



October 1, 2024

Harry Corkle
Henry Corkle Construction
34612 Colorado State Highway 14
Walden, CO 80480

**Re: Henry Corkle Construction, Arapaho Pit, File No. M-2024-043,
112c Permit Application Adequacy Review**

Mr. Corkle,

The Division of Reclamation, Mining and Safety (Division) is in the process of reviewing the above referenced application to ensure it adequately satisfies the requirements of the Colorado Land Reclamation Act for the Extraction of Construction Materials (Act) and the associated Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials (Rules). During review of the material submitted, the Division determined that the following issue(s) of concern shall be adequately addressed before the application can be considered for approval.

Application Form

1. On page six of the application, item 10 refers to operations where a joint venture or partnership is planned to occur between the operator and another entity. If this is not planned for this operation please provide a corrected document without item 10 initialed.
2. On page two of the application, please correct the typo present under the "general description" section of item 9.

6.2 General Requirements of Exhibits

3. Please include the Applicant's name on all maps pursuant to Rule 6.2.1(2)(a)



6.4.3 Exhibit C - Pre-Mining and Mining Plan Maps of Affected Land

4. A ditch, titled "Arapaho Ditch" by the operator, is labelled within the northern portion of the affected area. Please update the structure agreement between the operator and Arapaho Ranch, LLC to include this structure.

6.4.4 Exhibit D - Mining Plan

5. On page 12 of the application, the applicant states that the operator plans to store "specialty materials" on-site. Please provide a more detailed description of what type of materials are proposed, and include labelled locations of the proposed stockpiles in Exhibit C.
6. On page 12 of the application, the applicant states that portable processing equipment will be utilized. Please state if footers are planned to be constructed to support these structures or if they are planned to be placed as-is. Per conversations during the pre-operation inspection it is our understanding that footings are not planned, but please provide a statement regarding this in the application as well.
7. On page 13 of the application, the applicant states that phases A-1 and B-1 are planned to be completed first. Per rule 6.4.4(e), please clarify if phase A-1 is planned to be completed in its entirety before mining in phase B-1 will begin, or if they are planned to be mined simultaneously. This will affect the Division's initial bond calculation.

6.4.5 Exhibit E - Reclamation Plan

8. On page 19 of the application, the applicant states that the reclamation plan is in support of the incorrect mine, the Lindsay Pit. Please update this heading to reference the Arapaho Pit.
9. On page 19 of the application, the applicant references "Table 1, above," referring to the table included in Exhibit C of the application. Please reference an exact page number of the table to improve the clarity of the application.
10. Table 1, referenced in the previous comment, includes estimated timeframes for each phase of the operation. Per Rule 6.4.5(2)(e), please state if these timeframes include reclamation. If they do not include reclamation, please include estimated timeframes for reclamation in each phase.
11. As mentioned in item 6 of this letter, please clarify if phases A-1 and B-1 are intended to be performed simultaneously.
12. On page 29 of the application, under the section labelled item 3, the operator refers to their seed mix. This section appears to be referring to the incorrect section of the Mineral Rules and Regulations. Rule 3.1.10(3), the section referenced in this item, states that the operator will ensure "the land shall be restored to slopes commensurate with the proposed land use and shall not be too steep to be traversed by livestock." Please address this requirement in this section.



6.4.5 Exhibit H – Wildlife Information

13. Please see the attached timely comments provided by CPW. Per Rule 6.4.8(2), please provide the Division information regarding how the operator will consider the provided comments.

6.4.12 Exhibit L - Reclamation Costs

14. Per rule 3.1.9(6), please verify there is an adequate volume of topsoil or plant growth material present within the planned Phase A-1 area to sufficiently reclaim that section assuming complete abandonment without interaction with the following Phase B-1. This will affect the Division's initial bond calculation for phase A-1. If it is deemed to be inadequate an updated estimate will be provided.

