



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

July 11, 2023

Tony Tennyson
Colowyo Coal Company L.P.
5731 State Highway 13
Meeker, CO 81641

Re: Colowyo Coal Mine (Permit No. C-1981-019)
Minor No. 248 (MR-248)
Adequacy Review

Dear Mr. Tennyson:

After reviewing MR-248 from Colowyo Coal Company L.P. (Colowyo), the Division has the following comments:

1. With the addition of proposed Topsoil Pile 2A to Table 13C-27 on page 17, there appears to be a text shift which causes a portion of approved Table 13C-30 to shift down to page 18 within Exhibit 13C. Please provide an updated page 18 of Exhibit 13C that accounts for the shift with Table 13C-30.
2. The Division has performed a reclamation cost estimate to reclaim the addition of Topsoil Pile 2A located at the Collom Pit. The total value of this estimate is \$283,631.00 (see attached cost estimate). The Division's cost estimate is consistent with previous cost estimates approved by both the Division and Colowyo. The Division respectfully requests a response from Colowyo with any questions regarding the cost estimate or an acceptance of the Division's estimate.

If you have any questions, feel free to contact me.

Sincerely,

Zach Trujillo
Environmental Protection Specialist
(303) 866-3567 ext. 8164
Zach.Trujillo@state.co.us



COST SUMMARY WORK

Task description: Replace Topsoil from and Reseed Footprint of Topsoil Pile 2A

Site: Colowyo Coal Mine

Permit Action: MR248

Permit/Job#: C1981019

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 7/11/2023

County: Moffat

Filename: C019-000

User: ZTT

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Load, Haul and Regrade Collom Pit Topsoil-MR248	TRUCK1	1	37.42	\$229,602
002	Reseed Collom TS Pile Footprint 2A	REVEGE	1	9.10	\$10,466
<u>SUBTOTALS:</u>				46.52	\$240,068

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$4,849

Performance bond: 1.05

Total = \$2,521

Job superintendent: 23.26

Total = \$1,514

Profit: 10.00

Total = \$24,007

TOTAL O & P = \$32,891

CONTRACT AMOUNT (direct + O & P) = \$272,959

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$0

Engineering work and/or contract/bid preparation: 2.00

Total = \$5,459

Reclamation management and/or administration: 1.91

\$5,214

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$43,563

TOTAL BOND AMOUNT (direct + indirect) = \$283,631

TRUCK/LOADER TEAM WORKTask description: **Load, Haul and Regrade Collom Pit Topsoil-MR248**Site: **Colowyo Coal Mine**Permit Action: **MR248**Permit/Job#: **C1981019****PROJECT IDENTIFICATION**Task #: **001**State: **Colorado**Abbreviation: **None**Date: **7/11/2023**County: **Moffat**Filename: **C019-001**User: **ZTT**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Shift basis: **1 per day**

	Equipment Description
Truck Loader Team -Truck:	KOMATSU 830E
-Loader:	LETOURNEAU L2350
Support Equipment -Load Area:	Cat D11T - 11U
-Dump Area:	Cat D11T - 11U
Road Maintenance -Motor Grader:	CAT 16M
-Water Truck:	Water Tanker, 14,000 Gal.

Cost Breakdown:**Truck/Loader Team****Support Equipment****Maintenance Equipment**

	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	100	100	50	50
Ownership cost/hour:	\$207.26	\$859.02	\$334.55	\$334.55	\$212.21	\$158.36
Operating cost/hour:	\$284.76	\$639.31	\$260.65	\$260.65	\$62.44	\$98.55
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Ripper op. cost/hour:	NA	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Operator cost/hour:	\$34.42	\$40.71	\$41.30	\$41.30	\$28.56	\$21.12
Unit Subtotals:	\$526.44	\$1,539.04	\$636.50	\$636.50	\$303.21	\$278.03
Number of Units:	4	1	1	2	1	1
Group Subtotals:	Work: \$3,644.80		Support: \$1,909.50		Maint: \$581.24	

Total work team cost/hour: **\$6,135.54****MATERIAL QUANTITIES**Initial volume: **138,853**

CCY

Swell factor: **1.000**Loose volume: **138,853**

LCY

Source of estimated volume: **Division of Reclamation, Mining & Safety**Source of estimated swell factor: **Cat Handbook**Material Purchase Cost: **\$0.00**Total Cost: **\$0.00****HOURLY PRODUCTION****Truck Capacity:****Truck Payload (weight) Basis:**Material weight: **1,600**

Pounds/LCY

Description: **Top Soil**Rated Payload: **492,200**

Pounds

Payload Capacity: **307.63**

LCY

Truck Bed (volume) Basis:

