

Mountain Coal Company, LLC West Elk Mine 5174 Highway 133 Somerset, CO 81434

Edward Ogrodny Mine Engineer eogrodny@archcoal.com phone: 970.929.2248

January 27, 2020

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 Inspection Reports – 4th Quarter 2019

Dear Mr. Simmons:

Attached are Mountain Coal Company, LLC's (MCC) Pond, Refuse Pile and Mine Site quarterly self-inspection reports for the 4th Quarter of 2019.

MCC added waste rock material to the RPEE during the 4th quarter, constructing lifts no more than 24". Compaction tests were conducted and the construction of the RPEE certified by John C. Poulos, P.E.

Should you have questions or require additional information, please contact me at (970) 929-2248.

Sincerely,

Edward Ogrodny Mine Engineer

Enclosures: Inspection Reports – 4th Quarter 2019 RPEE Certification and Compaction Reports

cc: J. Poulos K. Welt Availability of Records File

WEST ELK MINE

Quarterly Pond Inspection Report Somerset, Gunnison County, Colorado

Date: 12/26/19

Quarter: 4th of 2019 Page 1 of 2

Location: West Elk Mine

Inspector: Edward Ogrodny

Pond Identification	FW-2 (form	nerly MB-1)	MB-3	MB-4	ME	8-5E
Type of Pond	North Fresh	South Fresh	Sediment	Sediment	North	South
	Water	Water			Sediment	Sediment
Sediment Level %	NA	NA	<5%	<10%	<5%	~5%
Water Level (Approx.)	90%	90%	<30%	<50%	<25%	<30%
Discharge at Time of Inspection (Y/N)	NA	NA	N	N	N	N

Features	Proble		lainten Needed		Repa Need		Comments
Erosional:	Yes	No	Yes	No	Yes	No	
Rills & Gullies on Embankment		V		V		V	
Inadequate Vegetation		V		1		V	
Outlet Channel Erosion		V		7		V	
Burrows		V		\checkmark		\checkmark	
Other		1		V		٦V .	
Structural:	Yes	No	Yes	No	Yes	No	
Differential Settling		V				\checkmark	
Cracks or slides		V		\checkmark		\checkmark	
Seepage		V		V		\checkmark	
Other		1		V		√	
Appurtenant Structures:	Yes	No	Yes	No	Yes	No	
Defective Spillways		V		\checkmark		\checkmark	
De-watering Device Clogged		V		V		V	
Faulty Gates, Baffles, Pumps		V		V		1	
Other		V				V	

Additional Comments: Sediment removal completed at MB-3 and MB-5E (South) ponds. Electric Pump and building installation in progress at west end of MB-5E. 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.

WEST ELK MINE

Quarterly Pond Inspection Report Somerset, Gunnison County, Colorado

Date: 12/26/19

Quarter: 4th of 2019 Page 2 of 2

Location: West Elk Mine

Inspector: Edward Ogrodny

Pond Identification	FW-1	SG-1	F	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

eatures Pro	oblem	Main Nee	tenanc ded		epairs eeded		Comments
Erosional:	Yes	No	Yes	No	Yes	No	
Rills & Gullies on Embankment		\checkmark		V		V	÷:
Inadequate Vegetation				V			
Outlet Channel Erosion		V		V		V	
Burrows				V		\checkmark	
Other		V		N		1	
Structural:	Yes	No	Yes	No	Yes	No	
Differential Settling		\checkmark		V		\checkmark	
Cracks or slides				N		\checkmark	-
Seepage				V		\checkmark	
Other		\checkmark		V		V	
Appurtenant Structures:	Yes	No	Yes	No	Yes	No	
Defective Spillways		\checkmark		V		\checkmark	
De-watering Device Clogged		V		N		V	
Faulty Gates, Baffles, Pumps		V		V		V	
Other		\checkmark		V		\checkmark	

Additional Comments: Sediment removal completed at RPE (East) pond. 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.

