



June 10, 2024

Owen Robertson
Twin Buttes Land Co., LLC
PO Box 190
Rangely, CO 81648

**Re: Wagner Pit, File No. M-2023-038, Construction Material Limited Impact (110)
Reclamation Permit, Adequacy Review #2**

Dear Robertson:

Adequacy responses were received on Monday, June 03, 2024, for the Construction Material Limited Impact (110) Reclamation Permit Application package for the Wagner Pit, File No. M-2023-038. The Division of Reclamation, Mining and Safety has reviewed the materials submitted and the following items remain.

2. Please state the current bench configuration. What is the anticipated benching configuration moving forward? Rule 6.3.3(f) **A line item for grading has been provided under exhibit L, however the Division is unclear what is being grade (how much of what and where) if highwalls are to be left in place. Is any grading associated with contouring? Please provide more information.**
5. Table C-1 proposed a temporary seed mix for salvaged topsoil. Please include two additional grasses (needle and thread, bottlebrush squirreltail, Indian ricegrass, etc.). Additionally, the Division request that yellow sweet clover be omitted given its tendency to be invasive. Alfalfa is a suitable alternative.
If sufficient seed stock of sweet clover is already present in the soil, not additional seeding is required.
No additional grass species were provided as requested. Please include at least two additional grass species in the temporary seed mix. If possible please use native species.
12. Pursuant to Rule 1.6.2(1)(g) please provide proof of publication (d) and proof of all required notice(s). **Close of comment period on the newspaper publication was incorrect. Notice of publication error was sent on June 4, 2024. Please note that the decision due date must be extended to allows for the comment period to close prior to a decision.**

A draft reclamation cost estimate is attached. This is the worst case scenario for the site. Please provide comments or feedback with adequacy responses.



Please submit your response(s) to the above listed issue(s) by Friday, June 14, 2024 in order to allow the Division sufficient time for review. The decision date for your application is scheduled for June 16, 2024. If you require additional time, please file a written request for an extension.

If you require additional information or have questions or concerns, please don't hesitate to contact me at amy.yeldell@state.co.us or 970-210-1272.

Sincerely,



Amy Yeldell

Environmental Protection Specialist

Cc: Travis Marshall, Senior EPS, Grand Junction DRMS



**Re: Wagner Pit, File No. M-2023-038, Construction Material Limited Impact (110)
Reclamation Permit, Preliminary Reclamation Cost Estimate**

General Assumptions:

- 9.74 ac permit
- General agriculture pre/post mine use. Existing roads no improvement and to be left in place, 1.12ac roads of roads to remain.
- 1.2 ac of potentially mined highwall will remain as is and not to be reclaimed
- Min 4" topsoil to be applied site wide* to areas being reclaimed
- 2 different seed mixes, broadcast seed, no nursery or mulch

Task	Form Used	Description
01a	Dozer	Misc. grading of stockpiles, access roads, general contouring 8582 CY with 100 ft push (0.54 ac @ 8ft = 6,969 CY + 1ac @ 12" = 1,613 CY)
02a	Ripper	Decompact stockpile area 4.38 2.74 ac + 1.64 ac = 4.38
03a	Dozer	Apply topsoil 7.34 ac @ 4" = 3,947 CY (9.74 ac - 1.2 ac highwall bench - 1.2 ac roads = 7.34ac)
04a	Reveg	Reveg Mix 1 : 5.92 ac (1.64 ac area A + 2.26 ac area B-1 + 0.48 ac area C + 2.74 ac area D - 1.2 ac roads = 5.92 ac)
04b	Reveg	Reveg Mix 2: 1.42 ac (2.62 ac area B-2 -1.2 ac of highwall = 1.42ac)
10a	Mob	Initial Mobilization
10b	Mob	Secondary Failure Seeding Mobilization



COST SUMMARY WORK

Task description: Permit application

Site: Wagner Pit

Permit Action: App

Permit/Job#: M2023038

PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 6/10/2024

County: Rio Blanco

Filename: M038-ACY

User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Misc grading	DOZER	1	29.70	\$12,668
02a	Decompact stockpile areas	RIPPER	1	6.69	\$2,998
03a	Apply topsoil	DOZER	1	14.17	\$6,044
04a	Reveg Mix 1	REVEGE	1	9.00	\$6,368
04b	Reveg Mix 2	REVEGE	1	3.00	\$1,526
10a	Initial Mobilization	MOBILIZE	1	7.20	\$4,398
10b	Secondary Mobilization	MOBILIZE	1	7.20	\$1,339
<u>SUBTOTALS:</u>				76.96	\$35,341

