



STATE OF
COLORADO

Simmons - DNR, Leigh <leigh.simmons@state.co.us>

M2018055, Tower Pit, March 2023 Inspection Report

1 message

Simmons - DNR, Leigh <leigh.simmons@state.co.us>
To: Jen Jewett <thetowerpit@gmail.com>

Thu, Apr 13, 2023 at 10:52 AM

The inspection report from the snowy March 22 inspection is attached.

Please note that action is required on your part.

Feel free to email or call if you have any questions.

Leigh Simmons
Environmental Protection Specialist



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

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M2018055_2023InspectionReportPacket.pdf
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COLORADO

Division of Reclamation,
Mining and Safety


Department of Natural Resources

MINERALS PROGRAM INSPECTION REPORT

PHONE: (303) 866-3567

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

MINE NAME: Tower Pit	MINE/PROSPECTING ID#: M-2018-055	MINERAL: Sand and gravel	COUNTY: Eagle
INSPECTION TYPE: Monitoring	WEATHER: Snowing	INSP. DATE: March 22, 2023	INSP. TIME: 14:00
OPERATOR: Eagle Rocks Aggregate, Inc.	OPERATOR REPRESENTATIVE: Steve Jewett	TYPE OF OPERATION: 112c - Construction Regular Operation	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$101,453.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
INSPECTOR(S): Leigh Simmons	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: April 12, 2023

The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.

INSPECTION TOPIC: Financial Warranty

PROBLEM/POSSIBLE VIOLATION: Problem: The financial warranty is not adequate to reclaim the site in accordance with the approved reclamation plan. This is a failure to maintain the proper financial warranty amount to complete reclamation of the affected lands pursuant to C.R.S. 34-32.5-117(4)(b) of the Act.

CORRECTIVE ACTIONS: Please review the attached Reclamation Cost Estimate and respond with comments within 30 days. After 30 days the Division will initiate a separate Surety Increase notice to increase the financial warranty. The operator will have 60 days from the date on the Surety Increase notice to post the additional financial warranty.

CORRECTIVE ACTION DUE DATE: 5/11/23

OBSERVATIONS

This inspection was conducted as part of the normal monitoring program established by the Colorado Division of Reclamation, Mining and Safety (Division). The inspection was conducted by Leigh Simmons of the Division, and accompanied by Steve Jewett of Eagle Rocks Aggregate, Inc. (permittee and operator).

The Tower Pit is a 112c operation with a total permit area of 36.7 acres, located about 1 mile east of Gypsum and 5 miles west of Eagle, with access off Hwy 6. The site was active at the time of the inspection.

The pre-mining land use of the site was Rangeland, and the site will ultimately be reclaimed to Rangeland (15 acres) and Industrial/Commercial (22 acres). Mining is proceeding from west to east, with the alluvial deposit removed down to the approximate grade of the highway (approximately a 60 foot depth). Mined material was being crushed and screened on-site. Part of the highwall on the southern boundary has already been reclaimed, with a slope of around 2:1.

The locations of photos taken during the inspection are shown on the screenshot of the field map.

Financial Warranty:

As is usual the Reclamation Cost Estimate (RCE) was re-evaluated following the inspection to ensure that Division continues to hold adequate financial warranty to reclaim the site. In this case no new tasks were added to the RCE, but tasks included in the 2018 estimate were updated with 2023 unit costs, and some indirect costs that had been omitted from the original estimate were added. The total amount has increased to \$183,363, (see Appendix 1).

Hydrologic Balance:

Run-off from the disturbed area remained within the pit and drained to a sediment pond at the west end of the site. The pond was covered in snow, but there was no sign of any discharge. Mr Jewett reported that water on-site tended to infiltrate into the ground.

Gen. Compliance with Mine Plan:

Mr Jewett estimated that approximately 2,100,000 tons of material remained to be mined, (with 600,000 tons already sold). At the current rate of mining he estimated that the mine would be actively producing for another 8-10 years.

Revegetation:

Although the site was snow-covered, some vegetation could be seen poking through the snow on the reclaimed 2:1 slope in the south-west of the permit area.

Signs and Markers:

The Mine ID sign was posted at the entrance to the site.



