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

December 27, 2023

Russell A. Larsen
Grand Junction Pipe & Supply Co.
556 Struthers Ave.
Grand Junction, CO 81501-2826

Re: Soaring Eagle Gravel Pit - File No. M-1999-025
Grand Junction Pipe & Supply Co.
Surety Increase (SI-1)
Post Inspection Bond Increase

Dear Russell A. Larsen:

On December 27, 2023 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to $583,210.00, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of $340,722.00.

Please see the November 7, 2023 inspection report for details regarding why this surety increase is required.

The Division ordered amendment of the current Financial Warranty, or submittal of a new Financial Warranty reflecting the increase, within 60 days from the date of this letter (December 27, 2023).

Please make arrangements with Sara M. Stevenson-Benn at the Division's Denver office for submittal of the financial warranty. Any other questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Sara M. Stevenson-Benn by telephone at (303) 866-3567 (8148), or by email at Sara.stevenson-benn@state.co.us.

The Permittee for this site may be scheduled for a Formal Board Hearing for possible revocation of the permit after February 25, 2024, if the amount of any increased Financial Warranty has not been provided.

Bond Held:	$242,488.00
Prior Liability:	$242,488.00
Change in Liability:	$340,722.00
Revised Liability:	$583,210.00
Prior Permit Acreage:	112.00

Change in Permit Acreage:	0.00
Revised Permit Acreage:	112.00
Prior Affected Acreage:	112.00
Change in Affected Acreage:	0.00
Revised Affected Acreage:	112.00

If you have any questions, please contact me by telephone at (303) 866-3567 x 8183, or by email at Amy.yeldell@state.co.us.

Sincerely,

Amy C. Yeldell
Environmental Protection Specialist

cc: Jon Mueller

M-GR-04

COST SUMMARY WORK

Task description: **Post Inspection Update 11-7-2023**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: ACY State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025
User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Dewater 55 ac pit	PUMPING	1	1,037.03	$23,043
02a	Excavate outlets structure	DOZER	2	2.22	$2,042
02b	Excavate inlet structure	DOZER	2	2.22	$2,042
03a	Provide 3,080 CY of 2 ft D50 Riprap	NA	5	16.00	$0
03b	Place riprap on outlet structure	EXCAVATE	1	17.40	$2,919
03c	Place riprap on inlet structure	EXCAVATE	1	17.40	$2,919
04a	Reduce highwalls to 3H: 1V	DOZER	2	14.49	$13,337
04b	Create wetlands bench	DOZER	2	158.00	$145,453
05a	Rip compacted areas prior to topsoil replacement	RIPPER	1	34.52	$16,170
06a	Haul topsoil to slopes	TRUCK1	1	45.82	$49,280
06b	Spread topsoil on pit slopes	DOZER	2	9.25	$8,157
06c	Haul topsoil to facilities areas	TRUCK1	1	47.41	$50,994
06d	Spread topsoil on facilities areas	DOZER	2	10.09	$8,899
07a	Reveg disturbed areas	REVEGE	1	60.00	$112,833
08a	Install wetlands exclusion fencing	SITEMAINTENANCE	1	80.00	$8,800
10a	Initial mobilization	MOBILIZE	1	2.57	$8,706
10b	Secondary mobilization	MOBILIZE	1	2.57	$1,565
		SUBTOTALS:		**1556.99**	**$457,159**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$9,235
Performance bond:	1.05	Total =	$4,800
Job superintendent:	260.00	Total =	$16,921
Profit:	10.00	Total =	$45,716
		TOTAL O & P =	$76,671
		CONTRACT AMOUNT (direct + O & P) =	$533,830

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	$0	Total =	$0
Engineering work and/or contract/bid preparation:	4.25	Total =	$22,688
Reclamation management and/or administration:	5.00		$26,692
CONTINGENCY:	0.00	Total =	$0
		TOTAL INDIRECT COST =	$126,051
		TOTAL BOND AMOUNT (direct + indirect) =	**$583,210**

PUMPING WORK

Task description: **Dewater 55 ac pit**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 01A State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-01a
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

	Description	Quantity
Make and Model:	Submersible pump - 460v, 8 in.	1
Attachment 1:	Suction hose - 6 in. diam., 25 ft.	2
Attachment 2:	Discharge hose - 6 in. D., 25 ft.	4
Labor Unit 1:	Pump operator	0