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02

Total = \$714

Performance bond: 1.05

Total = \$371

Job superintendent: 16.00

Total = \$1,041

Profit: 10.00

Total = \$3,534

TOTAL O & P = \$5,660

CONTRACT AMOUNT (direct + O & P) = \$41,001

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

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

Total = \$500

Engineering work and/or contract/bid preparation: 4.25

Total = \$1,743

Reclamation management and/or administration: 5.00

\$2,050

CONTINGENCY: 3.00

Total = \$1,060

TOTAL INDIRECT COST = \$11,013

TOTAL BOND AMOUNT (direct + indirect) = \$46,354

BULLDOZER WORKTask description: Misc gradingSite: Wagner Pit Permit Action: App Permit/Job#: M2023038**PROJECT IDENTIFICATION**

Task #: 01A State: Colorado Abbreviation: None
 Date: 6/10/2024 County: Rio Blanco Filename: M038-01a
 User: ACY

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:	<u>\$241.38</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$143.92</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>\$41.30</u>	<u>NA</u>

Total unit Cost/Hour: \$426.60
 Total Fleet Cost/Hour: **\$426.60**

MATERIAL QUANTITIES

Initial Volume: 8,582
 Swell factor: 1.165
 Loose volume: **9,998 LCY**

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

HOURLY PRODUCTION

Average push distance: 100 feet
 Unadjusted hourly production: 852.6 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: 0 %
 Average site altitude: 6,300 feet

Material weight: 2,900 lbs/LCYWeight description: Decomposed rock - 50% Rock, 50% Earth**Job Condition Correction Factor**

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

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.800	(SSD-AC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.793	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3949

Adjusted unit production: 336.69 LCY/hr

Adjusted fleet production: **336.69** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$1.267/LCY

Total job time: **29.70** Hours

Total job cost: **\$12,668**

BULLDOZER RIPPING WORK

Task description: Decompact stockpile areas

Site: Wagner Pit Permit Action: App Permit/Job#: M2023038

PROJECT IDENTIFICATION

Task #: 02A State: Colorado Abbreviation: None
Date: 6/10/2024 County: Rio Blanco Filename: M038-02a
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D8T - 8SU Horsepower: 310
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$241.38	NA
Operating Cost/Hour:	\$143.92	100
Ripper Ownership Cost/Hour:	\$14.11	NA
Ripper Operating Cost/Hour:	\$7.45	100
Operator Cost/Hour:	\$41.30	NA
Total Unit Cost/Hour:	\$448.16	
Total Fleet Cost/Hour:	\$448.16	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 4.38 acres Rip Depth (ft): 2.00 Volume: 14,133 BCY or CCY

Source of estimated quantity: Areas A and D

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth: 2.56 feet/pass
Average Ripping Width: 7.08 feet/pass
Average Ripping Length: 250.00 feet/pass
Average Dozer Speed: 88.00 feet/minute
Average Maneuver Time: 0.25 minutes/pass
Production per unit area: 0.789 acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.789 Acres/hr
Site Altitude: 6,300 feet
Altitude Adj: 1.00 (CAT HB)
Job Efficiency: 0.83 (1 shift/day)
Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.65 Acres/hr
Adjusted Hourly Fleet Production: **0.65** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **6.69** Hours

Unit cost: \$684.549 Per acre Total job cost: **\$2,998**

BULLDOZER WORKTask description: Apply topsoilSite: Wagner PitPermit Action: AppPermit/Job#: M2023038**PROJECT IDENTIFICATION**Task #: 03AState: ColoradoAbbreviation: NoneDate: 6/10/2024County: Rio BlancoFilename: M038-03aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$241.38	NA
Operating Cost/Hour:	\$143.92	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.30	NA

Total unit Cost/Hour: \$426.60Total Fleet Cost/Hour: **\$426.60****MATERIAL QUANTITIES**Initial Volume: 3,947Swell factor: 1.125Loose volume: **4,440 LCY**Source of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 150 feetUnadjusted hourly production: 634.3 LCY/hrMaterials consistency description: Partly consolidated stockpile 1.1Average push gradient: 0 %Average site altitude: 6,300 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packed**Job Condition Correction Factor**

		<u>Source</u>
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(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:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4941

Adjusted unit production: 313.41 LCY/hr

Adjusted fleet production: **313.41** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$1.361/LCY

Total job time: **14.17** Hours

Total job cost: **\$6,044**

REVEGETATION WORKTask description: Reveg Mix 1Site: Wagner PitPermit Action: AppPermit/Job#: M2023038**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 6/10/2024County: Rio BlancoFilename: M038-04aUser: ACYAgency 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
Orchardgrass - Paiute	8.00	99.17	\$32.60
Russian Wildrye - Bozoisky	8.00	32.14	\$51.84
Intermediate Wheatgrass - Rush	12.00	25.62	\$33.60
Burnett, Small (or Little) - Delar	6.00	7.58	\$15.00
Yellow Sweet Clover - Madrid	1.50	8.95	\$4.24
Saltbush, Four Wing	3.00	4.13	\$37.50
Siberian Wheatgrass	12.00	30.30	\$68.70
Kochia, Forage (Prostrate)	3.00	421.35	\$26.93
		629.25	\$270.40