Figure 1: Screen shot of field map (west)



Figure 2: Screenshot of field map (east)

PHOTOGRAPHS



Figure 3: Reclaimed slope on south west boundary of permit area



Figure 4: Eastern limit of current mining disturbance



Figure 5: Crushing and screening facilities



Figure 6: Sediment pond



Figure 7: Future mining and reclamation will see 2:1 slope carried down to near the small shack



Figure 8: Mine ID sign at entrance

GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

(AR) RECORDS----- <u>N</u>	(FN) FINANCIAL WARRANTY----- <u>PB</u>	(RD) ROADS----- <u>N</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>Y</u>	(TS) TOPSOIL----- <u>N</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>N</u>	(FW) FISH & WILDLIFE----- <u>N</u>	(RV) REVEGETATION---- <u>Y</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SP) STORM WATER MGT PLAN--- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>N</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	

Y = Inspected / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited

Inspection Contact Address

Steve Jewett
Eagle Rocks Aggregate, Inc.
PO Box 4260
Eagle, CO 81631

Enclosures

- Appendix 1: M2018055_RCE_2023

Appendix 1: M2018055_RCE_2023

COST SUMMARY WORK

Task description: Cost estimate review and update

Site: Tower Pit

Permit Action: 2023_Inspection

Permit/Job#: M2018055

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 4/11/2023

County: Eagle

Filename: M055-000

User: LDS

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	remove truck scale and office trailer	DEMOLISH	1	80.00	\$8,469
002	knock down highwall	DOZER	1	107.69	\$31,096
003	Topsoil	LOADER	1	392.31	\$42,194
004	Reveg	REVEGE	1	0.00	\$40,031
005	Mob/demob	MOBILIZE	1	0.11	\$2,057
<u>SUBTOTALS:</u>				580.11	\$123,847

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$2,502

Performance bond: 1.05

Total = \$1,300

Job superintendent: 290.06

Total = \$21,792

Profit: 10.00

Total = \$12,385

TOTAL O & P = \$37,979

CONTRACT AMOUNT (direct + O & P) = \$161,826

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): \$500

Total = \$500

Engineering work and/or contract/bid preparation: 8.00

Total = \$12,946

Reclamation management and/or administration: 5.00

\$8,091

CONTINGENCY: 0.00

Total = \$0

TOTAL INDIRECT COST = \$59,516

TOTAL BOND AMOUNT (direct + indirect) = \$183,363

DEMOLITION WORK

Task description: Remove truck scale and office trailer

Site: Tower Pit Permit Action: 2023_Inspection Permit/Job#: M2018055

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 4/11/2023 County: Eagle Filename: 055-001
User: LDS

Agency or organization name: DRMS

UNIT COSTS

Location adjustment: 95.90 %

Structure or Item Description	Dimensions	Demolition Menu Selection	Quantity	Unit	Unit Cost	Total Cost
scale	100x 20	Cat 319D L 8'-10" Stick	30.00	EA	\$147.19	\$4,415.70
office trailer	100x20	Cat 319D L 8'-10" Stick	30.00	EA	\$147.19	\$4,415.70

Job Hours: <u>80.00</u>	Subtotal (unadjusted): <u>\$8,831.40</u>	Total Cost (adjusted for location): <u>\$8,469.31</u>
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BULLDOZER WORKTask description: **Knock down highwall**Site: **Tower Pit** Permit Action: **2023_Inspection** Permit/Job#: **M2018055****PROJECT IDENTIFICATION**

Task #: **002** State: **Colorado** Abbreviation: **None**
 Date: **4/11/2023** County: **Eagle** Filename: **055-002**
 User: **LDS**

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

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

Cost Breakdown:

		<u>Utilization %</u>
Ownership Cost/Hour:	\$124.85	NA
Operating Cost/Hour:	\$97.63	100
Ripper own. Cost/Hour:	\$16.38	NA
Ripper op. Cost/Hour:	\$8.60	100
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: **\$288.76**
 Total Fleet Cost/Hour: **\$288.76**

MATERIAL QUANTITIES

Initial Volume: **33,333**
 Swell factor: **1.000**
 Loose volume: **33,333 LCY**

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

HOURLY PRODUCTION

Average push distance: **55 feet**
 Unadjusted hourly production: **1,323.4 LCY/hr**

Materials consistency description: **Partly consolidated stockpile 1.1**

Average push gradient: **25 %**
 Average site altitude: **6,500 feet**

Material weight: **2,000 lbs/LCY**Weight description: **User Provided**

<u>Job Condition Correction Factor</u>	<u>Source</u>
Operator Skill: 0.750	(AVG.)
Material consistency: 1.100	(CAT HB)
Dozing method: 1.100	(50% SL)
Visibility: 0.800	(POOR)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(FND-RF)
Push gradient:	0.422	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.150	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.2339

Adjusted unit production: 309.54 LCY/hr

Adjusted fleet production: **309.54** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.933/LCY

Total job time: **107.69** Hours

Total job cost: **\$31,096**

WHEEL LOADER – LOAD AND CARRY WORKTask description: TopsoilSite: Tower Pit Permit Action: 2023_Inspection Permit/Job#: M2018055**PROJECT IDENTIFICATION**

Task #: 003 State: Colorado Abbreviation: None
 Date: 4/11/2023 County: Eagle Filename: 055-003
 User: LDS

