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

October 18, 2023

Mr. H. Bruce Humphries
Regulatory Permits Management Inc.
25049 E. Alder Dr.
Aurora, CO 80016
(303) 854-7499
hlhumphries2@comcast.net

Re: Dill Pit, Permit No. M-2009-077, Technical Revision No. 1 (TR-01) Approval, Revise the Approved Seed Mixture

Dear Mr. Humphries:

On October 18, 2023, the Division of Reclamation, Mining and Safety concluded its review and approved the Technical Revision application submitted to the Division on October 10, 2023, addressing the following:

Revise the approved seed mixture.

On October 18, 2023, the Division of Reclamation, Mining and Safety (Division) increased the current Financial Warranty for the Dill Pit to $48,322.00, in accordance with Rule 4.2.1 and C.R.S. 34-32.5-117. This is an increase of $13,065.00 from the currently held Financial Warranty of $35,257.00. 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, due by December 17, 2023. The revision will not be final until the bond is received and approved by the Division.

If you have any questions regarding submittal of the Financial Warranty, please contact our Financial Warranty Specialist, Sara Stevenson-Benn, by telephone at (303) 866-3567 ext. 8148 or by email at sara.stevenson-benn@state.co.us. All Financial Warranty forms are available on our website at: https://drms.colorado.gov/forms/minerals-program-forms.

If you require additional information, or have questions or concerns, please feel free to contact me by phone at (303) 866-3567, ext. 8147, or by email at joel.renfro@state.co.us.

Sincerely,

Joel Renfro

Joel Renfro
Environmental Protection Specialist

Enclosed:
Divisions bond estimate

Cc:
Tracy and Ed Grimes
Amy Eschberger, DRMS

COST SUMMARY WORK

Task description: **Current disturbance estimation**

Site: **Dill Pit** Permit Action: 2023 Calculation Permit/Job#: M2009077

PROJECT IDENTIFICATION

Task #: 000 State: Colorado Abbreviation: None
Date: 7/19/2023 County: Elbert Filename: M077-000
User: JR2

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	Grade pit slopes from 2.5H:1V to 3H:1V	DOZER	1	2.14	$914
001b	Grade W pit slopes from 3H:1V to 4H:1V	DOZER	1	6.42	$2,739
002	Replace 4.5 in topsoil on 14.5 acres	DOZER	1	12.75	$5,441
003	Rip compacted areas - 8.5 acres	RIPPER	1	13.24	$5,936
004	Revegetate 14.5 acres	REVEGE	1	7.25	$16,464
004b	Mulch 4.3 acres (excluding pit floor and W pit wall)	REVEGE	1	2.00	$4,016
005	Mobilization/Demobilization	MOBILIZE	1	6.30	$3,750
	SUBTOTALS:			**50.1**	**$39,260**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$793
Performance bond:	1.05	Total =	$412
Job superintendent:	25.05	Total =	$1,630
Profit:	10.00	Total =	$3,926
		TOTAL O & P =	$6,761
		CONTRACT AMOUNT (direct + O & P) =	$46,021

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	$0	Total =	$0
Engineering work and/or contract/bid preparation:	0.00	Total =	$0
Reclamation management and/or administration:	5.00		$2,301
CONTINGENCY:	0.00	Total =	$0
		TOTAL INDIRECT COST =	$9,062
		TOTAL BOND AMOUNT (direct + indirect) =	**$48,322**

BULLDOZER WORK

Task description: **Grade pit slopes from 2.5H:1V to 3H:1V**

Site: **Dill Pit** Permit Action: 2023 Calculation Permit/Job#: M2009077

PROJECT IDENTIFICATION

Task #: 001 State: Colorado Abbreviation: None
Date: 7/19/2023 County: Elbert Filename: M077-001
User: JR2

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:

		Utilization %
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: $426.60
Total Fleet Cost/Hour: **$426.60**

MATERIAL QUANTITIES

Initial Volume: 1,390
Swell factor: 1.250
Loose volume: **1,738** LCY

Source of estimated volume: 1500 ft L x 20 ft H, cut and fill
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 60 feet
Unadjusted hourly production: 1,246.9 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -5 %
Average site altitude: 5,700 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:	0.900	(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:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6507

Adjusted unit production: 811.36 LCY/hr
Adjusted fleet production: **811.36** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.526/LCY

Total job time: **2.14** Hours
Total job cost: **$914**

BULLDOZER WORK

Task description: **Grade W pit slopes from 3H:1V to 4H:1V**

Site: **Dill Pit** Permit Action: 2023 Calculation Permit/Job#: M2009077

PROJECT IDENTIFICATION

Task #: 001B State: Colorado Abbreviation: None
Date: 8/11/2023 County: Elbert Filename: M077-001b
User: AME

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:

		Utilization %
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: $426.60
Total Fleet Cost/Hour: **$426.60**

MATERIAL QUANTITIES

Initial Volume: 4,167
Swell factor: 1.250
Loose volume: **5,209** LCY

Source of estimated volume: 1500 ft L x 20 ft H, cut and fill
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 60 feet
Unadjusted hourly production: 1,246.9 LCY/hr

