							
Rills & Gullies		√		√		√	
Vegetation		√		√		√	
Other		√		√		√	
Drainage:	Yes	No	Yes	No	Yes	No	
Ditches & Channels		√		√		√	Maintenance ongoing as needed
Berms	√			√	√		Berm/barriers along north edge of the MSB bench repaired
Linings		√		√		√	
Temporary Structures		√		√		√	
Culverts		√		√		√	
Other		√		√		√	
Structural:	Yes	No	Yes	No	Yes	No	
Sideslopes & Stability	√			√	√		Continued monitoring of north-facing slump slope. See comments.
Cracks or settling	√			√	√		See comments.
Compaction		√		√		√	
Seepage		√		√		√	
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey	NA	NA	NA	NA	NA	NA	
Monitoring - Visual		√		√		√	Measurements conducted.
Other		√		√		√	
Reclamation:	Yes	No	Yes	No	Yes	No	
Seedbed Material		√		√		√	
Subsoil		√		√		√	
Vegetation		√		√		√	
Mulch		√		√		√	
Other		√		√		√	
General Compliance & Miscellaneous:	Yes	No	Yes	No	Yes	No	
Signs & Markers		√		√		√	
Spontaneous Combustion	NA	NA	NA	NA	NA	NA	
Roads	√			√	√		See comments.
Other		√		√		√	
Additional Comments: Some continued slumping pushing-up on road pavement at base of rock buttress and some cracks along the bench edge.							
Action Required or Needed: Plans being drawn-up for repairs.							

MOUNTAIN COAL COMPANY, LLC

WEST ELK MINE

**Quarterly Stockpile and/or Site Inspection Report
Somerset, Gunnison County, Colorado**

Date: 3/27/2020

Quarter: 1st of 2020

Location: Refuse Pile Expansion (RPE) & RPE East (RPEE)

Inspector: Edward Ogradny

Features	Problems?		Maintenance?		Repairs?		Comments
	Yes	No	Yes	No	Yes	No	
Erosion:							
Rills & Gullies		√		√		√	
Vegetation		√		√		√	
Other		√		√		√	
Drainage:							
Ditches & Channels		√		√		√	Maintenance ongoing as needed
Berms		√		√		√	
Linings		√		√		√	
Temporary Structures		√		√		√	
Culverts		√		√		√	
Other		√		√		√	
Structural:							
Sideslopes & Stability		√		√		√	Slope regrading completed. Area mulched and seeded.
Cracks or settling		√		√		√	
Compaction		√		√		√	Compaction tests done.
Seepage		√		√		√	
Underdrains		√		√		√	
Monitoring - Survey		√		√		√	
Monitoring - Visual		√		√		√	
Other		√		√		√	
Reclamation:							
Seedbed Material		√		√		√	
Subsoil		√		√		√	
Vegetation		√		√		√	
Mulch		√		√		√	
Other		√		√		√	
General Compliance & Miscellaneous:							
Signs & Markers		√		√		√	
Spontaneous Combustion		√		√		√	
Roads		√		√		√	Maintenance ongoing as needed
Other		√		√		√	
<u>Additional Comments:</u> Condition of road above turn #4 has deteriorated due to weather and ground conditions. Repairs and maintenance planned after weather and ground conditions improve. Compaction tests done by Lambert and Associates. See attached reports. <u>Action Required or Needed:</u> Road grading when weather conditions improve.							

MOUNTAIN COAL COMPANY, LLC

WEST ELK MINE

**Quarterly Stockpile and/or Site Inspection Report
Somerset, Gunnison County, Colorado**

Date: 3/26/2020

Quarter: 1st of 2020

Location: Sylvester Gulch Facilities Area

Inspector: Edward Ogrodny

Features	Problems?		Maintenance?		Repairs?		Comments
	Yes	No	Yes	No	Yes	No	
Erosion:							
Rills & Gullies		√		√		√	
Vegetation		√		√		√	
Other		√		√		√	
Drainage:							
Ditches & Channels		√		√		√	Maintenance ongoing as needed
Berms		√		√		√	
Linings		√		√		√	
Temporary Structures		√		√		√	
Culverts		√		√		√	
Other		√		√		√	
Structural:							
Sideslopes & Stability		√		√		√	
Cracks or settling		√		√		√	
Compaction		√		√		√	
Seepage		√		√		√	
Underdrains		√		√		√	
Monitoring - Survey		√		√		√	
Monitoring - Visual		√		√		√	
Other		√		√		√	
Reclamation:							
Seedbed Material		√		√		√	
Subsoil		√		√		√	
Vegetation		√		√		√	
Mulch		√		√		√	
Other		√		√		√	
General Compliance & Miscellaneous:							
Signs & Markers		√		√		√	
Spontaneous Combustion	NA	NA	NA	NA	NA	NA	
Roads		√		√		√	Maintenance ongoing as needed
Other		√		√		√	
<u>Additional Comments:</u> Maintenance of ditches, roads, and facilities ongoing as needed.							
<u>Action Required or Needed:</u>							

