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

May 23, 2025

Michael Golliher
Pete Lien & Sons, Inc.
P.O. Box 440
Rapid City, SD 57709

RE: St. Barbara Sand and Gravel Mine, Permit No. M-2004-013; Technical Revision (TR-4), Adequacy Review

Dear Mr. Golliher,

On May 19, 2025, the Division of Reclamation, Mining, and Safety (Division/DRMS) received the Technical Revision (TR-4) application requesting to increase the maximum disturbed area from 96 acres to 115 acres on the St. Barbara Sand and Gravel Mine, Permit No. M-2004-013, in Pueblo County. A review of the TR-4 application was completed by the Division and there are some items that require additional information/clarification. Please provide a response to the following item in a cover letter along with any supplemental items that may be required.

1. With the purposed increase of 19 acres to the maximum disturbed area, the required financial warranty was re-calculated by the Division. The proposed increase in disturbance would require a financial warranty of $947,575.00, this is an increase of $121,077.00 to the currently held bond for the permit. A copy of the Division's calculation for the reclamation cost estimate (RCE) is attached with this letter. Review the Division's calculated RCE and provide comments.

This concludes the Division's adequacy review of the TR-4 application for the St. Barbara Sand and Gravel Mine. The decision date for the TR-4 application is **June 18, 2025**. Please provide a response to the Division five (5) days prior to the decision date, June 13, 2025, to allow time for a review of the response. If more time is needed to address the item above, a written request to extend the decision date should be submitted to the Division before the decision date.

If you have any questions or concerns, please contact me by email at Jocelyn.carter@state.co.us or by phone at (720) 666-1065.

Sincerely,

Jocelyn Carter
Environmental Protection Specialist
Division of Reclamation, Mining, and Safety

Enclosure: Division's Reclamation Cost Estimate

Ec: Amy Eschberger, DRMS
Dakota DeBoer, Pete Lien & Sons, Inc.

COST SUMMARY WORK

Task description: **Cost Summary**

Site: **St. Barbara Sand and Gravel Mine** Permit Action: 2025 TR04 Permit/Job#: M2004013

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 5/23/2025 County: Pueblo Filename: M013-000
User: JLC

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Fill settling pond, 0.51 acres and 7.5' deep	DOZER	4	3.23	$6,710
002	Fill processing ponds, 8.75 acres, avg 11.25' deep	TRUCK1	3	118.00	$230,778
003	Topsoil 7-in on 96.3 acres	SCRAPER1	1	39.18	$191,152
004	Reveg 96.3 Acres	REVEGE	1	48.00	$302,616
005	Mob/Demob	MOBILIZE	1	3.33	$28,004
			SUBTOTALS:	**211.74**	**$759,260**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$15,337
Performance bond:	1.05	Total =	$7,972
Job superintendent:	105.87	Total =	$8,392
Profit:	10.00	Total =	$75,926
		TOTAL O & P =	$107,628
		CONTRACT AMOUNT (direct + O & P) =	$866,888

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	$500	Total =	$500
Engineering work and/or contract/bid preparation:	4.25	Total =	$36,843
Reclamation management and/or administration:	5.00		$43,344
CONTINGENCY:	0.00	Total =	$0

TOTAL INDIRECT COST = $188,315

TOTAL BOND AMOUNT (direct + indirect) = $947,575

BULLDOZER WORK

Task description: **Fill settling pond, 0.51 acres and 7.5' deep**

Site: **St. Barbara Sand and Gravel Mine** Permit Action: 2025 TR04 Permit/Job#: M2004013

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 5/23/2025 County: Pueblo Filename: M013-001
User: JLC

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D10T - 10SU
Horsepower: 574
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$257.39	NA
Operating Cost/Hour:	$196.93	100
Ripper own. Cost/Hour:	$25.02	NA
Ripper op. Cost/Hour:	$0.59	5
Operator Cost/Hour:	$40.04	NA

Total unit Cost/Hour: $519.96
Total Fleet Cost/Hour: **$2,079.85**

MATERIAL QUANTITIES

Initial Volume: 6,171
Swell factor: 1.125
Loose volume: **6,942** LCY

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

HOURLY PRODUCTION

Average push distance: 250 feet
Unadjusted hourly production: 754.3 LCY/hr

Materials consistency description: Partly consolidated stockpile 1.1

Average push gradient: 0 %
Average site altitude: 4,500 feet

Material weight: 2,650 lbs/LCY

Weight description: Decomposed rock - 25% Rock, 75% Earth

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.100	(CAT HB)
Dozing method:	1.200	(SLOT)

Visibility:	1.000	(AVG.)
Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	1.000	(DOZ-OC)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.7132

Adjusted unit production: 537.97 LCY/hr
Adjusted fleet production: **2151.88** LCY/hr