6.4.18 Exhibit S – Structure Agreements

15. Per Rule 6.4.19, please provide either:
- A notarized structure agreement pertaining to each structure located within 200 feet of the permit boundary. In this case the document provided only mentioned the existing fences, but failed to mention the existing ranch road and ditch and was not notarized.
 - An engineering evaluation stating each structure shall not be damaged by activities occurring as part of the mining operation.
- Please provide the division with a document addressing either requirement of the rule with each nearby structure included.

Please be advised the McClave Ranch Pit application may be deemed inadequate, and the application may be denied on **November 12, 2024**, unless the above-mentioned adequacy review items are addressed to the satisfaction of the Division. If more time is needed to complete the reply, the Division can grant an extension to the decision date. This will be done upon receipt of a written waiver of the Applicant's right to a decision by **November 12, 2024** and request for additional time. This must be received no later than the decision date.

If you have any questions, please contact me at ben.hammar@state.co.us or (720) 793-2988.

Sincerely,

Benjamin Hammar
Environmental Protection Specialist

Ec: Zachary Trujillo, Division of Reclamation, Mining & Safety





COST SUMMARY WORK

Task description: New Permit CO

Site: Arapaho Pit

Permit Action: Phase A-1
Reclamation

Permit/Job#: M2024043

PROJECT IDENTIFICATION

Task #: 000
Date: 8/22/2024
User: BEH

State: Colorado
County: Jackson

Abbreviation: None
Filename: M043-000

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	3:1 Levelling	DOZER	1	1.12	\$360
002	Topsoil Replacement	DOZER	1	49.20	\$15,822
004	Topsoil Replacement	LOADER	1	172.30	\$15,122
005	Reseeding	REVEGE	1	36.00	\$32,123
006	Equipment Mobilization	MOBILIZE	1	6.60	\$4,241
<u>SUBTOTALS:</u>				265.22	\$67,668

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	<u>\$1,367</u>
Performance bond:	1.05	Total =	<u>\$711</u>
Job superintendent:	134.44	Total =	<u>\$10,657</u>
Profit:	10.00	Total =	<u>\$6,767</u>

TOTAL O & P = \$19,501

CONTRACT AMOUNT (direct + O & P) = \$87,169

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	<u>\$500</u>	Total =	<u>\$500</u>
Engineering work and/or contract/bid preparation:	<u>4.25</u>	Total =	<u>\$3,705</u>
Reclamation management and/or administration:	<u>5.00</u>		<u>\$4,358</u>

CONTINGENCY: 0.00 Total = \$0

TOTAL INDIRECT COST = \$28,064

TOTAL BOND AMOUNT (direct + indirect) = \$95,732

BULLDOZER WORKTask description: **3:1 Levelling**

Site: **Arapaho Pit** Permit Action: **Phase A-1 Reclamation** Permit/Job#: **M2024043**

PROJECT IDENTIFICATION

Task #: **001** State: **Colorado** Abbreviation: **None**
 Date: **8/19/2024** County: **Jackson** Filename: **M043-001**
 User: **BEH**

Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**

Basic Machine: **Cat D8T - 8SU**
 Horsepower: **310**
 Blade Type: **Semi-Universal**
 Attachment: **NA**
 Shift Basis: **1 per day**
 Data Source: **(CRG)**

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$173.32	NA
Operating Cost/Hour:	\$109.71	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$38.59	NA

Total unit Cost/Hour: **\$321.62**
 Total Fleet Cost/Hour: **\$321.62**

MATERIAL QUANTITIES

Initial Volume: **1,000**
 Swell factor: **1.230**
 Loose volume: **1,230 LCY**

Source of estimated volume: **Division of Reclamation, Mining & Safety**
 Source of estimated swell factor: **Cat Handbook**

HOURLY PRODUCTION

Average push distance: **50 feet**
 Unadjusted hourly production: **1,400.0 LCY/hr**

Materials consistency description: **Compacted fill or embankment 0.9**

Average push gradient: **-30 %**
 Average site altitude: **8,550 feet**

Material weight: **2,100 lbs/LCY**Weight description: **Earth - Loam**

<u>Job Condition Correction Factor</u>	<u>Source</u>
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:	0.800	(FND-RF)
Push gradient:	1.601	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7857