WEST ELK MINE

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

Date: 12/26/19

Quarter: 4th of 2019

Location: Mine Supply Storage

Inspector: Edward Ogrodny

Features	Features Problems? Maintenance? Repairs?		airs?	Comments			
Erosion:	Yes	No	Yes	No	Yes	No	
Rills & Gullies		N		V		N	
Vegetation		N		V		V	
Other		N		V		V	
				N		NT	1
Drainage:	Yes	No	Yes	No	Yes	No	
Ditches & Channels		N		V		V	Maintenance ongoing as needed
Berms		V		1		V	
Linings		1		<u>۸</u>		V	
Temporary		V		\checkmark		V	
Structures		1					
Culverts		V		1		V	
Other		V		7		\checkmark	
Structural:	Yes	No	Yes	No	Yes	No	
Sideslopes &	105	N	100	V			
Stability							
Cracks or settling		N		V		N	
Compaction	NA	NA	NA	NA	NA	NA	
Seepage		N		V		V	
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey	NA	NA	NA	NA	NA	NA	
Monitoring - Visual		V		V		\checkmark	
Other		N				\checkmark	
Reclamation:	Yes	No	Yes	No	Yes	No	
Seedbed Material		√)	1		V	
Subsoil		N		V			
Vegetation		N		\checkmark		\checkmark	
Mulch		N		V		\checkmark	
Other		\checkmark		\checkmark			
Cananal Compliance &	Yes	No	Yes	No	Yes	No	
General Compliance & Miscellaneous:	res	INO	1 05	INU	105	INU	
		V		V		V	
Signs & Markers		Y		4		v	
Spontaneous Combustion	NA	NA	NA	NA	NA	NA	
Roads		V		1		V	Maintenance ongoing as needed
Other		V		V		$\overline{\mathbf{v}}$	Internetionalitée ongoing us needed
Additional Comments: Mainter	nance of	ditches, 1	oads, and	facilities of	ongoing a	s needed	1.

WEST ELK MINE

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

Date: 12/26/19

Quarter: 4th of 2019

Location: Main Topsoil Stockpile

Inspector: Edward Ogrodny

Features	Probl	lems?	Mainte	enance?	Repa	airs?	Comments
Erosion:	Yes	No	Yes	No	Yes	No	
Rills & Gullies				V		$\overline{\mathbf{A}}$	
Vegetation		N		N		\checkmark	
Other		\checkmark		\checkmark		V	
		N		NL	V	NL.	
Drainage:	Yes	No	Yes	No	Yes	No √	Maintenance and income and ad
Ditches & Channels		V		V			Maintenance ongoing as needed
Berms		V		<u></u>		<u>ار</u>	
Linings		V		V		1	
Temporary		V		\checkmark		\checkmark	
Structures						.1	
Culverts		1		1		1	
Other		1		\checkmark		\checkmark	
Structural:	Yes	No	Yes	No	Yes	No	
Sideslopes &		V		N			
Stability							
Cracks or settling		\checkmark				\checkmark	
Compaction		\checkmark		\checkmark		\checkmark	
Seepage		\checkmark				\checkmark	
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey	NA	NA	NA	NA	NA	NA	
Monitoring - Visual		\checkmark				\checkmark	
Other		\checkmark		\checkmark		\checkmark	
Reclamation:	Yes	No	Yes	No	Yes	No	
Seedbed Material	Tes	NO √	1 05	NU V	105		
Subsoil		V				7	
		N N				 √	
Vegetation		V				1	
Mulch		N N					
Other		V		V		V	
General Compliance & Miscellaneous:	Yes	No	Yes	No	Yes	No	
Signs & Markers		V		V			
Spontaneous Combustion	NA	NA	NA	NA	NA	NA	
Roads	NA	NA	NA	NA	NA	NA	
Other		V				\checkmark	
		· · · · · · · · · · · · · · · · · · ·	I				
Additional Comments: No issu	es						