MOUNTAIN COAL COMPANY, LLC

WEST ELK MINE

Quarterly Stockpile and/or Site Inspection Report Somerset, Gunnison County, Colorado

Date: 3/27/2020

Quarter: 1st of 2020

Location: North Soils Storage Area (NSSA)

Inspector: Edward Ogrodny

Features	Problems?		Maintenance?		Repairs?		Comments
	Yes	No	Yes	No	Yes	No	
Erosion:							
Rills & Gullies		√		√		√	
Vegetation		√		√		√	
Other		√		√		√	
Drainage:							
Ditches & Channels		√		√		√	Maintenance ongoing as needed
Berms		√		√		√	
Linings		√		√		√	
Temporary Structures		√		√		√	
Culverts		√		√		√	
Other		√		√		√	
Structural:							
Sideslopes & Stability		√		√		√	
Cracks or settling		√		√		√	
Compaction		√		√		√	
Seepage		√		√		√	
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey	NA	NA	NA	NA	NA	NA	
Monitoring - Visual		√		√		√	
Other		√		√		√	
Reclamation:							
Seedbed Material		√		√		√	
Subsoil		√		√		√	
Vegetation		√		√		√	
Mulch		√		√		√	
Other		√		√		√	
General Compliance & Miscellaneous:							
Signs & Markers		√		√		√	
Spontaneous Combustion	NA	NA	NA	NA	NA	NA	
Roads		√		√		√	Maintenance ongoing as needed
Other		√		√		√	
<u>Additional Comments:</u> Maintenance of ditches, roads, and facilities ongoing as needed.							
<u>Action Required or Needed:</u>							

MOUNTAIN COAL COMPANY, LLC

WEST ELK MINE

**Quarterly Stockpile and/or Site Inspection Report
Somerset, Gunnison County, Colorado**

Date: 3/27/2020

Quarter: 1st of 2020

Location: Lower Refuse Pile

Inspector: Edward Ogrodny

Features	Problems?		Maintenance?		Repairs?		Comments
	Yes	No	Yes	No	Yes	No	
Erosion:							
Rills & Gullies		√		√		√	
Vegetation		√		√		√	
Other		√		√		√	
Drainage:							
Ditches & Channels		√		√		√	Maintenance ongoing as needed
Berms		√		√		√	
Linings		√		√		√	
Temporary Structures		√		√		√	
Culverts		√		√		√	
Other		√		√		√	
Structural:							
Sideslopes & Stability		√		√		√	
Cracks or settling		√		√		√	
Compaction		√		√		√	
Seepage		√		√		√	
Underdrains		√		√		√	
Monitoring - Survey		√		√		√	
Monitoring - Visual		√		√		√	
Other		√		√		√	
Reclamation:							
Seedbed Material		√		√		√	
Subsoil		√		√		√	
Vegetation		√		√		√	
Mulch		√		√		√	
Other		√		√		√	
General Compliance & Miscellaneous:							
Signs & Markers		√		√		√	
Spontaneous Combustion		√		√		√	
Roads		√		√		√	Maintenance ongoing as needed
Other		√		√		√	
<u>Additional Comments:</u> Maintenance of ditches, roads, and facilities ongoing as needed.							
<u>Action Required or Needed:</u>							

