



February 8, 2022

Kurt Blunt
Blue Mountain Energy, Inc.
3607 County Rd. 65
Rangely, CO 81648

RE: Deserado Mine, C-1981-018
Technical Revision No. 73 Second Adequacy Review

Dear Mr. Blunt,

The Colorado Division of Reclamation, Mining and Safety (the Division) received the Deserado Mine's responses to the Division's Preliminary Adequacy Review for Technical Revision No. 73 (TR-73) on February 1, 2022. The Division has completed its review of BME's responses and has the following comments:

Rule 2.05.4(2)(b) – Reclamation Plan

1. The Division completed a reclamation cost estimate for reclaiming the activities proposed under TR-73. The Division estimates the costs to be in the amount of \$25,590.00. The Division estimates the total reclamation liability for the Deserado Mine to be \$6,533,708.00. The current bond held by the Division is in the amount of \$6,600,000.00. The current bond held is enough to cover the additional costs proposed under TR-73. No additional bond monies are required to be submitted with this revision. A copy of the Reclamation Cost Estimate has been enclosed with this letter for your review.

Rule 4.05.9 Impoundments

5. On Map 164A, the road should be shown as new disturbance with the dotted blue line. Please update the map 164A to reflect the map legend.

This concludes the Division's second adequacy review of Technical Revision No. 73. If you have any questions or concerns, please feel free to contact me at (303)-866-3567 x8185 or by email at clayton.wein@state.co.us.



Sincerely,

A handwritten signature in dark ink that reads "Clayton Wein". The script is cursive and fluid, with the first name "Clayton" and last name "Wein" clearly distinguishable.

Clayton Wein
Environmental Protection Specialist

cc: Travis Marshall, Senior Environmental Protection Specialist

COST SUMMARY WORK

Task description: DW-1R Dewatering System

Site: Deserado Mine

Permit Action: TR73

Permit/Job#: C1981018

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 2/8/2022

County: Moffat

Filename: C18-000

User: CCW

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Plug and Seal DW-1R Borehole	BOREHOLE	1	8.00	\$16,702
002	Regrade DW-1R Pond	DOZER	1	2.56	\$867
003	Regrade DW-1R Light Use Road	DOZER	1	0.83	\$280
004	Topsoil Replacement for the DW-1R Pond	DOZER	1	1.22	\$403
005	Topsoil Replacement for the DW-1R Light Use Road	DOZER	1	0.40	\$131
006	Reseed DW-1R Pond	REVEGE	1	10.00	\$406
007	Reseed DW-1R Light Use Road	REVEGE	1	10.00	\$131
<u>SUBTOTALS:</u>				33.01	\$18,920

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$382

Performance bond: 1.05

Total = \$199

Job superintendent: 12.50

Total = \$900

Profit: 10.00

Total = \$1,892

TOTAL O & P = \$3,373

CONTRACT AMOUNT (direct + O & P) = \$22,293

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$0

Total = \$0

Engineering work and/or contract/bid preparation: 8.59

Total = \$1,915

Reclamation management and/or administration: 6.20

\$1,382

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$6,670

TOTAL BOND AMOUNT (direct + indirect) = \$25,590

BOREHOLE SEALING WORK

Task description: Plug and Seal DW-1R Borehole

Site: Deserado Mine

Permit Action: TR73

Permit/Job#: C1981018

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 2/8/2022

County: Moffat

Filename: C018-001

User: CCW

Agency or organization name: DRMS

UNIT COSTS

Borehole Description	Sealing/Item Method	Diameter	Length	Quantity	Unit	Unit Cost	Total Cost
Seal 10" Borehole	Portland cement grout - 10 in. (labor, equip, materials)	10	1697	1,697.00	LF	\$9.75	\$16,545.75
Bottom Plug 10"	PVC plug - 10 in. diameter borehole	10	NA	1.00	EA	\$115.29	\$115.29
Cut Casing 10" diameter	Exposed casing removal - Calculate Circumference in Linear Feet	10	NA	1.00	LF	\$3.26	\$3.26
Borehole Marker	Borehole location/identification marker (EA, material cost only)	NA	NA	1.00	EA	\$37.50	\$37.50

Job Hours: 8.00

Total Cost: \$16,702.00

BULLDOZER WORKTask description: **Regrade DW-1R Pond**Site: **Deserado Mine**Permit Action: **TR73**Permit/Job#: **C1981018****PROJECT IDENTIFICATION**Task #: **002**State: **Colorado**Abbreviation: **None**Date: **2/8/2022**County: **Moffat**Filename: **C018-002**User: **CCW**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D9T - 9SU**Horsepower: **405**Blade Type: **Semi-Universal**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own.		
Cost/Hour:	\$19.26	NA
Ripper op. Cost/Hour:	\$11.48	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$339.46**Total Fleet Cost/Hour: **\$339.46****MATERIAL QUANTITIES**Initial Volume: **1,573**Swell factor: **1.250**Loose volume: **1,966 LCY**Source of estimated volume: **Section V and Map 162**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **100 feet**Unadjusted hourly production: **1,243.2 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **-10 %**Average site altitude: **5,800 feet**Material weight: **2,550 lbs/LCY**Weight description: **Earth - Dry packed****Job Condition Correction Factor****Source**

Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6190

Adjusted unit
production: 769.54 LCY/hr

Adjusted fleet
production: **769.54** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.441/LCY

Total job time: **2.56** Hours

Total job cost: **\$867**

BULLDOZER WORKTask description: **Regrade DW-1R Light Use Road**Site: **Deserado Mine**Permit Action: **TR73**Permit/Job#: **C1981018****PROJECT IDENTIFICATION**Task #: **003**State: **Colorado**Abbreviation: **None**Date: **2/8/2022**County: **Moffat**Filename: **C018-003**User: **CCW**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D9T - 9SU**Horsepower: **405**Blade Type: **Semi-Universal**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own.		
Cost/Hour:	\$19.26	NA
Ripper op. Cost/Hour:	\$11.48	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$339.46**Total Fleet Cost/Hour: **\$339.46****MATERIAL QUANTITIES**Initial Volume: **508**Swell factor: **1.250**Loose volume: **635 LCY**Source of estimated volume: **Section V and Map 162**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **100 feet**Unadjusted hourly production: **1,243.2 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **-10 %**Average site altitude: **5,800 feet**Material weight: **2,550 lbs/LCY**Weight description: **Earth - Dry packed****Job Condition Correction Factor****Source**

Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6190

Adjusted unit
production: 769.54 LCY/hr
Adjusted fleet
production: **769.54** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.441/LCY

Total job time: **0.83** Hours
Total job cost: **\$280**

BULLDOZER WORKTask description: **Topsoil Replacement for the DW-1R Pond**Site: **Deserado Mine**Permit Action: **TR73**Permit/Job#: **C1981018****PROJECT IDENTIFICATION**Task #: **004**State: **Colorado**Abbreviation: **None**Date: **2/8/2022**County: **Moffat**Filename: **C018-004**User: **CCW**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D9T - 9SU**Horsepower: **405**Blade Type: **Semi-Universal**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own.		
Cost/Hour:	\$19.26	NA
Ripper op. Cost/Hour:	\$1.72	15
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$329.70**Total Fleet Cost/Hour: **\$329.70****MATERIAL QUANTITIES**Initial Volume: **655**Swell factor: **1.000**Loose volume: **655 LCY**Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **75 feet**Unadjusted hourly production: **1,514.3 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **0 %**Average site altitude: **5,600 feet**Material weight: **2,550 lbs/LCY**Weight description: **Earth - Dry packed****Job Condition Correction Factor****Source**

Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3537

Adjusted unit
production: 535.61 LCY/hr
Adjusted fleet
production: **535.61** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.616/LCY

Total job time: **1.22** Hours
Total job cost: **\$403**

BULLDOZER WORKTask description: Topsoil Replacement for the DW-1R Light Use RoadSite: Deserado MinePermit Action: TR73Permit/Job#: C1981018**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 2/8/2022County: MoffatFilename: C018-005User: CCWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$126.01	NA
Operating Cost/Hour:	\$141.41	100
Ripper own.		
Cost/Hour:	\$19.26	NA
Ripper op. Cost/Hour:	\$1.72	15
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$329.70Total Fleet Cost/Hour: **\$329.70****MATERIAL QUANTITIES**Initial Volume: 212Swell factor: 1.000Loose volume: **212 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly production: 1,514.3 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: 0 %Average site altitude: 5,600 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packedJob Condition Correction FactorSource

Operator Skill:	0.750	(AVG.)
Material consistency:	0.900	(CAT HB))
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.700	(FND-MF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3537

Adjusted unit
production: 535.61 LCY/hr
Adjusted fleet
production: **535.61** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: \$0.616/LCY

Total job time: **0.40** Hours
Total job cost: **\$131**

REVEGETATION WORKTask description: Reseed DW-1R PondSite: Deserado MinePermit Action: TR73Permit/Job#: C1981018**PROJECT IDENTIFICATION**Task #: 006State: ColoradoAbbreviation: NoneDate: 2/8/2022County: Rio BlancoFilename: C018-006User: CCWAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.10	3.90	\$2.85
Indian Ricegrass - Nespar	0.40	1.29	\$3.55
Beardless Wheatgrass - Whitmar	0.50	1.63	\$5.86
Bluebunch Wheatgrass - Secar	0.50	1.61	\$5.44
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Crested Wheatgrass - Nordan	4.00	18.37	\$15.60
Russian Wildrye - Bozoisky	2.00	8.03	\$12.96
Bottlebrush Squirreltail	0.20	0.88	\$3.25
Sandberg Bluegrass - VNS	0.20	4.25	\$1.68