Totals Seed Mix	53.50		
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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
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.01	\$4.01
Total Mulch Materials Cost/Acre				\$4.01

Application

Description	Cost /Acre
Weed spray, truck, non-aquatic area, nox. [DMG]	\$62.72
Total Mulch Application Cost/Acre	\$62.72

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: 5.92 Cost /Acre: \$717.17
 Estimated Failure Rate: 50% Cost /Acre*: \$717.17
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$4,245.65**
 Reseeding Job Cost: **\$2,122.82**
 Total Job Cost: **\$6,368**
 Job Hours: **9.00**

REVEGETATION WORKTask description: Reveg Mix 2Site: Wagner PitPermit Action: AppPermit/Job#: M2023038**PROJECT IDENTIFICATION**Task #: 04BState: ColoradoAbbreviation: NoneDate: 6/10/2024County: Rio BlancoFilename: M038-04bUser: ACYAgency 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
Indian Ricegrass - Paloma	8.00	25.90	\$89.00
Yellow Sweet Clover - Madrid	1.50	8.95	\$4.24
Thickspike Wheatgrass - Critana	12.00	42.42	\$82.50
Saltbush, Four Wing	4.00	5.51	\$50.00
Siberian Wheatgrass	3.00	7.58	\$17.18
Kochia, Forage (Prostrate)	3.00	421.35	\$26.93
Totals Seed Mix	31.50	511.71	\$269.84

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
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$4.01	\$4.01
Total Mulch Materials Cost/Acre				\$4.01

Application

Description	Cost /Acre
Weed spray, truck, non-aquatic area, nox. [DMG]	\$62.72
Total Mulch Application Cost/Acre	\$62.72

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: 1.42 Cost /Acre: \$716.61
 Estimated Failure Rate: 50% Cost /Acre*: \$716.61
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$1,017.59**
 Reseeding Job Cost: **\$508.79**
 Total Job Cost: **\$1,526**
 Job Hours: **3.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Initial Mobilization**Site: **Wagner Pit**Permit Action: **App**Permit/Job#: **M2023038****PROJECT IDENTIFICATION**Task #: **10A**State: **Colorado**Abbreviation: **None**Date: **6/10/2024**County: **Rio Blanco**Filename: **M038-10a**User: **ACY**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:	\$20.26	\$36.04	\$47.05
Operating Cost/Hour:	\$39.51	\$76.08	\$82.85
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$82.29	\$158.17	\$175.95

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 D8T - 8SU	53.08	\$255.49	\$175.95	1	\$431.44	\$175.95	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00
Subtotals:					\$520.46	\$258.24	\$500.00

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$127.92	1	\$127.92	\$127.92
Subtotals:			\$127.92	\$127.92

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: GRAND JUNCTION
 Total one-way travel distance: 65.00 miles
 Average Travel Speed: 50.00 mph

Total Non-Roadable Mob/Demob Cost * \$4,065.54
 ** two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$332.59
 ** one round trip, no haul rig:

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.30	1.30
Return Time (Hours):	1.30	1.30
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	3.60	2.60

JOB TIME AND COST

Total job time: 7.20 Hours

Total job cost: \$4,398

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Secondary MobilizationSite: Wagner PitPermit Action: AppPermit/Job#: M2023038**PROJECT IDENTIFICATION**Task #: 10BState: ColoradoAbbreviation: NoneDate: 6/10/2024County: Rio BlancoFilename: M038-10bUser: ACYAgency 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:	\$20.26	\$36.04	\$47.05
Operating Cost/Hour:	\$39.51	\$76.08	\$82.85
Operator Cost/Hour:	\$22.52	\$22.52	\$22.52
Helper Cost/Hour:	\$0.00	\$23.53	\$23.53
Total Unit Cost/Hour:	\$82.29	\$158.17	\$175.95

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
Drill/Broadcast Seeder with Tractor	25.00	\$6.73	\$82.29	1	\$89.02	\$82.29	\$250.00

Subtotals: **\$89.02** **\$82.29** **\$250.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 1 T. Crew	\$82.80	1	\$82.80	\$82.80

Subtotals: **\$82.80** **\$82.80**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	<u>GRAND JUNCTION</u>	
Total one-way travel distance:	<u>65.00</u>	miles
Average Travel Speed:	<u>50.00</u>	mph

Total Non-Roadable Mob/Demob Cost *	<u>\$1,123.45</u>
** two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	<u>\$215.28</u>
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	<u>1.30</u>	<u>1.30</u>
Return Time (Hours):	<u>1.30</u>	<u>1.30</u>
Loading Time (Hours):	<u>0.50</u>	<u>NA</u>
Unloading Time (Hours):	<u>0.50</u>	<u>NA</u>
Subtotals:	<u>3.60</u>	<u>2.60</u>

JOB TIME AND COST

Total job time:	<u>7.20</u>	Hours
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Total job cost:	<u>\$1,339</u>
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