WEST ELK MINE

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

Date: 12/26/19

Quarter: 4th of 2019

Location:	General Mine Site	

Inspector: Edward Ogrodny

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Features	Probl	lems?	Mainte	enance?	Repa	airs?	Comments
Erosion:	Yes	No	Yes	No	Yes	No	
Rills & Gullies		V		\checkmark		\checkmark	
Vegetation		V		\checkmark		\checkmark	
Other		V		\checkmark		\checkmark	
	N	NI-	Ves	No	Yes	Na	
Drainage:	Yes	No √	Yes	No √	res	No √	Maintenance anaping as needed
Ditches & Channels				 √		N	Maintenance ongoing as needed
Berms		V					
Linings		V		<u>√</u>		V	
Temporary Structures		V		\checkmark		V	
Culverts		N		\checkmark		\checkmark	
Other		\checkmark		\checkmark		V	
Structural:	Yes	No	Yes	No	Yes	No	
Sideslopes &	105		105	V	105	V	
Stability							
Cracks or settling		1		\checkmark		V	
Compaction		\checkmark		\checkmark		V	
Seepage		\checkmark		\checkmark		N N	
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey		\checkmark	V			N	Some Monitoring mirrors need repaired
Monitoring - Visual		V		\checkmark		V	
Other						V	
Reclamation:	Yes	No	Yes	No	Yes	No	
Seedbed Material	105	V	105	V	105	N	
Subsoil		V	1	1		V	
Vegetation		V		V		V	
Mulch		V		V		V	
Other		V		V		N	
General Compliance & Miscellaneous:	Yes	No	Yes	No	Yes	No	
Signs & Markers		V		\checkmark		\checkmark	
Spontaneous		\checkmark		\checkmark		V	
Combustion		$\overline{\mathbf{v}}$		\checkmark			Maintananaa angeing as needed
z Roads				V		N N	Maintenance ongoing as needed
Other		$\sqrt{2}$		٧		V	
Additional Comments: Mainter	nance of	ditches,	roads, and	facilities of	ongoing a	is needed	d. Site Monitoring continues with monthly

surveys from a few stations and quarterly for the rest. Continue to monitor of slump areas.

Action Required or Needed: Survey mirrors that are broke, missing, or dirty need to be repaired.

WEST ELK MINE

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

Date:12/26/19Location:Material Storage Bench, Topsoil Stockpile #5

Quarter:4th of 2019Inspector:Edward Ogrodny

Features	Prob	lems?	Mainte	enance?	Repa	airs?	Comments
Erosion:	Yes	No	Yes	No	Yes	No	
Rills & Gullies		\checkmark		\checkmark		\checkmark	
Vegetation		N		\checkmark		\checkmark	
Other		V		\checkmark		\checkmark	
Drainage:	Yes	No	Yes	No	Yes	No	
Ditches & Channels		V				V	Maintenance ongoing as needed
Berms	V			V	V		Berm/barriers along north edge of the MSB bench repaired
Linings		\checkmark		\checkmark		N	
Temporary Structures		V				\checkmark	
Culverts	\checkmark			\checkmark		\checkmark	
Other		V		\checkmark		V	
Structural:	Yes	No	Yes	No	Yes	No	
Sideslopes & Stability	V				V		Continued monitoring of north- facing slump slope. See comments.
Cracks or settling	\checkmark			\checkmark	\checkmark		See comments.
Compaction		N		\checkmark		N	
Seepage		V		\checkmark		N	
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey	NA	NA	NA	NA	NA	NA	
Monitoring - Visual		N		\checkmark		N	Measurements conducted.
Other						\checkmark	
Reclamation:	Yes	No	Yes	No	Yes	No	
Seedbed Material	105	V	105	V	100	V	
Subsoil		V		Ń		V	
Vegetation		V		1		V	
Mulch		V		V		V	
Other		V		1		V	
Other				•			
General Compliance & Miscellaneous:	Yes	No	Yes	No	Yes	No	
Signs & Markers		\checkmark				1	
Spontaneous Combustion	NA	NA	NA	NA	NA	NA	
Roads	\checkmark			\checkmark	\checkmark		See comments.
Other		\checkmark		\checkmark		V	
Additional Comments: Continu	ued slum	oing pusl	ning up on	road pave	ement at b	base of r	ock buttress and some cracks along the

<u>Additional Comments</u>: Continued slumping pushing up on road pavement at base of rock buttress and some cracks along bench edge.

Action Required or Needed: Plans being drawn-up for repairs.