Horsepower: 95
Shift Basis: 1 per day
Weight: 0.70
(US Tons)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$18.10	NA
Operating Cost/Hour:	$4.12	100
Operator Cost/Hour:	$0.00	NA
Total Unit Cost/Hour:	$22.22	

Total Fleet Cost/Hour: $22.22

PUMPING QUANTITIES

Initial Pond Volume: 550.00
Final Pond Volume: **179,217,819.00** gallons
Total Pond Inflow Surface Area: 28,000 Sq. ft.
Total Pond Inflow Volume per Hour: 4,922.40 gallons

Conversion factor: 325850.5800
Unit inflow rate in gph/sq. ft.: 0.1758

Source of estimated volume: Assume 2800'L x 10'H river side pit slope

PUMPING TIME

Maximum Pump Capacity:	170,000	gph/pump
Estimated Suction Head:	15	feet
Estimated Discharge Head:	20	feet
Total Head:	35	feet
CPB Pump Capacity:	163,200	gph/pump
Site Altitude:	4,490	feet

Adjusted Pumping Capacity:	163,200	gph
Initial Unadjusted Pumping Time:	1,098.15	hours
Inflow during Initial Pumping:	5,405,526	gallons
Net Unadjusted Pumping Time:	1,131.27	Hours
Altitude Adjustment Factor:	1.0000	(3% rule)
Pump Efficiency Factor:	0.9167	(55 min./hr.)
Total Adjusted Pumping Time:	1,037.04	hours

JOB TIME AND COST

Total job time: **1,037.04** Hours

Unit cost: $0.000125 /Gallon Total job cost: **$23,043**

BULLDOZER WORK

Task description: **Excavate outlets structure**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 02A State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-02a
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU
Horsepower: 405
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$238.76	NA
Operating Cost/Hour:	$162.29	100
Ripper own. Cost/Hour:	$18.32	NA
Ripper op. Cost/Hour:	$0.90	10
Operator Cost/Hour:	$40.04	NA

Total unit Cost/Hour: $460.30
Total Fleet Cost/Hour: **$920.61**

MATERIAL QUANTITIES

Initial Volume: 2,555
Swell factor: 1.180
Loose volume: **3,015** LCY

Source of estimated volume: Outlet details in permit (TR-2 estimate)
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 50 feet
Unadjusted hourly production: 2,110.5 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %
Average site altitude: 4,490 feet

Material weight: 2,400 lbs/LCY

Weight description: Clay and gravel - Dry

Job Condition Correction Factor		Source
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:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3220

Adjusted unit production: 679.58 LCY/hr
Adjusted fleet production: **1359.16** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.677/LCY

Total job time: **2.22** Hours
Total job cost: **$2,042**

BULLDOZER WORK

Task description: **Excavate inlet structure**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 02B State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-02b
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU
Horsepower: 405
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$238.76	NA
Operating Cost/Hour:	$162.29	100
Ripper own. Cost/Hour:	$18.32	NA
Ripper op. Cost/Hour:	$0.90	10
Operator Cost/Hour:	$40.04	NA

Total unit Cost/Hour: $460.30
Total Fleet Cost/Hour: **$920.61**

MATERIAL QUANTITIES

Initial Volume: 2,555
Swell factor: 1.180
Loose volume: **3,015** LCY

Source of estimated volume: Outlet details in permit (TR-2 estimate)
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 50 feet
Unadjusted hourly production: 2,110.5 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: 0 %
Average site altitude: 4,490 feet

Material weight: 2,400 lbs/LCY

Weight description: Clay and gravel - Dry

Job Condition Correction Factor		Source
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:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3220

Adjusted unit production: 679.58 LCY/hr
Adjusted fleet production: **1359.16** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.677/LCY

Total job time: **2.22** Hours
Total job cost: **$2,042**

HYDRAULIC EXCAVATOR WORK

Task description: **Place riprap on outlet structure**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 03B State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-03b
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat 320D L 9'-6" Stick
Attachment 1: ROPS Cab

Horsepower: 148
Weight (MT): 21.55
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$70.85	NA
Operating Cost/Hour:	$50.01	100
Operator Cost/Hour:	$46.87	NA
Total Unit Cost/Hour:	$167.73	