JOB TIME AND COST

Fleet size: 4 Dozer(s)
Unit cost: $0.967/LCY

Total job time: **3.23** Hours
Total job cost: **$6,710**

TRUCK/LOADER TEAM WORK

Task description: **Fill processing ponds, 8.75 acres, avg 11.25' deep**

Site: **St. Barbara Sand and Gravel Mine** Permit Action: 2025 TR04 Permit/Job#: M2004013

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 5/23/2025 County: Pueblo Filename: M013-002
User: JLC

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Shift basis: 1 per day

	Equipment Description
Truck Loader Team -Truck:	Cat 730
-Loader:	CAT 972H
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	NA	NA	25	25
Ownership cost/hour:	$108.67	$62.43	NA	NA	$129.81	$11.65
Operating cost/hour:	$66.26	$57.98	NA	NA	$22.28	$5.61
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	NA	NA	$0.00	$0.00
Ripper op. cost/hour:	NA	$0.00	NA	NA	$0.00	$0.00
Operator cost/hour:	$24.82	$56.64	NA	NA	$56.70	$0.00
Unit Subtotals:	$199.75	$177.05	NA	NA	$208.79	$17.26
Number of Units:	6	3	0	0	1	1
Group Subtotals:	Work: $1,729.65		Support: $0.00		Maint: $226.05	

Total work team cost/hour: **$1,955.70**

MATERIAL QUANTITIES

Initial volume: 158,813 CCY Swell factor: 1.125
Loose volume: **178,665** 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: 2,650 Pounds/LCY
Description: Decomposed rock - 25% Rock, 75% Earth
Rated Payload: 62,000 Pounds

Payload Capacity: 23.40 LCY

Truck Bed (volume) Basis:

Struck Volume:	17.10	LCY
Heaped Volume:	22.10	LCY
Average Volume:	19.60	LCY
Adjusted Volume:	22.10	LCY

Final Truck Volume Based on Number of Loader Passes: **18.48** LCY

Loading Tool Capacity

Bucket Size Class: NA

Rated Capacity:	5.600	LCY (heaped)
Bucket Fill Factor:	1.100	Other - rock/dirt mixtures (100-120%) 1.100
Adjusted Capacity:	**6.160**	LCY

Job Condition Corrections: Site Altitude (ft.): 4500 feet

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

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): 0.525 minutes

Cycle Time Factors		Factor (min.)	Source
Material:	Mixed material 0.02	0.020	(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:	-0.060	minutes
	Adjusted Loader Cycle Time:	**0.465**	minutes
	Net Load Time per Truck:	**1.030**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	1.030	Minutes	Adjusted for site altitude:	1.030	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	750.00	0.00	3.00	3.00	2183	0.607

Haul Time: **0.607** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	750.00	0.00	3.00	3.00	2936	0.410

Return Time: **0.410** minutes
Total Truck Cycle Time: **3.647** minutes

Loading Tool unit Production: 680.25 LCY/Hour — Adjusted for job efficiency: 564.60 LCY/Hour
Truck Unit Production: 304.03 LCY/Hour — Adjusted for job efficiency: 252.35 LCY/Hour

Optimal No. of Trucks: 2 Truck(s) — Selected Number of Trucks: 2 Truck(s)

Adjusted hourly truck team production: 504.69 LCY/Hour
Adjusted single truck/loader team production: 504.69 LCY/Hour
Adjusted multiple truck/loader team production: **1,514.07** LCY/Hour

JOB TIME AND COST

Fleet size: 3 Team(s) — Total job time: **118.00** Hours

Unit cost: $1.292 /LCY — Total job cost: **$230,778**

SCRAPER TEAM WORK

Task description: **Topsoil 7-in on 96.3 acres**

Site: **St. Barbara Sand and Gravel Mine** Permit Action: 2025 TR04 Permit/Job#: M2004013

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 5/23/2025 County: Pueblo Filename: 003
User: JLC

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G
-Dozer:	Cat D10T - 10SU
Support Equipment -Load Area:	NA
-Dump Area:	NA
Road Maintenance –Motor Grader:	CAT 14M
-Water Truck:	Water Tanker, 2,500 Gal.

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	50	NA	NA	50	50
Ownership cost/hour:	$329.66	$257.39	NA	NA	$129.81	$11.65
Operating cost/hour:	$347.48	$98.47	NA	NA	$44.57	$11.23
%Utilization-ripper:	NA	5	NA	NA	NA	NA
Ripper own. cost/hour:	NA	$25.02	NA	NA	$0.00	$0.00
Ripper op. cost/hour:	NA	$0.59	NA	NA	$0.00	$0.00
Operator cost/hour:	$57.52	$40.04	NA	NA	$56.70	$0.00
Unit Subtotals:	$734.66	$421.50	NA	NA	$231.07	$22.88
Number of Units:	4	4	0	0	1	1
Group Subtotals:	Work:	$4,624.64	Support:	$0.00	Maint:	$253.95