MOUNTAIN COAL COMPANY, LLC

WEST ELK MINE

**Quarterly Stockpile and/or Site Inspection Report
Somerset, Gunnison County, Colorado**

Date: 3/26/2020

Quarter: 1st of 2020

Location: Upper Sly Gulch Rd & E Seam MVBs

Inspector: Edward Ogrodny

Features	Problems?		Maintenance?		Repairs?		Comments
	Yes	No	Yes	No	Yes	No	
Erosion:							
Rills & Gullies		√		√		√	
Vegetation		√		√		√	
Other		√		√		√	
Drainage:							
Ditches & Channels		√		√		√	Maintenance ongoing as needed
Berms		√		√		√	
Linings		√		√		√	
Temporary Structures		√		√		√	
Culverts		√		√		√	
Other		√		√		√	
Structural:							
Sideslopes & Stability							
Cracks or settling		√		√		√	
Compaction		√		√		√	
Seepage		√		√		√	
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey		√		√		√	
Monitoring - Visual		√		√		√	
Other		√		√		√	
Reclamation:							
Seedbed Material		√		√		√	
Subsoil		√		√		√	
Vegetation		√		√		√	
Mulch		√		√		√	
Other		√		√		√	
General Compliance & Miscellaneous:							
Signs & Markers		√		√		√	
Spontaneous Combustion	NA	NA	NA	NA	NA	NA	
Roads		√		√		√	Maintenance ongoing as needed
Other		√		√		√	
<u>Additional Comments:</u> Maintenance of ditches, roads, and facilities ongoing as needed.							
<u>Action Required or Needed:</u>							

MOUNTAIN COAL COMPANY, LLC

WEST ELK MINE

**Quarterly Stockpile and/or Site Inspection Report
Somerset, Gunnison County, Colorado**

Date: 3/12/2020

Quarter: 1st of 2020

Location: Deer Creek Shaft & Monument Dam Borrow

Inspector: Edward Ogrodny

Features	Problems?		Maintenance?		Repairs?		Comments
	Yes	No	Yes	No	Yes	No	
Erosion:							
Rills & Gullies		√		√		√	
Vegetation		√		√		√	
Other		√		√		√	
Drainage:							
Ditches & Channels		√		√		√	Maintenance ongoing as needed
Berms		√		√		√	
Linings		√		√		√	
Temporary Structures		√		√		√	
Culverts		√		√		√	
Other		√		√		√	
Structural:							
Sideslopes & Stability		√		√		√	
Cracks or settling		√		√		√	
Compaction		√		√		√	
Seepage							
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey		√		√		√	
Monitoring - Visual		√		√		√	
Other		√		√		√	
Reclamation:							
Seedbed Material		√		√		√	
Subsoil		√		√		√	
Vegetation		√		√		√	
Mulch		√		√		√	
Other		√		√		√	
General Compliance & Miscellaneous:							
Signs & Markers		√		√		√	
Spontaneous Combustion	NA	NA	NA	NA	NA	NA	
Roads		√		√		√	Maintenance ongoing as needed
Other		√		√		√	
<u>Additional Comments:</u> Maintenance of ditches, roads, and facilities ongoing as needed.							
<u>Action Required or Needed:</u>							

Lambert and Associates

CONSULTING GEOTECHNICAL ENGINEERS AND MATERIAL TESTING

DAILY FIELD REPORT

PROJECT NUMBER: M19006MT

DATE: 1/27/2020

PROJECT NAME: West Elk Mine

TECHNICIAN: Derrick Hayes

PROJECT LOCATION: near Somerset, CO

CONDITIONS: snowing

CLIENT: West Elk Mine

WORK REQUESTED: densities and
pick up proctor sample

CONTRACTOR:

FOREMAN: Ty Hiatt

WORK PERFORMED BY LAMBERT AND ASSOCIATES REPRESENTATIVE (AND REMARKS)

I arrived at the project site at 10:45 AM as requested by Ty Hiatt of West Elk Mine. No nuclear field density tests were performed due to the heavy snowfall. A proctor sample was obtained and returned to our laboratory for further testing.

P.O. Box 0045
Montrose, CO 81402
(970) 249-2154
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"Committed To Quality"

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(970) 245-6506
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RELATIVE COMPACTION TEST RESULTS

PROJECT: West Elk Mine

PROJECT NUMBER: M19006MT

DATE: Friday, 2/14/2020

LOCATION: Somerset, CO

ENGINEERING TECHNICIAN: Hayes

CLIENT: West Elk Mine

NUCLEAR GAUGE USED: 16

	TEST LOCATION	DEPTH OR ELEVATION	PROBE DEPTH (IN)	LABORATORY PROCTOR DENSITY (PCF)	OPTIMUM MOISTURE CONTENT (%)	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	RELATIVE COMPACTION (%)	SOIL TYPE
51	RPEE-01		8"	90.0	15.0	98.9	4.3	100	Coal gob, black
52	RPEE-02		8"	90.0	15.0	85.6	19.0	95	Coal gob, black
53	RPEE-03		8"	90.0	15.0	93.1	12.3	100	Coal gob, black
54	RPEE-04		8"	90.0	15.0	96.5	11.0	100	Coal gob, black