Total Fleet Cost/Hour: $167.73

MATERIAL QUANTITIES

Initial volume: 1,540 CCY Swell factor: 1.000
Loose volume: **1,540** LCY

Source of estimated volume: Outlet structure design (TR-2 estimate)
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: SEVERE
Secondary Job Condition within Basic Description: SEVERE
Cycle Time Value: 0.390 minutes

Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 1.54 LCY (heaped)
Bucket Fill Factor: 0.450 Rock - Poorly blasted (40% - 50%) 0.450
Adjusted Capacity: **0.69** LCY

Job Condition Correction Factors Site Altitude: 4490 feet

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

Unadjusted Hourly Unit Production: 106.62 LCY/Hour
Adjusted Hourly Unit Production: 88.49 LCY/Hour
Adjusted Hourly Fleet Production: **88.49** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Excavator Total job time: **17.40** Hours

Unit cost: $1.895 /LCY Total job cost: **$2,919**

HYDRAULIC EXCAVATOR WORK

Task description: **Place riprap on inlet structure**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 03C State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-03c
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat 320D L 9'-6" Stick
Attachment 1: ROPS Cab

Horsepower: 148
Weight (MT): 21.55
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$70.85	NA
Operating Cost/Hour:	$50.01	100
Operator Cost/Hour:	$46.87	NA
Total Unit Cost/Hour:	$167.73	

Total Fleet Cost/Hour: $167.73

MATERIAL QUANTITIES

Initial volume: 1,540 CCY Swell factor: 1.000
Loose volume: **1,540** LCY

Source of estimated volume: Outlet structure design (TR-2 estimate)
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Excavator Cycle Time (load bucket, swing loaded, dump bucket, swing empty):

Basic Job Condition Description: SEVERE
Secondary Job Condition within Basic Description: SEVERE
Cycle Time Value: 0.390 minutes

Load Bucket Capacity

Bucket Size Class: Medium

Rated Capacity: 1.54 LCY (heaped)
Bucket Fill Factor: 0.450 Rock - Poorly blasted (40% - 50%) 0.450
Adjusted Capacity: **0.69** LCY

Job Condition Correction Factors Site Altitude: 4490 feet

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

Unadjusted Hourly Unit Production: 106.62 LCY/Hour
Adjusted Hourly Unit Production: 88.49 LCY/Hour
Adjusted Hourly Fleet Production: **88.49** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Excavator Total job time: **17.40** Hours

Unit cost: $1.895 /LCY Total job cost: **$2,919**

BULLDOZER WORK

Task description: **Reduce highwalls to 3H: 1V**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 04A State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-04a
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU
Horsepower: 405
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$238.76	NA
Operating Cost/Hour:	$162.29	100
Ripper own. Cost/Hour:	$18.32	NA
Ripper op. Cost/Hour:	$0.90	10
Operator Cost/Hour:	$40.04	NA

Total unit Cost/Hour: $460.30
Total Fleet Cost/Hour: **$920.61**

MATERIAL QUANTITIES

Initial Volume: 17,167
Swell factor: 1.180
Loose volume: **20,257** LCY

Source of estimated volume: Staff estimates
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 70 feet
Unadjusted hourly production: 1,633.5 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -15 %
Average site altitude: 4,490 feet

Material weight: 2,400 lbs/LCY

Weight description: Clay and gravel - Dry

Job Condition Correction Factor		Source
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:	0.600	(FND-SF)
Push gradient:	1.329	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4280

Adjusted unit production: 699.14 LCY/hr
Adjusted fleet production: **1398.28** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.658/LCY

Total job time: **14.49** Hours
Total job cost: **$13,337**

BULLDOZER WORK

Task description: **Create wetlands bench**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 04B State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-04b
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU
Horsepower: 405
Blade Type: Semi-Universal
Attachment: 3-shank ripper
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$238.76	NA
Operating Cost/Hour:	$162.29	100
Ripper own. Cost/Hour:	$18.32	NA
Ripper op. Cost/Hour:	$0.90	10
Operator Cost/Hour:	$40.04	NA

Total unit Cost/Hour: $460.30
Total Fleet Cost/Hour: **$920.61**

MATERIAL QUANTITIES

Initial Volume: 77,440
Swell factor: 1.180
Loose volume: **91,379** LCY

Source of estimated volume: 12 ac @ 48"
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 175 feet
Unadjusted hourly production: 805.3 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -5 %
Average site altitude: 4,490 feet