Adjusted unit production: 1,099.98 LCY/hr

Adjusted fleet production: **1099.98** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.292/LCY

Total job time: **1.12** Hours

Total job cost: **\$360**

BULLDOZER WORKTask description: **Topsoil Replacement**Site: Arapaho Pit Permit Action: Phase A-1 Reclamation Permit/Job#: M2024043**PROJECT IDENTIFICATION**Task #: 002 State: Colorado Abbreviation: None
Date: 8/19/2024 County: Jackson Filename: M043-002
User: BEHAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SU
Horsepower: 310
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$173.32</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$109.71</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$0.00</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$38.59</u>	<u>NA</u>

Total unit Cost/Hour: \$321.62
Total Fleet Cost/Hour: \$321.62**MATERIAL QUANTITIES**Initial Volume: 26,265
Swell factor: 1.000
Loose volume: 26,265 LCYSource 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: 1,017.1 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %
Average site altitude: 8,550 feetMaterial weight: 2,100 lbs/LCYWeight description: Earth - Loam**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	<u>0.750</u>	<u>(AVG.)</u>
Material consistency:	<u>1.100</u>	<u>(CAT HB)</u>
Dozing method:	<u>1.000</u>	<u>(GEN.)</u>

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:	1.095	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.5249

Adjusted unit production: 533.88 LCY/hr

Adjusted fleet production: **533.88** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.602/LCY

Total job time: **49.20** Hours

Total job cost: **\$15,822**

WHEEL LOADER – LOAD AND CARRY WORKTask description: Topsoil Replacement

Site: Arapaho Pit Permit Action: Phase A-1 Reclamation Permit/Job#: M2024043

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
 Date: 8/22/2024 County: Jackson Filename: M043-004
 User: BEH

Agency or organization name: DRMS**HOURLY EQUIPMENT COST**

Basic Machine: CAT 924H Horsepower: 128
 Attachment 1: ROPS Cab Shift Basis: 1 per day
 Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$26.01	NA
Operating Cost/Hour:	\$24.90	100
Operator Cost/Hour:	\$36.85	NA
Total Unit Cost/Hour:	\$87.76	
Total Fleet Cost/Hour:	\$87.76	

MATERIAL QUANTITIES

Initial volume: 26,265 CCY Swell factor: 1.000
 Loose volume: 26,265 LCY

Source of estimated volume: Division of Reclamation, Mining & Safety
 Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTIONLoader Cycle Time: Unadjusted Basic Cycle Time (load, dump, maneuver): 0.475 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Material up to 1/8" diameter 0.02	0.020	(Cat HB)
Stockpile:	Dumped by truck 0.02	0.020	(Cat HB)
Truck Ownership:	No adjustment - factor not applicable 0.00	0.000	(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:		0.000	minutes
Adjusted Basic Cycle Time:		0.475	minutes

Rolling Resistance – Road Conditions

Haul: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0
 Return: Rutted dirt, little maintenance, no water, 1" tire penetration 4.0

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	400	0.00	4.00	4.00	0.2539	(Cat HB)
Return Route:	400	0.00	4.00	4.00	0.2539	(Cat HB)

Total Travel Time: 0.5078 minutes
 Total Cycle Time: 0.9828 minutes

Load Bucket Capacity

Rated Capacity: 2.70 LCY (heaped)
 Bucket Fill Factor: 1.050 Moist loam or sandy clay (100% - 110%) 1.050
 Adjusted Capacity: 2.84 LCY

Job Condition Correction Factors

Site Altitude: 8550 feet

Altitude Adj:	<u>1.00</u>	Source (CAT HB)
Job Efficiency:	<u>0.83</u>	(1 shift/day)
Net Correction:	<u>0.83</u>	multiplier

Unadjusted Hourly Unit Production: 173.08 LCY/Hour
 Adjusted Hourly Unit Production: 143.66 LCY/Hour
 Adjusted Hourly Fleet Production: 143.66 LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: 182.83 Hours
 Unit cost: \$0.611 /LCY Total job cost: \$16,045