WEST ELK MINE

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

Date: 12/26/19					Qua	arter:	4th of 2019
Location: Refuse Pile Expa	unsion (R	.PE) & I	RPE East	(RPEE)	Insp	pector:	Edward Ogrodny
Features	Prob	lems?	Maint	enance?	Rep	airs?	Comments
Erosion:	Yes	No	Yes	No	Yes	No	
Rills & Gullies		$\sqrt{1}$		\checkmark		\checkmark	
Vegetation		\checkmark		\checkmark		\checkmark	
Other		V		\checkmark		V	
Drainage:	Yes	No	Yes	No	Yes	No	
Ditches & Channels	105	V	105	110	100	V	Maintenance ongoing as needed
Brenes & Channels		V		1		V	Wantenance ongoing as needed
Linings	8	V		V		V	
Temporary		V				V	
Structures		v		۷			
Culverts		N		V		V	
Other		V		V		V	
Stars stores la	Vac	No	Vaa	No	Vaa	No	
Structural:	Yes	No √	Yes	No √	Yes √	INO	Slong regreding completed Area
Sideslopes & Stability					V		Slope regrading completed. Area mulched and seeded.
Cracks or settling		\checkmark		V		\checkmark	
Compaction		N		\checkmark		\vee	24" lifts completed. Compaction tests done.
Seepage		\checkmark					
Underdrains						\vee	
Monitoring - Survey		\checkmark		\checkmark		N N	
Monitoring - Visual		N		1		V	
Other				\checkmark		\checkmark	
Reclamation:	Yes	No	Yes	No	Yes	No	
Seedbed Material		N		V		V	
Subsoil		N		V		V	
Vegetation		V				\checkmark	
Mulch		\checkmark				V	
Other		V		\checkmark		\checkmark	
General Compliance & Miscellaneous:	Yes	No	Yes	No	Yes	No	
		\checkmark		1		\checkmark	
Signs & Markers		N N				V	
Spontaneous Combustion							
Roads		\checkmark				1	Maintenance ongoing as needed
Other		\checkmark		\checkmark		1	
Additional Comments: Mainter	nance of d	litches, r	oads, and	facilities or	ngoing a	s needed	. 24" lifts completed on RPEE.

Compaction tests done by Lambert and Associates on 10/25/19, and 11/12/19. See attached reports.

WEST ELK MINE

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

Date: 12/26/19				_	Qua	rter:	4th of 2019
Location: Sylvester Gulch	Facilities	s Area		:	Insp	ector:	Edward Ogrodny
Features	Prob	lems?	Maint	enance?	Rep	airs?	Comments
Erosion:	Yes	No	Yes	No	Yes	No	
Rills & Gullies		1				\checkmark	
Vegetation				\checkmark		\checkmark	
Other		\checkmark		\checkmark		\checkmark	
Drainage:	Yes	No	Yes	No	Yes	No	
Ditches & Channels		V		V		V	Maintenance ongoing as needed
Brenes & Chamers		V	<u> </u>	V		V	intentitie ongoing us needed
Linings		V		V		V	
Temporary		V	1	1		V	
Structures		l ·		·			
Culverts		V		\checkmark		V	
Other		\checkmark		1		\checkmark	
Structural:	Yes	No	Yes	No	Yes	No	
Sideslopes &	105	NU V	105	V	105	V	
Stability				,			
Cracks or settling		\checkmark				N	
Compaction	1	V		V		N	
Seepage		\checkmark		\checkmark		V	
Underdrains		\checkmark		V		N	
Monitoring - Survey		V				N	
Monitoring - Visual		V		V		\checkmark	
Other		\checkmark		\checkmark		\checkmark	
Reclamation:	Yes	No	Yes	No	Yes	No	
Seedbed Material	105	V	105	V	103	$\sqrt{10}$	
Subsoil		1		1		$\overline{\mathbf{v}}$	
Vegetation		V		V		V	
Mulch		V		V		V	
Other		V		V		V	
	l						
General Compliance & Miscellaneous:	Yes	No	Yes	No	Yes	No	
Signs & Markers		\checkmark		Ń		√	
Spontaneous Combustion	NA	NA	NA	NA	NA	NA	
Roads		\checkmark		Ń		\checkmark	Maintenance ongoing as needed
Other		\checkmark		\checkmark			
Additional Comments: Mainte	nance of	ditches, r	oads, and	facilities of	ngoing a	s needec	1.