Material weight: 2,400 lbs/LCY

Weight description: Clay and gravel - Dry

Job Condition Correction Factor		Source
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:	0.600	(FND-SF)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.958	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3591

Adjusted unit production: 289.18 LCY/hr
Adjusted fleet production: **578.36** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $1.592/LCY

Total job time: **158.00** Hours
Total job cost: **$145,453**

BULLDOZER RIPPING WORK

Task description: **Rip compacted areas prior to topsoil replacement**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 05A State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-05a
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU Horsepower: 405
Ripper Attachment: 3-Shank Ripper Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$238.76	NA
Operating Cost/Hour:	$162.29	100
Ripper Ownership Cost/Hour:	$18.32	NA
Ripper Operating Cost/Hour:	$8.98	100
Operator Cost/Hour:	$40.04	NA
Total Unit Cost/Hour:	$468.39	

Total Fleet Cost/Hour: **$468.39**

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 24.00 acres Rip Depth (ft): 2.00 Volume: 77,440 BCY or CCY

Source of estimated quantity: Staff estimates

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	2.00	feet/pass
Average Ripping Width:	7.67	feet/pass
Average Ripping Length:	200.00	feet/pass
Average Dozer Speed:	88.00	feet/minute
Average Maneuver Time:	0.25	minutes/pass
Production per unit area:	0.838	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.838 Acres/hr

Site Altitude:	4,490	feet
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.83	multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr
Adjusted Hourly Fleet Production: **0.70** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **34.52** Hours

Unit cost: $673.769 Per acre Total job cost: **$16,170**

TRUCK/LOADER TEAM WORK

Task description: **Haul topsoil to slopes**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 06A State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-06a
User: ACY

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:	Cat D9T - 9SU
-Dump Area:	NA
Road Maintenance –Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	20	NA	NA	NA
Ownership cost/hour:	$108.06	$57.78	$238.76	NA	NA	NA
Operating cost/hour:	$71.88	$56.23	$32.46	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	$0.00	$0.00	NA	NA	NA
Operator cost/hour:	$24.82	$35.97	$40.04	NA	NA	NA
Unit Subtotals:	$204.76	$149.98	$311.25	NA	NA	NA
Number of Units:	3	1	1	0	0	0
Group Subtotals:	Work:	$764.26	Support:	$311.25	Maint:	$0.00

Total work team cost/hour: **$1,075.51**

MATERIAL QUANTITIES

Initial volume: 20,704 CCY Swell factor: 1.215
Loose volume: **25,155** 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: 62,000 Pounds
Payload Capacity: 38.75 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.): 4490 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:	Material 3/4" to 6" diameter 0.00	0.000	(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:	-0.080	minutes
	Adjusted Loader Cycle Time:	**0.445**	minutes
	Net Load Time per Truck:	**0.990**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.990	Minutes	Adjusted for site altitude:	0.990	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	0.00	5.00	5.00	1427	1.524

Haul Time: **1.524** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	2000.00	0.00	5.00	5.00	2646	0.915

Return Time: **0.915** minutes
Total Truck Cycle Time: **5.029** minutes

Loading Tool unit Production 697.36 LCY/Hour Adjusted for job efficiency: 578.81 LCY/Hour

Truck Unit Production 220.48 LCY/Hour Adjusted for job efficiency: 183.00 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 549.00 LCY/Hour
Adjusted single truck/loader team production: 549.00 LCY/Hour
Adjusted multiple truck/loader team production: **549.00** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **45.82** Hours

Unit cost: $1.959 /LCY Total job cost: **$49,280**

BULLDOZER WORK

Task description: **Spread topsoil on pit slopes**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 06B State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-06b
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine: Cat D9T - 9SU
Horsepower: 405
Blade Type: Semi-Universal
Attachment: NA
Shift Basis: 1 per day
Data Source: (CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$238.76	NA
Operating Cost/Hour:	$162.29	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	10
Operator Cost/Hour:	$40.04	NA

Total unit Cost/Hour: $441.09
Total Fleet Cost/Hour: **$882.17**

MATERIAL QUANTITIES

Initial Volume: 25,155
Swell factor: 1.000
Loose volume: **25,155** LCY

Source of estimated volume: Transported volume
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 50 feet
Unadjusted hourly production: 2,110.5 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %
Average site altitude: 4,490 feet