Total work team cost/hour: **$4,878.59**

MATERIAL QUANTITIES

Initial volume: 90,629 CCY Swell factor: 1.125
Loose volume: **101,958** LCY

Source of estimated volume: TR-4 Application
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight: 2,650 lbs/LCY
Material description: Decomposed rock - 25% Rock, 75% Earth
Rated Payload: 81,600 pounds

Struck Volume: 24.00 LCY
Heaped Volume: 34.00 LCY
Average Volume: 29.00 LCY

Payload Capacity: 30.79 LCY Adjusted Capacity: **29.00** LCY

Cycle Time:

Scraper Loading Time: 0.50 Minutes
Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 4500 feet

	Scraper	Push Dozer	Source
Altitude Adj:	1.000	1.000	(CAT HB)
Job Efficiency:	0.830	0.830	(CAT HB)
Net Correction:	0.830	0.830	

Travel Time:

Road Condition: Firm, smooth, rolling, dirt/lt. surfaced, watered, maintained 3.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	2.00	3.00	5.00	1867	0.67

Haul Time: **0.67** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1000.00	-2.00	3.00	1.00	2963	0.45

Return Time: **0.45** minutes

Total Scraper team cycle time: **2.22** minutes
Adjusted for job conditions: 650.54 LCY/Hour
Selected Number of Scrapers: 4 Scraper(s)
Adjusted single scraper team (unit) hourly production: 2,602.16 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: **2,602.16** LCY/Hour

Unadjusted unit production/hour: 783.78 LCY/Hour
Optimal Number of Scrapers per push dozer: ____________

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **39.18** Hours

Unit cost: $1.875 /LCY Total job cost: **$191,152**

REVEGETATION WORK

Task description: **Reveg 96.3 Acres**

Site: **St. Barbara Sand and Gravel Mine** Permit Action: 2025 TR04 Permit/Job#: M2004013

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 5/23/2025 County: Pueblo Filename: 004
User: JLC

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)	$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**
Alkali Sacaton	1.50	58.54	$43.63
Switchgrass - Blackwell	4.00	35.72	$52.88
Galleta	11.00	40.15	$609.81
Western Wheatgrass - Barton	16.00	40.40	$150.33
Totals Seed Mix	32.50	174.82	**$856.65**

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	$236.64
Total Seed Application Cost/Acre	**$236.64**

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	$492.78	$985.56
Herbicide - 2,4D @ 1.0 pt/ac	2.00	ACRE	$4.13	$8.25
Total Mulch Materials Cost/Acre				**$993.81**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$85.37
Power mulcher (MEANS 32 91 13.16 0350)	$157.25
Weed spray, truck, non-aquatic area, nox. [DMG]	$83.26
Total Mulch Application Cost/Acre	**$325.89**

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: 96.3
Estimated Failure Rate: 15%
*Selected Replanting Work Items: SEEDING

Cost /Acre: $2,869.40
Cost /Acre*: $1,093.29

Initial Job Cost: **$276,323.22**
Reseeding Job Cost: **$15,792.57**
Total Job Cost: **$292,116**
Job Hours: **48.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mob/Demob**

Site: **St. Barbara Sand and Gravel Mine** Permit Action: 2025 TR04 Permit/Job#: M2004013

PROJECT IDENTIFICATION

Task #: 005 State: Colorado Abbreviation: None
Date: 5/23/2025 County: Pueblo Filename: 005
User: JLC

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 D10T - 10SU	93.31	$282.41	$125.64	4	$1,632.20	$502.56	$250.00
Cat 637G	57.28	$329.66	$125.64	4	$1,821.20	$502.56	$500.00
CAT 14M	23.57	$129.81	$59.44	1	$189.25	$59.44	$250.00
Hydroseeder with Tractor	28.00	$45.21	$122.78	2	$335.98	$245.56	$500.00
CAT 972H	28.00	$62.43	$122.78	3	$555.63	$368.34	$2,000.00
Cat 730	25.19	$108.67	$59.44	6	$1,008.66	$356.64	$2,000.00
Power Mulcher (Bowie LD-90)	6.00	$27.21	$59.44	1	$86.65	$59.44	$250.00
				Subtotals:	**$5,629.57**	**$2,094.54**	**$5,750.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Water Tanker, 2,500 Gal.	$34.10	1	$34.10	$34.10
Light Duty Pickup, 4x4, 1 T. Crew	$108.47	1	$108.47	$108.47
		Subtotals:	**$142.57**	**$142.57**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	PUEBLO	
Total one-way travel distance:	15.00	miles
Average Travel Speed:	45.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$27,908.55	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$95.05	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.33	0.33
Return Time (Hours):	0.33	0.33
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.67	0.67

JOB TIME AND COST

Total job time:	**3.33**	Hours
Total job cost:	**$28,004**	