WEST ELK MINE

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

Date: 12/26/19

Quarter: 4th of 2019

Location: North Soils Storage Area (NSSA)

Inspector: Edward Ogrodny

Features	Problems?		Mainte	enance?	Repa	airs?	Comments	
Erosion:	Yes	No	Yes	No	Yes	No		
Rills & Gullies		\checkmark				\checkmark		
Vegetation		V				\checkmark		
Other								
Drainage:	Yes	No	Yes	No	Yes	No		
Ditches & Channels		V				\checkmark	Maintenance ongoing as needed	
Berms		V		\checkmark		\checkmark		
Linings		\checkmark				\checkmark		
Temporary Structures		V		V		\checkmark		
Culverts		$\overline{\mathbf{A}}$		N		\checkmark		
Other						\checkmark		
Structural:	Yes	No	Yes	No	Yes	No		
Sideslopes &	103	V	103	√	103	√		
Stability		N	·	V		$\overline{\mathbf{v}}$		
Cracks or settling		- 1-		V				
Compaction		 √				V V		
Seepage	NT 4		NA		NA	NA		
Underdrains	NA	NA		NA NA	NA	NA		
Monitoring - Survey	NA	$\frac{NA}{}$	NA	NA V	IVA	$\frac{NA}{}$		
Monitoring - Visual		V		V V		V		
Other		V		V		V		
Reclamation:	Yes	No	Yes	No	Yes	No		
Seedbed Material				V		\checkmark		
Subsoil		\checkmark		V		\checkmark		
Vegetation		Ń		V		\checkmark		
Mulch		\checkmark		\checkmark		\checkmark		
Other				\checkmark		\checkmark		
General Compliance & Miscellaneous:	Yes	No	Yes	No	Yes	No		
Signs & Markers		N		V		V		
Spontaneous Combustion	NA	NA	NA	NA	NA	NA		
Roads		V		1		N	Maintenance ongoing as needed	
Other		V		1		V	internet ongoing as needed	
		¥	I	4		¥		