Material weight: 1,600 lbs/LCY

Weight description: Top Soil

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6445

Adjusted unit production: 1,360.22 LCY/hr
Adjusted fleet production: **2720.44** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.324/LCY

Total job time: **9.25** Hours
Total job cost: **$8,157**

TRUCK/LOADER TEAM WORK

Task description: **Haul topsoil to facilities areas**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 06C State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-06c
User: ACY

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:	Cat D9T - 9SU
-Dump Area:	NA
Road Maintenance –Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Truck/Loader Team		Support Equipment		Maintenance Equipment	
	Truck	Loader	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	20	NA	NA	NA
Ownership cost/hour:	$108.06	$57.78	$238.76	NA	NA	NA
Operating cost/hour:	$71.88	$56.23	$32.46	NA	NA	NA
%Utilization-riper:	NA	0	NA	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	$0.00	NA	NA	NA
Ripper op. cost/hour:	NA	$0.00	$0.00	NA	NA	NA
Operator cost/hour:	$24.82	$35.97	$40.04	NA	NA	NA
Unit Subtotals:	$204.76	$149.98	$311.25	NA	NA	NA
Number of Units:	3	1	1	0	0	0
Group Subtotals:	Work:	$764.26	Support:	$311.25	Maint:	$0.00

Total work team cost/hour: **$1,075.51**

MATERIAL QUANTITIES

Initial volume: 22,587 CCY Swell factor: 1.215
Loose volume: **27,443** 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: 62,000 Pounds
Payload Capacity: 38.75 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.): 4490 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:	Material 3/4" to 6" diameter 0.00	0.000	(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:	-0.080	minutes
	Adjusted Loader Cycle Time:	**0.445**	minutes
	Net Load Time per Truck:	**0.990**	minutes

Truck Cycle Time:

Truck Exchange Time:	0.60	Minutes	Adjusted for site altitude:	0.600	Minutes
Truck Load Time:	0.990	Minutes	Adjusted for site altitude:	0.990	Minutes
Truck Maneuver and Dump Time:	1.00	Minutes	Adjusted for site altitude:	1.000	Minutes

Truck Travel (Haul & Return) Time: Road Condition: Rutted dirt, little maintenance, no water, 2" tire penetration 5.0

Haul Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1200.00	0.00	5.00	5.00	1427	0.963

Haul Time: **0.963** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	1200.00	0.00	5.00	5.00	2646	0.613

Return Time: **0.613** minutes
Total Truck Cycle Time: **4.166** minutes

Loading Tool unit Production 697.36 LCY/Hour Adjusted for job efficiency: 578.81 LCY/Hour

Truck Unit Production 266.15 LCY/Hour Adjusted for job efficiency: 220.91 LCY/Hour

Optimal No. of Trucks: 3 Truck(s) Selected Number of Trucks: 3 Truck(s)

Adjusted hourly truck team production: 662.72 LCY/Hour
Adjusted single truck/loader team production: 578.81 LCY/Hour
Adjusted multiple truck/loader team production: **578.81** LCY/Hour

JOB TIME AND COST

Fleet size: 1 Team(s) Total job time: **47.41** Hours

Unit cost: $1.858 /LCY Total job cost: **$50,994**

BULLDOZER WORK

Task description: **Spread topsoil on facilities areas**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #:	06D	State:	Colorado	Abbreviation:	None
Date:	11/20/2023	County:	Mesa	Filename:	M025-06d
User:	ACY				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

Basic Machine:	Cat D9T - 9SU
Horsepower:	405
Blade Type:	Semi-Universal
Attachment:	NA
Shift Basis:	1 per day
Data Source:	(CRG)

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$238.76	NA
Operating Cost/Hour:	$162.29	100
Ripper own. Cost/Hour:	$0.00	NA
Ripper op. Cost/Hour:	$0.00	10
Operator Cost/Hour:	$40.04	NA

Total unit Cost/Hour: $441.09
Total Fleet Cost/Hour: **$882.17**

MATERIAL QUANTITIES

Initial Volume:	27,443
Swell factor:	1.000
Loose volume:	**27,443** LCY

Source of estimated volume: Transported volume
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 50 feet
Unadjusted hourly production: 2,110.5 LCY/hr