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:	\$35.89	NA
Operating Cost/Hour:	\$30.95	100
Operator Cost/Hour:	\$40.71	NA
Total Unit Cost/Hour:	\$107.55	
Total Fleet Cost/Hour:	\$107.55	

MATERIAL QUANTITIES

Initial volume: 116,133 CCY Swell factor: 1.000
 Loose volume: 116,133 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:	No adjustment - factor not applicable 0.00	0.000	(Cat HB)
Stockpile:	Conveyor or dozer piled 10 ft. high and up 0.00	0.000	(Cat HB)
Truck Ownership:	Independently owned trucks 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:		0.000	minutes
Adjusted Basic Cycle Time:		0.475	minutes

Rolling Resistance – Road Conditions

Haul: Hard, smooth, stabilized, surfaced, watered, maintained 2.0
 Return: Hard, smooth, stabilized, surfaced, watered, maintained 2.0

Haul and Return Time

	Length (feet)	Grade Res. (%)	Rolling Res. (%)	Total Res. (%)	Travel Time (minutes)	Source
Haul Route:	25	0.00	2.00	2.00	0.0123	(Cat HB)
Return Route:	25	0.00	2.00	2.00	0.0123	(Cat HB)

Total Travel Time: 0.0247 minutes
 Total Cycle Time: **0.4997** minutes

Load Bucket Capacity

Rated Capacity: 2.70 LCY (heaped)
 Bucket Fill Factor: 1.100 Other - rock/dirt mixtures (100-120%) 1.100
 Adjusted Capacity: **2.97** LCY

Job Condition Correction Factors

Site Altitude: 6500 feet

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

Unadjusted Hourly Unit Production: 356.65 LCY/Hour
 Adjusted Hourly Unit Production: 296.02 LCY/Hour
 Adjusted Hourly Fleet Production: **296.02** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Loader(s) Total job time: **392.32** Hours
 Unit cost: \$0.363 /LCY Total job cost: **\$42,194**

REVEGETATION WORKTask description: RevegSite: Tower PitPermit Action: 2023_InspectionPermit/Job#: M2018055**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 4/11/2023County: EagleFilename: 055-004User: LDSAgency 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
Orchardgrass - Latar	0.60	7.44	\$2.51
Smooth Brome - Lincoln	3.20	10.65	\$10.64
Intermediate Wheatgrass - Rush	5.00	10.67	\$14.00
Sainfoin - Remont	5.00	2.18	\$15.80
Pubescent Wheatgrass - Topar	4.50	9.30	\$14.85
Totals Seed Mix	18.30	40.24	\$57.80

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
Straw, delivered {MEANS 31 25 14.16 1200}	5.00	TON	\$421.36	\$2,106.80
Total Mulch Materials Cost/Acre				\$2,106.80

Application

Description	Cost /Acre
Hand spread, 1" deep (MEANS 32 91 13.16 0200)	\$3,726.80
Total Mulch Application Cost/Acre	\$3,726.80

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: 5 Cost /Acre: \$6,158.62
 Estimated Failure Rate: 30% Cost /Acre*: \$6,158.62
 *Selected Replanting Work Items: SEEDING,MULCHING

Initial Job Cost: **\$30,793.10**
 Reseeding Job Cost: **\$9,237.93**
 Total Job Cost: **\$40,031**
 Job Hours: **0.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Mob/demobSite: Tower PitPermit Action: 2023_InspectionPermit/Job#: M2018055**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 4/11/2023County: EagleFilename: 055-005User: LDSAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck 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:	\$15.25	\$23.06	\$37.58
Operating Cost/Hour:	\$25.26	\$30.83	\$51.41
Operator Cost/Hour:	\$27.71	\$27.71	\$27.71
Helper Cost/Hour:	\$0.00	\$20.22	\$20.22
Total Unit Cost/Hour:	\$68.22	\$101.82	\$136.92

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 315D L 8'-6" Stick	19.05	\$68.58	\$68.22	2	\$273.60	\$136.44	\$500.00
Cat D8T - 8SU	52.21	\$141.23	\$136.92	1	\$278.15	\$136.92	\$250.00
CAT 924H	12.69	\$35.89	\$68.22	1	\$104.11	\$68.22	\$250.00
Subtotals:					\$655.86	\$341.58	\$1,000.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Subtotals:			\$0.00	\$0.00

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: GYPSUM
 Total one-way travel distance: 1.00 miles
 Average Travel Speed: 35.00 mph

Total Non-Roadable Mob/Demob Cost * \$2,057.00
 * two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$0.00
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.03	0.03
Return Time (Hours):	0.03	0.03
Loading Time (Hours):	0.00	NA
Unloading Time (Hours):	0.00	NA
Subtotals:	0.06	0.06

JOB TIME AND COST

Total job time: 0.11 Hours

Total job cost: \$2,057