WEST ELK MINE

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

Location: Lower Refuse PileInspector: Edward OgrodnyFeaturesProblems?Maintenance?Repairs?CommentsErosion:YesNoYesNoVestorNoRills & Gullies \vee \vee \vee \vee \vee \vee Vegetation \vee \vee \vee \vee \vee \vee Other \vee \vee \vee \vee \vee \vee Drainage:YesNoYesNoYesDitches & Channels \vee \vee \vee \vee \vee Ditches & Channels \vee \vee \vee \vee Culverts \vee \vee \vee \vee Culverts \vee \vee \vee \vee Structures \vee \vee \vee	Date: 12/26/19			<u> </u>	Qua	rter:	4th of 2019
Erosion:YesNoYesNoYesNoRills & Gullies \vee \vee \vee \vee \vee \vee Vegetation \vee \vee \vee \vee \vee Other \vee \vee \vee \vee \vee Drainage:YesNoYesNoDitches & Channels \vee \vee \vee \vee \vee \vee \vee \vee \vee Ditches & Channels \vee \vee \vee \vee \vee \vee \vee Ditches & Channels \vee <	Location: Lower Refuse Pi	le		_	Insp	ector:	Edward Ogrodny
Rills & Gullies \vee \vee \vee \vee \vee Vegetation \vee \vee \vee \vee \vee Other \vee \vee \vee \vee \vee Drainage:YesNoYesNoDitches & Channels \vee \vee \vee \vee Maintenance ongoing as neededBerms \vee \vee \vee Linings \vee \vee \vee Temporary \vee \vee \vee Structures \vee \vee \vee Culverts \vee \vee \vee Other \vee \vee \vee Structural:YesNoYesStability \vee \vee \vee Cracks or settling \vee \vee \vee Seepage \vee \vee \vee Underdrains \vee \vee \vee	Features	Problems?	Maint	tenance?	Rep	airs?	Comments
Vegetation \vee \vee \vee \vee Other \vee \vee \vee \vee \vee Drainage:YesNoYesNoYesNoDitches & Channels \vee \vee \vee \vee \vee Berms \vee \vee \vee \vee \vee Linings \vee \vee \vee \vee Temporary \vee \vee \vee \vee Structures \vee \vee \vee Culverts \vee \vee \vee Other \vee \vee \vee Structural:YesNoYesStability \vee \vee \vee Compaction \vee \vee \vee Seepage \vee \vee \vee Underdrains \vee \vee \vee	Erosion:	Yes No	Yes	No	Yes		
Other \checkmark \checkmark \checkmark \checkmark Drainage:YesNoYesNoDitches & Channels \checkmark \checkmark \checkmark \checkmark Maintenance ongoing as neededBerms \checkmark \checkmark \checkmark Linings \checkmark \checkmark \checkmark Temporary \checkmark \checkmark \checkmark Structures \checkmark \checkmark \checkmark Culverts \checkmark \checkmark \checkmark Other \checkmark \checkmark \checkmark Structural:YesNoYesYesNoYesNoStability \checkmark \checkmark \checkmark Compaction \checkmark \checkmark \checkmark Seepage \checkmark \checkmark \checkmark V \checkmark \checkmark \checkmark Underdrains \checkmark \checkmark \checkmark	Rills & Gullies	√				\checkmark	
Drainage:YesNoYesNoYesNoDitches & Channels $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Maintenance ongoing as neededBerms $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Linings $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Temporary $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Structures $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Culverts $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Other $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Structural:YesNoYesNoSideslopes & $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Cracks or settling $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Compaction $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Seepage $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Underdrains $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$	Vegetation	√		√		\checkmark	
Ditches & Channels $$ $\sqrt{$ $\sqrt{$ Maintenance ongoing as neededBerms $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Linings $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Temporary $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Structures $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Culverts $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Other $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Structural:YesNoYesNoYesSideslopes & Stability $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Compaction $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Genge $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Underdrains $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$	Other	√		\checkmark		\checkmark	
Ditches & Channels $$ $\sqrt{$ $\sqrt{$ Maintenance ongoing as neededBerms $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Linings $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Temporary $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Structures $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Culverts $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Other $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Structural:YesNoYesNoYesSideslopes & Stability $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Compaction $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Genge $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Underdrains $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$	Drainage	Ves No	Ves	No	Ves	No	
Berms \vee \vee \vee \vee \vee Linings \vee \vee \vee \vee \vee Temporary Structures \vee \vee \vee \vee Culverts \vee \vee \vee \vee Other \vee \vee \vee \vee Structural:YesNoYesNoSideslopes & Stability \vee \vee \vee \vee Cracks or settling \vee \vee \vee \vee Compaction \vee \vee \vee \vee Seepage \vee \vee \vee \vee Underdrains \vee \vee \vee			105		105		Maintenance ongoing as needed
Linings $$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Temporary Structures $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Culverts $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Other $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Structural:YesNoYesNoSideslopes & Stability $\sqrt{$ $\sqrt{$ $\sqrt{$ Cracks or settling $\sqrt{$ $\sqrt{$ $\sqrt{$ Compaction $\sqrt{$ $\sqrt{$ $\sqrt{$ Seepage $\sqrt{$ $\sqrt{$ $\sqrt{$ Underdrains $\sqrt{$ $\sqrt{$ $$							internative offgoing as needed
Temporary Structures $$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Culverts $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Other $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Structural:YesNoYesNoSideslopes & Stability $\sqrt{$ $\sqrt{$ $\sqrt{$ Cracks or settling $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ $\sqrt{$ Seepage $\sqrt{$ $\sqrt{$ $\sqrt{$ Underdrains $\sqrt{$ $\sqrt{$ $\sqrt{$							
Structures \checkmark \checkmark \checkmark Culverts \checkmark \checkmark \checkmark Other \checkmark \checkmark \checkmark Structural:YesNoYesSideslopes & Stability \checkmark \checkmark Cracks or settling \checkmark \checkmark \checkmark \checkmark \checkmark Compaction \checkmark \checkmark \checkmark \checkmark \checkmark Seepage \checkmark \checkmark \checkmark \checkmark \checkmark Underdrains \checkmark \checkmark							
Other $$ $$ $$ Structural:YesNoYesNoSideslopes & $$ $$ $$ $$ Stability $$ $$ $$ $$ Cracks or settling $$ $$ $$ Compaction $$ $$ $$ Seepage $$ $$ $$ Underdrains $$ $$ $$							r
Structural:YesNoYesNoYesNoSideslopes & $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Stability $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Cracks or settling $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Compaction $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Seepage $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$ Underdrains $\sqrt{1}$ $\sqrt{1}$ $\sqrt{1}$	Culverts	V		V		V	
Sideslopes & Stability $$ $$ $$ Cracks or settling $$ $$ $$ Compaction $$ $$ $$ Seepage $$ $$ $$ Underdrains $$ $$ $$	Other	√		1		\checkmark	
Sideslopes & Stability $$ $$ $$ Cracks or settling $$ $$ $$ Compaction $$ $$ $$ Seepage $$ $$ $$ Underdrains $$ $$ $$	Structural	Ves No	Ves	No	Yes	No	E Contraction of the second seco
Stability \checkmark \checkmark Cracks or settling \checkmark \checkmark Compaction \checkmark \checkmark Seepage \checkmark \checkmark Underdrains \checkmark \checkmark					100		
Cracks or settling $$ $$ $$ Compaction $$ $$ $$ Seepage $$ $$ $$ Underdrains $$ $$ $$							1
Compaction $$ $$ $$ Seepage $$ $$ $$ Underdrains $$ $$ $$		V		V		V	
Seepage $$ $$ $$ Underdrains $$ $$ $$		V		V		V	
Underdrains $\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$	è	V		V		N	
		V		V		\sim	
Monitoring - Survey $ V V V V $	Monitoring - Survey	√		V		\checkmark	
Monitoring - Visual \vee \vee \vee		V		V		N	
Other $\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$		√		1		N	
Reclamation: Yes No Yes No Yes No	Reclamation:	Ves No	Ves	No	Ves	No	
$\frac{1}{1} \frac{1}{1} \frac{1}$			103		103		
Subsoil $$ $$			_				
Subsolution $$ $$ Vegetation $$ $$							
$\frac{1}{Mulch}$							
$\begin{array}{c c c c c c c c c c c c c c c c c c c $			_				
		1	1			9	
General Compliance & Miscellaneous:YesNoYesNoYesVesVesVesVes		Yes No	Yes	No	Yes	No	
Signs & Markers $\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{\sqrt{$	Signs & Markers			V		1	
Spontaneous $$ $$ Combustion $$		1		\checkmark		\checkmark	
Roads $\sqrt{1}$ $\sqrt{1}$ Maintenance ongoing as needed	Roads	√ V				V	Maintenance ongoing as needed
Other $$ $$ $$		V		\checkmark		\checkmark	
Additional Comments: Maintenance of ditches, roads, and facilities ongoing as needed.	Additional Comments: Mainter	nance of ditches	s, roads, and	l facilities o	ongoing a	s needed	1.