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

Lambert and Associates

PROJECT NUMBER: M19006MT

RELATIVE COMPACTION TEST RESULTS

PROJECT: West Elk Mine

PROJECT NUMBER: M19006MT

DATE: Tuesday, 2/18/2020

LOCATION: Somerset, CO

ENGINEERING TECHNICIAN: Hayes

CLIENT: West Elk Mine

NUCLEAR GAUGE USED: 16

	TEST LOCATION	DEPTH OR ELEVATION	PROBE DEPTH (IN)	LABORATORY PROCTOR DENSITY (PCF)	OPTIMUM MOISTURE CONTENT (%)	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	RELATIVE COMPACTION (%)	SOIL TYPE
55	RPEE-01	6869.6	8"	90.0	15.0	92.0	14.2	100	Coal gob, black
56	RPEE-02	6872.5	8"	90.0	15.0	86.9	11.0	97	Coal gob, black
57	RPEE-03	6842.6	8"	90.0	15.0	87.0	13.0	97	Coal gob, black
58	RPEE-04	6861.2	8"	90.0	15.0	90.0	15.6	100	Coal gob, black

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

Lambert and Associates

PROJECT NUMBER: M19006MT

RELATIVE COMPACTION TEST RESULTS

PROJECT: West Elk Mine

PROJECT NUMBER: M19006MT

DATE: Friday, 2/28/2020

LOCATION: Somerset, CO

ENGINEERING TECHNICIAN: Hayes

CLIENT: West Elk Mine

NUCLEAR GAUGE USED: 16

	TEST LOCATION	DEPTH OR ELEVATION	PROBE DEPTH (IN)	LABORATORY PROCTOR DENSITY (PCF)	OPTIMUM MOISTURE CONTENT (%)	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	RELATIVE COMPACTION (%)	SOIL TYPE
59	RPEE-01	6863.5	8"	90.0	15.0	87.3	13.0	97	Coal gob, black
60	RPEE-02	6871.9	8"	90.0	15.0	94.0	16.3	100	Coal gob, black
61	RPEE-03	6873.6	8"	90.0	15.0	95.2	11.7	100	Coal gob, black
62	RPEE-04	6879.9	8"	90.0	15.0	91.4	14.9	100	Coal gob, black
63	RPEE-05	6874.4	8"	90.0	15.0	93.8	13.6	100	Coal gob, black
64	RPEE-06	6871.9	8"	90.0	15.0	84.8	14.2	94	Coal gob, black
65	RPEE-07	6868.8	8"	90.0	15.0	93.2	19.0	100	Coal gob, black
66	RPEE-08	6848.0	8"	90.0	15.0	95.1	15.6	100	Coal gob, black
67	RPEE-09	6854.7	8"	90.0	15.0	98.8	14.9	100	Coal gob, black

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

Lambert and Associates

PROJECT NUMBER: M19006MT

RELATIVE COMPACTION TEST RESULTS

PROJECT: West Elk Mine

PROJECT NUMBER: M19006MT

DATE: Monday, 2/3/2020

LOCATION: Somerset, CO

ENGINEERING TECHNICIAN: Derrick Hayes

CLIENT: West Elk Mine

NUCLEAR GAUGE USED: 16

	TEST LOCATION	DEPTH OR ELEVATION	PROBE DEPTH (IN)	LABORATORY PROCTOR DENSITY (PCF)	OPTIMUM MOISTURE CONTENT (%)	DRY DENSITY (PCF)	MOISTURE CONTENT (%)	RELATIVE COMPACTION (%)	SOIL TYPE
51	RPEE-01		8"	90.0	15.0	101.9	6.5	100	Coal gob, black
52	RPEE-02		8"	90.0	15.0	90.6	13.6	100	"
53	RPEE-03		8"	90.0	15.0	98.5	11.0	100	"