Pubescent Wheatgrass - Greenleaf	1.00	2.07	\$3.65
Sheep Fescue - Covar	0.20	3.12	\$1.22
Slender Wheatgrass - Pryor	2.00	7.30	\$8.50
Milk Vetch, Cicer - Monarch	1.00	3.33	\$8.20
Thickspike Wheatgrass - Critana	1.00	3.54	\$6.88
Western Wheatgrass - Arriba	2.00	5.05	\$13.00
Needlegrass, Green - Lodorm	0.60	2.49	\$7.07
Sagebrush, Mountain or Big	0.10	5.28	\$1.98
Prairie Junegrass	0.20	10.63	\$5.20
Flax, Lewis Blue	0.40	2.65	\$6.60
Saltbush, Four Wing	2.00	2.75	\$25.00
Saltbush, Shadscale	0.50	0.75	\$5.00
Yarrow, White	0.10	6.36	\$4.00
Totals Seed Mix	19.20	99.54	\$149.52

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$267.22
Total Seed Application Cost/Acre	\$267.22

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
Total Mulch Materials Cost/Acre				\$0.00

Application

Description	Cost /Acre
	\$
Total Mulch Application Cost/Acre	\$0.00

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres: 0.65 Cost /Acre: \$416.74
 Estimated Failure Rate: 50% Cost /Acre*: \$416.74
 *Selected Replanting Work Items: SEEDING
 Initial Job Cost: \$270.88

Reseeding Job Cost:	\$135.44
Total Job Cost:	\$406
Job Hours:	10.00

REVEGETATION WORKTask description: Reseed DW-1R Light Use RoadSite: Deserado MinePermit Action: TR73Permit/Job#: C1981018**PROJECT IDENTIFICATION**Task #: 007State: ColoradoAbbreviation: NoneDate: 2/8/2022County: Rio BlancoFilename: C018-007User: CCWAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
			Total Fertilizer Materials Cost/Acre	\$0.00

Application

Description	Cost /Acre
	\$
Total Fertilizer Application Cost/Acre	\$0.00

TILLING

Description	Cost /Acre
	\$
Total Tilling Cost/Acre	\$0.00

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.10	3.90	\$2.85
Indian Ricegrass - Nespar	0.40	1.29	\$3.55
Beardless Wheatgrass - Whitmar	0.50	1.63	\$5.86
Bluebunch Wheatgrass - Secar	0.50	1.61	\$5.44
Canby Bluegrass - Canbar	0.20	4.25	\$2.05
Crested Wheatgrass - Nordan	4.00	18.37	\$15.60
Russian Wildrye - Bozoisky	2.00	8.03	\$12.96
Bottlebrush Squirreltail	0.20	0.88	\$3.25
Sandberg Bluegrass - VNS	0.20	4.25	\$1.68

Pubescent Wheatgrass - Greenleaf	1.00	2.07	\$3.65
Sheep Fescue - Covar	0.20	3.12	\$1.22
Slender Wheatgrass - Pryor	2.00	7.30	\$8.50
Milk Vetch, Cicer - Monarch	1.00	3.33	\$8.20
Thickspike Wheatgrass - Critana	1.00	3.54	\$6.88
Western Wheatgrass - Arriba	2.00	5.05	\$13.00
Needlegrass, Green - Lodorm	0.60	2.49	\$7.07
Sagebrush, Mountain or Big	0.10	5.28	\$1.98
Prairie Junegrass	0.20	10.63	\$5.20
Flax, Lewis Blue	0.40	2.65	\$6.60
Saltbush, Four Wing	2.00	2.75	\$25.00
Saltbush, Shadscale	0.50	0.75	\$5.00
Yarrow, White	0.10	6.36	\$4.00
Totals Seed Mix	19.20	99.54	\$149.52

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$267.22
Total Seed Application Cost/Acre	\$267.22

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			\$	\$
Total Mulch Materials Cost/Acre				\$0.00

Application

Description	Cost /Acre
	\$
Total Mulch Application Cost/Acre	\$0.00

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
					\$
Totals Nursery Stock Cost / Acre					\$0.00

JOB TIME AND COST

No. of Acres: 0.21 Cost /Acre: \$416.74
 Estimated Failure Rate: 50% Cost /Acre*: \$416.74
 *Selected Replanting Work Items: SEEDING
 Initial Job Cost: **\$87.52**

Reseeding Job Cost:	\$43.76
Total Job Cost:	\$131
Job Hours:	10.00