WEST ELK MINE

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

Date: 12/26/19

Quarter: 4th of 2019

Location: Upper Sly Gulch Rd & E Seam MVBs

Inspector: Edward Ogrodny

Features	Prob	lems?	Maint	enance?	Rep	airs?	Comments
Erosion:	Yes	No	Yes	No	Yes	No	
Rills & Gullies		\checkmark					
Vegetation		\checkmark				\checkmark	
Other		\checkmark		\checkmark		\checkmark	
	1						
Drainage:	Yes	No	Yes	No	Yes	No	
Ditches & Channels		V		V		V	Maintenance ongoing as needed
Berms		V		V		V	
Linings		V		N		√ 	
Temporary		V		\checkmark		V	
Structures							
Culverts		V		N	-	V	
Other		$\sqrt{1}$		\checkmark		\vee	
Structural:	Yes	No	Yes	No	Yes	No	
Sideslopes &				110	100	110	
Stability							
Cracks or settling		V		V		N	
Compaction		V		V		N	
Seepage		N		V		V	
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey		V		V			
Monitoring - Visual		N		V		N	
Other		N		V		N	
						· · · · · · · · · · · · · · · · · · ·	
Reclamation:	Yes	No	Yes	No	Yes	No	
Seedbed Material		V		1		V	
Subsoil		V		V		V	
Vegetation		√		\checkmark		\checkmark	
Mulch		V		V		\checkmark	
Other		\checkmark		\checkmark		\checkmark	
General Compliance &	Yes	No	Yes	No	Yes	No	
Miscellaneous:	105	INU	105	NU	105	INO	
Signs & Markers		V		V		V	
Spontaneous				*		¥	
Combustion	NA	NA	NA	NA	NA	NA	
Roads				V		V	Maintenance ongoing as needed
Other		1		N		V	manitonance ongoing as needed
	1						1
Additional Comments: Mainter	nance of o	ditches, r	oads, and	facilities o	ngoing a	s needed	1.