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

Lambert and Associates

PROJECT NUMBER: M19006MT

RELATIVE COMPACTION TEST RESULTS

PROJECT: West Elk Mine

PROJECT NUMBER: M19006MT

DATE: Tuesday, 3/24/2020

LOCATION: Somerset, CO

ENGINEERING TECHNICIAN: Hayes

CLIENT: West Elk Mine

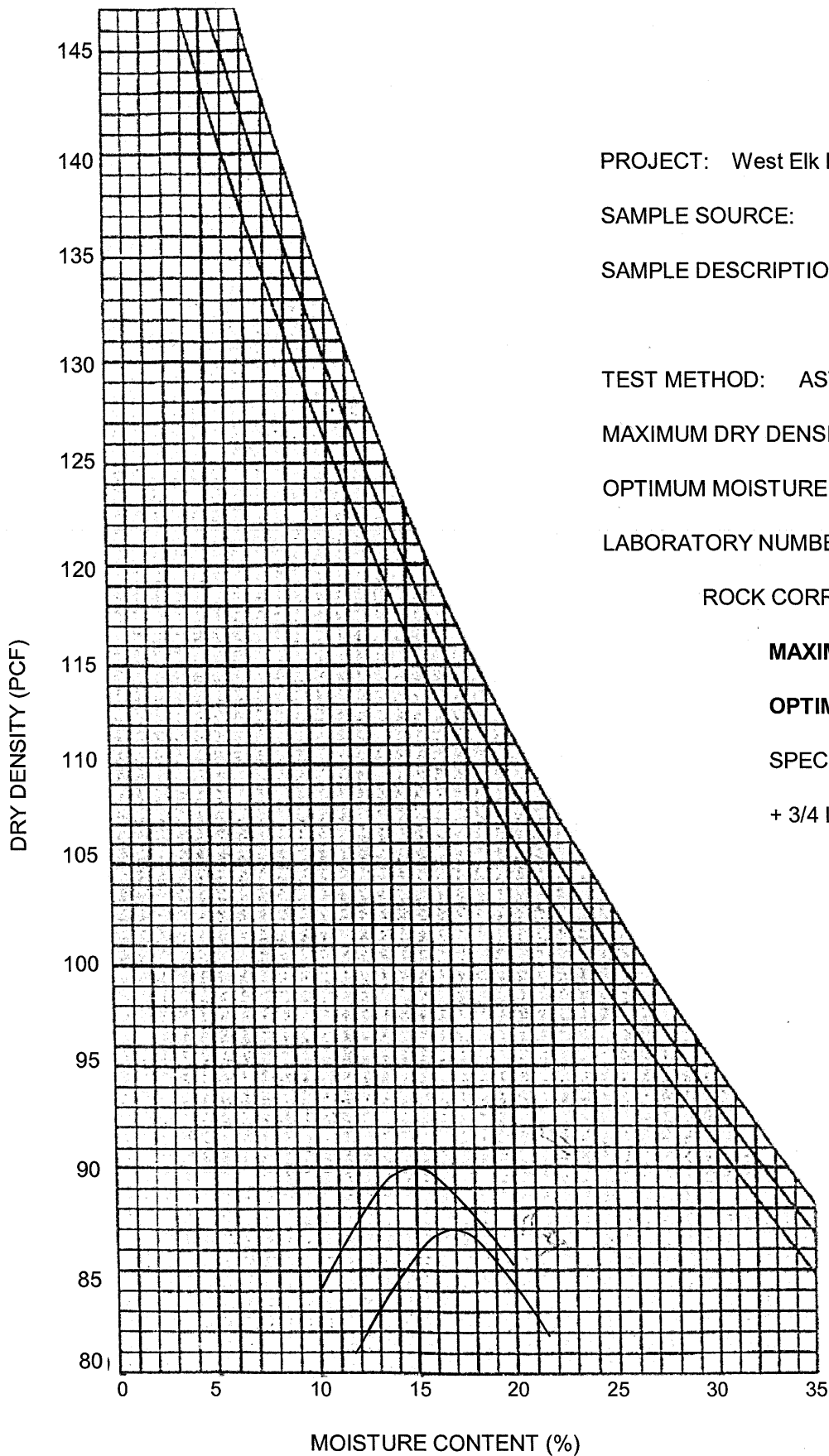
NUCLEAR GAUGE USED: 16

[illegible]

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

Lambert and Associates

PROJECT NUMBER: M19006MT



PROJECT: West Elk Mine

SAMPLE SOURCE: RPEE

SAMPLE DESCRIPTION: Coal gob, black

TEST METHOD: ASTM D698C

MAXIMUM DRY DENSITY: 87 pcf

OPTIMUM MOISTURE CONTENT: 17.0%

LABORATORY NUMBER: 3937

ROCK CORRECTION:

MAXIMUM DRY DENSITY: 90 pcf

OPTIMUM MOISTURE CONTENT: 15.0%

SPECIFIC GRAVITY: 1.87

+ 3/4 INCH = 12.8 % TOTAL WEIGHT

2.8

2.7

2.6

Zero Air Voids for
Specific Gravity