Materials consistency description: Loose stockpile 1.2

Average push gradient: 0 %
Average site altitude: 4,490 feet

Material weight: 1,600 lbs/LCY

Weight description: Top Soil

Job Condition Correction Factor		Source
Operator Skill:	0.750	(AVG.)
Material consistency:	1.200	(CAT HB)
Dozing method:	1.000	(GEN.)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.600	(FND-SF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6445

Adjusted unit production: 1,360.22 LCY/hr
Adjusted fleet production: **2720.44** LCY/hr

JOB TIME AND COST

Fleet size: 2 Dozer(s)
Unit cost: $0.324/LCY

Total job time: **10.09** Hours
Total job cost: **$8,899**

REVEGETATION WORK

Task description: **Reveg disturbed areas**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 07A State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-07a
User: ACY

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Potassium nitrate, 13-46-0	100.00	pound	$0.68	$68.00
			Total Fertilizer Materials Cost/Acre	**$68.00**

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	$41.82
Total Fertilizer Application Cost/Acre	**$41.82**

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
Alkali Sacaton	0.30	11.71	$8.54
Canada Wildrye	5.50	14.52	$59.62
Reed Canarygrass - VNS	1.66	19.28	$8.22
Saltbush, Four Wing	4.00	5.51	$50.00
Sumac, Skunkbrush	4.00	1.87	$84.00
Totals Seed Mix	15.46	52.89	**$210.38**

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
Hay, delivered {MEANS 31 25 14.16 1200}	2.00	TON	$429.79	$859.57
Herbicide - Curtail @ 4.0 pt/ac	1.00	ACRE	$35.09	$35.09
Total Mulch Materials Cost/Acre				**$894.66**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$74.46
Power mulcher (MEANS 32 91 13.16 0350)	$147.67
Weed spray, hand, aquatic area, nox. [DMG]	$183.16
Total Mulch Application Cost/Acre	**$405.29**

NURSERY STOCK PLANTING

Common Name	No / Acre	Type and Size	Planting Cost	Fertilizer Pellet Cost	Cost /Acre
Willow, Sandbar	31	Tubling, 10 cu. in. container {(MEANS)	$2.14	$0.00	$66.34
Totals Nursery Stock Cost / Acre					**$66.34**

JOB TIME AND COST

No. of Acres: 42 Cost /Acre: $2,066.53
Estimated Failure Rate: 30% Cost /Acre*: $2,066.53
*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,NURSERY,MULCHING

Initial Job Cost: **$86,794.26**
Reseeding Job Cost: **$26,038.28**
Total Job Cost: **$112,833**
Job Hours: **60.00**

SITE MAINTENANCE

Task description: **Install wetlands exclusion fencing**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 08A State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-08a
User: ACY

Agency or organization name: DRMS

UNIT COSTS

Maintenance Item	Hours per Year	Menu Selection	Quantity	Unit	Unit Cost	Total Cost
Install Wetlands Fencing	80.00	Fencing, barbed wire, - 3 strand	5,000.00	LF	$1.76	$8,800.00

Job Hours: 80.00 **Total Cost: $8,800.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Initial mobilization**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 10A State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-10a
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
Submersible pump - 460v, 8 in.	0.70	$15.28	$82.29	1	$97.57	$82.29	$250.00
Cat D9T - 9SU	66.13	$257.08	$175.95	2	$866.06	$351.90	$250.00
Cat 320D L 9'-6" Stick	23.70	$70.85	$82.29	1	$153.14	$82.29	$250.00
CAT 972H	28.00	$57.78	$158.17	1	$215.95	$158.17	$250.00
Cat 730	25.19	$108.06	$82.29	3	$571.05	$246.87	$250.00
Drill/Broadcast Seeder with Tractor	25.00	$6.73	$82.29	1	$89.02	$82.29	$250.00
Power Mulcher (Bowie LD-90)	6.00	$25.94	$82.29	1	$108.23	$82.29	$250.00
Subtotals:					**$2,101.02**	**$1,086.10**	**$1,750.00**

ROADABLE EQUIPMENT:

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Flatbed Truck, 4x2, 30K GVW	$92.68	1	$92.68	$92.68
Light Duty Pickup, 4x4, 3/4 T.	$116.86	2	$233.72	$233.72

Subtotals:	**$326.40**	**$326.40**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	GRAND JUNCTION	
Total one-way travel distance:	5.00	miles
Average Travel Speed:	35.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$8,612.65	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$93.26	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.14	0.14
Return Time (Hours):	0.14	0.14
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.29	0.29