WEST ELK MINE

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

Date: <u>12/26/19</u>					Qua	arter:	4th of 2019
Location: Deer Creek Shaf	t & Mon	ument [Dam Barr	ow Area	Insp	pector:	Edward Ogrodny
Features	Prob	ems?	Mainte	enance?	Rep	airs?	Comments
Erosion:	Yes	No	Yes	No	Yes	No	
Rills & Gullies		\checkmark		\checkmark		\checkmark	
Vegetation		\checkmark		V		\vee	
Other				\checkmark		V	
Drainage:	Yes	No	Yes	No	Yes	No	
Ditches & Channels		V		V		N	Maintenance ongoing as needed
Berms		V		Ń		, V	
Linings		V		V		V	
Temporary		V		Ń		V	
Structures		•		,			
Culverts		V		V		N	
Other		V		V		V	
	r					I	
Structural:	Yes	No	Yes	No	Yes	No	
Sideslopes & Stability		\checkmark		V		V	
Cracks or settling		\checkmark		\checkmark		\checkmark	
Compaction		V		\checkmark		\checkmark	
Seepage	ĺ						
Underdrains	NA	NA	NA	NA	NA	NA	
Monitoring - Survey	li	\checkmark		\checkmark		\checkmark	
Monitoring - Visual		\checkmark		\checkmark		\checkmark	
Other		\checkmark		\checkmark		\checkmark	
Reclamation:	Yes	No	Yes	No	Yes	No	
Seedbed Material	105	$\sqrt{10}$	103	 √	103	V	
Subsoil		-		V		1	
Vegetation		$\overline{}$		1		V	
Mulch		V		V		V	
Other		1		V		V	
		N.T.					1
General Compliance & Miscellaneous:	Yes	No	Yes	No	Yes	No	
Signs & Markers		\checkmark				\checkmark	
Spontaneous Combustion	NA	NA	NA	NA	NA	NA	
Roads				V		N	Maintenance ongoing as needed
		V		V		N	<u> </u>

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 4th Quarter of 2019 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



PROJECT: West Elk Mine	LOCATION: Somerset, CO

CLIENT: West Elk Mine

RELATIVE COMPACTION TEST RESULTS

PROJECT NUMBER: M19006MT

DATE: Friday, 10/25/19

ENGINEERING TECHNICIAN: Hayes

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
38	RPEE-01		8"	83.5	16.5	96.0	12.3	100	Coal gob, black
39	RPEE-02		8	23	33	94.2	11.0	100	з
40	RPEE-03		8	33	a,	94.5	13.6	100	z
41	Low water east		8"	107.0	ÿ	102.7	13,4	96	Clay, sand, gravelly, brown
42	Low water middle		ŝ	23	33	114.7	12.2	100	53
43	Low water west		%	25	33	110.4	14.6	100	ť
44	Retest of #4 on this date		ŝ	3	33	104.1	11.8	76	3
REMA	REMARKS: The test results indicate only the density	ate only the der		and moisture content for the location and elevation tested only.	ent for the lo	cation and	elevation teste	d only.	

Azzociatez

PROJECT NUMBER: M19006MT

CLIEN	CLIENT: West Elk Mine		NUCL	NUCLEAR GAUGE USED: 16	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
45	RPEE-01		6"	83.5	16.5	92.9	9.8	100	Coal gob, black
46	RPEE-02		6"	83.5	16.5	90.4	14.9	100	3
47	RPEE-03		6"	83.5	16.5	87.4	17.6	100	3
48	Low water east		6"	107.0	16.5	105.1	12.0	86	Clay, sand, gravelly, brown
49	Low water middle		6"	107.0	16.5	101.4	10.2	95	77
50	Low water west		6"	107.0	16.5	115.0	10.7	100	3
KEMA	KEMARKS: The test results indicate only the density and moisture content for the location and elevation tested only.	tte only the der	ısity and	moisture conte	ent for the lo	cation and	elevation teste	d only.	

PROJECT NUMBER: M19006MT

ENGINEERING TECHNICIAN: Hayes

RELATIVE COMPACTION TEST RESULTS

DATE: Tuesday, 11/12/19

PROJECT: West Elk Mine LOCATION: Somerset, CO

CLIENT: West FIL Mi

PROJECT NUMBER: M19006MT

Tambert and Associates