REVEGETATION WORKTask description: ReseedingSite: Arapaho PitPermit Action: Phase A-1
ReclamationPermit/Job#: M2024043**PROJECT IDENTIFICATION**Task #: 005
Date: 8/22/2024
User: BEHState: Colorado
County: JacksonAbbreviation: None
Filename: M043-005Agency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Composted manure DRMS Survey	20.00	pound	\$0.43	\$8.56
			Total Fertilizer Materials Cost/Acre	\$8.56

Application

Description	Cost /Acre
Manure, tractor spreader (MEANS 32 91 13.23 4450)	\$77.10
Total Fertilizer Application Cost/Acre	\$77.10

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$117.61
Weed control spraying (MEANS 31 31 16.13 3100)	\$338.80
Total Tilling Cost/Acre	\$456.41

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Arizona Fescue - Redondo	5.00	57.39	\$75.32
Prairie Clover, Purple - Kanab	0.50	3.42	\$22.45
Sandberg Bluegrass - VNS	4.00	84.94	\$57.79
Smooth Brome - Lincoln	4.00	13.31	\$19.43
Bluebunch Wheatgrass - Goldar	6.00	19.28	\$68.76
Totals Seed Mix	19.50	178.35	\$243.74

Application

Description	Cost /Acre
Broadcast seeding [DMG]	\$272.56
Total Seed Application Cost/Acre	\$272.56

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:	24.4	Cost /Acre:	\$1,058.37
Estimated Failure Rate:	50%	Cost /Acre*:	\$516.30
*Selected Replanting Work Items:	SEEDING		

Initial Job Cost:	\$25,824.23
Reseeding Job Cost:	\$6,298.86
Total Job Cost:	\$32,123
Job Hours:	36.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Equipment Mobilization

Site: Arapaho Pit Permit Action: Phase A-1 Reclamation Permit/Job#: M2024043

PROJECT IDENTIFICATION

Task #: 006 State: Colorado Abbreviation: None
 Date: 8/22/2024 County: Jackson Filename: M043-006
 User: BEH

Agency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**

Shift basis: 1 per day
 Cost Data Source: CRG Data

Truck Tractor Description: GENERIC ON-HIGHWAY TRUCK TRACTOR, 6X4, DIESEL POWERED, 400 HP (2ND HALF, 2006)Truck Trailer Description: GENERIC FOLDING GOOSENECK, DROP DECK EQUIPMENT TRAILER (25T, 50T, AND 100T)**Cost Breakdown:**

Available Rig Capacities	0-25 Tons	26-50 Tons	51+ Tons
Ownership Cost/Hour:	\$10.44	\$22.18	\$23.94
Operating Cost/Hour:	\$26.48	\$54.55	\$55.65
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$59.44	\$122.78	\$125.64

NON ROADABLE EQUIPMENT:

Machine Description	Weight/ Unit (TONS)	Owner ship Cost/hr/ unit	Haul Rig Cost/hr/unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet	DOT Permit Cost/ fleet
CAT 924H	12.69	\$26.01	\$59.44	1	\$85.45	\$59.44	\$250.00
Cat D8T - 8SU	53.08	\$187.85	\$125.64	1	\$313.49	\$125.64	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$41.02	\$59.44	1	\$100.46	\$59.44	\$250.00
Subtotals:					\$499.40	\$244.52	\$750.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$13.77	1	\$13.77	\$13.77
Subtotals:			\$13.77	\$13.77

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	STEAMBOAT SPRINGS	
Total one-way travel distance:	46.00	miles
Average Travel Speed:	40.00	mph
Total Non-Roadable Mob/Demob Cost *	\$4,209.82	
** two round trips with haul rig:		
Total Roadable Mob/Demob Cost **	\$31.67	
** one round trip, no haul rig:		

Transportation Cycle Time:

	Non- Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.15	1.15
Return Time (Hours):	1.15	1.15
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	3.30	2.30

JOB TIME AND COST

Total job time:	6.60	Hours
Total job cost:	\$4,241	