JOB TIME AND COST

Total job time:	**2.57**	Hours
Total job cost:	**$8,706**	

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Secondary mobilization**

Site: **Soaring Eagle Gravel Pit** Permit Action: 2023 Permit/Job#: M1999025

PROJECT IDENTIFICATION

Task #: 10B State: Colorado Abbreviation: None
Date: 11/20/2023 County: Mesa Filename: M025-10b
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
Drill/Broadcast Seeder with Tractor	25.00	$6.73	$82.29	1	$89.02	$82.29	$250.00
Power Mulcher (Bowie LD-90)	6.00	$25.94	$82.29	1	$108.23	$82.29	$250.00
Subtotals:					**$197.25**	**$164.58**	**$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, 3/4 T.	$116.86	2	$233.72	$233.72
Subtotals:			**$233.72**	**$233.72**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	GRAND JUNCTION	
Total one-way travel distance:	5.00	miles
Average Travel Speed:	35.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$1,497.88	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$66.78	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.14	0.14
Return Time (Hours):	0.14	0.14
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.29	0.29

JOB TIME AND COST

Total job time:	**2.57**	Hours
Total job cost:	**$1,565**	

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

November 20, 2023

Jim Doody
Grand Junction Pipe & Supply Co.
556 Struthers Ave
Grand Junction, CO 81501

RE: Soaring Eagle Gravel Pit, Permit No. M-1999-025, Proposed Surety Increase SI-1

Dear Mr. Doody:

This reclamation cost update was in response to the site inspection conducted on November 7, 2023. It is Division policy to periodically update its costs to ensure that the Financial Warranty adequately, reflects the actual current cost of fulfilling the requirements of the approved reclamation plan.

The bond was last recalculated in 2018. Below is a table summarizing input values that have been updated. This table does not account for price changes resulting from inflation or other RS Means cost changes. Bond calculations are based on a combination of field observations and worst case scenario based on the approved reclamation plan.

Task	**Form Used**	**Description**
	-	Scale is mobile, no demo required
01a	Pumping	Dewater Pit for Grading Pit is approx. 55 ac @ 10ft Prev. 35 ac @ 11ft
02a	Dozer	Excavate Outlet structure - No changes
02b	Dozer	Excavate Inlet Structure – No changes
03a	-	Riprap for structures - No changes
03b	Excavator	Place riprap on Outlet Structure - No changes

03c	Excavator	Place riprap on Inlet Structure - No changes
04a	Dozer	Highwall reduction grade to 3H: 1V = 17,167 BCY 20'H x 3000LF @ Vert cut/fill = 16,667 CCY + 500 CY of pond bottom berm grading Prev. 64,000 CCY with scraper backfilled
04b	Dozer	Create wetland bench. Flatten out areas adjacent to pond approx. 12 ac with 48" of grading. = 77,440 CY Prev. 14,444 CCY with scraper
05a	Ripper	Rip compacted areas 24 ac Prev. 31 ac
06a	Truck	Haul Topsoil Pit slopes and wetland areas 22 ac @ 7" = 20,704 CCY, Avg 2,000 LF haul Prev. 1943 CY (2 ac) w scraper
06b	Dozer	Spread Topsoil Pit slopes and wetland areas 22 ac @ 7" = 25,155 LCY 50 ft push 0%
06c	Truck	Haul Topsoil facilities and road areas 24 ac @ 7" = 22,587 CCY, Avg 1200 LF Prev. 27,929 (29 ac) w scraper
06d	Dozer	Spread Topsoil facilities and road areas 24 ac @ 7" = 27,443 LCY 50 ft push 0%
07a	Reveg	Reveg 42 acres Prev. 32 ac
08a	Site Maintenance	Install Wetlands Exclusion Fencing
10a	Mob	Update equipment used
10b	Mob	Update equipment used

Per policy I wanted to send this out for review prior to issuance. Please look it over and let me know if there are errors or concerns. If no response is received by **Monday, January**

22, 2024 then I'll issue SI-1 as is. SI-1 will result in a total required bond amount of $**583,211**, which is an increase of $340,723 over the $242,488 currently held.

Sincerely,

Amy Yeldell
Environmental Protection Specialist

Ec:
Travis Marshall, Senior EPS, Grand Junction DRMS