Struck Volume:	153.00	LCY
Heaped Volume:	192.00	LCY
Average Volume:	172.50	LCY
Adjusted Volume:	192.00	LCY

Final Truck Volume Based on Number of Loader Passes: 174.90 LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	53.000	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	58.300	LCY

Job Condition Corrections:

Site Altitude (ft.): 7600 feet

	Truck	Loader	Source
Altitude Adj:	1.000	0.980	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.813	

Loading Tool Cycle Time: Number of Loading Tool Passes Required to Fill Truck: 3 passes

Excavators and Front Shovels:

Machine Cycle Time vs. Job Condition Rating: NA
 Selected Value within this Basic Rating: NA

Track Loaders – Material Description: _____

Cycle Time Elements (min.):

Load: NA Maneuver: NA Dump: 0.100

Wheel and Track Loaders - Unadjusted Basic Loader Cycle Time (load, dump, maneuver): 0.725 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material 6" and over diameter 0.03	0.030	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Common ownership of trucks and loaders -0.04	-0.040	(Cat HB)
Operation:	Constant operation -0.04	-0.040	(Cat HB)
Dump Target:	Nominal target 0.00	0.000	(Cat HB)
Net Cycle Time Adjustment:		-0.050	minutes
Adjusted Loader Cycle Time:		0.675	minutes
Net Load Time per Truck:		1.450	minutes

Truck Cycle Time:

Truck Exchange Time:	0.80	Minutes	Adjusted for site altitude:	0.800	Minutes
Truck Load Time:	1.450	Minutes	Adjusted for site altitude:	1.480	Minutes
Truck Maneuver and Dump Time:	1.20	Minutes	Adjusted for site altitude:	1.200	Minutes

Truck Travel (Haul & Return) Time:
maintained 3.0

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered,

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5144.00	3.00	3.00	6.00	1266	4.238

Haul Time: **4.238** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	5144.00	-3.00	3.00	0.00	3503	1.672

Return Time: **1.672** minutesTotal Truck Cycle Time: **9.390** minutes

Loading Tool unit

Production 4,603.46 LCY/Hour Adjusted for job efficiency: 3,820.87 LCY/HourTruck Unit Production 1,117.62 LCY/Hour Adjusted for job efficiency: 927.62 LCY/HourOptimal No. of Trucks: 4 Truck(s) Selected Number of Trucks: 4 Truck(s)

Adjusted hourly truck team production: 3,710.50 LCY/Hour
Adjusted single truck/loader team production: 3,710.50 LCY/Hour
Adjusted multiple truck/loader team production: **3,710.50** LCY/Hour

JOB TIME AND COSTFleet size: 1 Team(s) Total job time: **37.42** HoursUnit cost: \$1.654 /LCY Total job cost: **\$229,602**

REVEGETATION WORKTask description: **Reseed Collom TS Pile Footprint 2A**Site: **Colowyo Coal Mine**Permit Action: **MR248**Permit/Job#: **C1981019****PROJECT IDENTIFICATION**Task #: **002**State: **Colorado**Abbreviation: **None**Date: **7/11/2023**County: **Moffat**Filename: **C019-002**User: **ZTT**Agency 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
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$112.82
Total Tilling Cost/Acre	\$112.82

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Beardless Wheatgrass - Whitmar	2.00	6.52	\$23.45
Mountain Brome - Bromar	1.00	1.61	\$3.80
Great Basin Wildrye - Magnar	0.50	2.03	\$5.78
Rocky Mountain Fescue	0.50	8.03	\$3.63
Slender Wheatgrass - Native	0.75	2.74	\$3.47
Milk Vetch, Cicer - Monarch	0.30	1.00	\$2.46
Thickspike Wheatgrass - Critana	1.25	4.42	\$8.59
Western Wheatgrass - Arriba	1.50	3.79	\$9.75
Needlegrass, Green - Lodorm	0.75	3.12	\$8.83
Sagebrush, Mountain or Big	0.50	26.40	\$9.88

Flax, Lewis Blue	0.25	1.66	\$4.13
Saltbush, Four Wing	1.60	2.20	\$20.00
Snowberry, Mountain	0.75	1.29	\$37.88
Penstemon, Rocky Mountain	0.25	3.92	\$7.38
Yarrow, Western	0.10	6.08	\$4.18
Totals Seed Mix	12.00	74.80	\$153.18

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	\$232.00
Total Seed Application Cost/Acre	\$232.00

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: 18.2 Cost /Acre: \$498.00
 Estimated Failure Rate: 20% Cost /Acre*: \$385.18
 *Selected Replanting Work Items: SEEDING

Initial Job Cost: **\$9,063.60**
 Reseeding Job Cost: **\$1,402.06**
 Total Job Cost: **\$10,466**
 Job Hours: **9.10**