Materials consistency description: Compacted fill or embankment 0.9

Average push gradient: -5 %
Average site altitude: 5,700 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:	0.900	(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:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.868	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.6507

Adjusted unit production: 811.36 LCY/hr
Adjusted fleet production: **811.36** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.526/LCY

Total job time: **6.42** Hours
Total job cost: **$2,739**

BULLDOZER WORK

Task description: **Replace 4.5 in topsoil on 14.5 acres**

Site: **Dill Pit** Permit Action: 2023 Calculation Permit/Job#: M2009077

PROJECT IDENTIFICATION

Task #: 002 State: Colorado Abbreviation: None
Date: 9/28/2023 County: Elbert Filename: M077-002
User: JR2

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:

		Utilization %
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: $426.60
Total Fleet Cost/Hour: **$426.60**

MATERIAL QUANTITIES

Initial Volume: 8,773
Swell factor: 1.215
Loose volume: **10,659** LCY

Source of estimated volume: 14.5 ac x 4.5 in depth
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Average push distance: 150 feet
Unadjusted hourly production: 634.3 LCY/hr

Materials consistency description: Consolidated stockpile 1.0

Average push gradient: -5 %
Average site altitude: 5,700 feet

Material weight: 1,600 lbs/LCY

Weight description: Top Soil

Job Condition Correction Factor		Source
Operator Skill:	1.000	(EXCL.)
Material consistency:	1.000	(CAT HB)
Dozing method:	1.100	(50% SL)
Visibility:	1.000	(AVG.)

Job efficiency:	0.830	(1 SHIFT/DAY)
Spoil pile:	0.900	(SSD-FC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 1.3175

Adjusted unit production: 835.69 LCY/hr
Adjusted fleet production: **835.69** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)
Unit cost: $0.510/LCY

Total job time: **12.75** Hours
Total job cost: **$5,441**

BULLDOZER RIPPING WORK

Task description: **Rip compacted areas - 8.5 acres**

Site: **Dill Pit** Permit Action: 2023 Calculation Permit/Job#: M2009077

PROJECT IDENTIFICATION

Task #: 003 State: Colorado Abbreviation: None
Date: 8/7/2023 County: Elbert Filename: M077-003
User: JR2

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: 8.50 acres Rip Depth (ft): 1.50 Volume: 20,570 BCY or CCY

Source of estimated quantity: Pit floor and internal haul roads

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:	200.00	feet/pass
Average Dozer Speed:	88.00	feet/minute
Average Maneuver Time:	0.25	minutes/pass
Production per unit area:	0.773	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.773 Acres/hr

Site Altitude:	5,700	feet
Altitude Adj:	1.00	(CAT HB)
Job Efficiency:	0.83	(1 shift/day)
Net Correction:	0.83	multiplier

Adjusted Hourly Unit Production: 0.64 Acres/hr
Adjusted Hourly Fleet Production: **0.64** Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: **13.25** Hours

Unit cost: $698.391 Per acre Total job cost: **$5,936**

REVEGETATION WORK

Task description: **Revegetate 14.5 acres**

Site: **Dill Pit** Permit Action: 2023 Calculation Permit/Job#: M2009077

PROJECT IDENTIFICATION

Task #: 004 State: Colorado Abbreviation: None
Date: 7/19/2023 County: Elbert Filename: M077-004
User: JR2

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
0-20-20, 4-8-12, 10-10-10	40.00	pound	$0.62	$24.80
			Total Fertilizer Materials Cost/Acre	**$24.80**

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
Chisel plowing {DMG}	$100.40
Weed control spraying (MEANS 31 31 16.13 3100)	$338.80
Total Tilling Cost/Acre	**$439.20**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Blue Grama - Native	2.00	32.64	$27.45
Little Bluestem - Cimarron	2.00	11.94	$24.97
Prairie Clover, Purple - Kaneb	0.25	1.71	$14.13
Sideoats Grama - El Reno	2.00	6.57	$16.75
Sand Bluestem - Woodward	1.00	2.59	$21.17
Prairie Sandreed - Goshen	2.00	12.53	$20.70
Totals Seed Mix	9.25	67.98	**$125.16**

Application

Description	Cost /Acre
Drill Seeding (DRMS Survey Cost)	$232.00
Total Seed Application Cost/Acre	**$232.00**

MULCHING and MISCELLANEOUS

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
			$	$
Total Mulch Materials Cost/Acre				**$0.00**

Application

Description	Cost /Acre
Weed spray, hand, non-aquatic area, nox. [DMG]	$183.16
Total Mulch Application Cost/Acre	**$183.16**

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: 14.5
Estimated Failure Rate: 25%
*Selected Replanting Work Items: SEEDING

Cost /Acre: $1,046.14
Cost /Acre*: $357.16

Initial Job Cost: **$15,169.03**
Reseeding Job Cost: **$1,294.71**
Total Job Cost: **$16,464**
Job Hours: **7.25**

REVEGETATION WORK

Task description: **Mulch 4.3 acres (excluding pit floor and W pit wall)**

Site: **Dill Pit** Permit Action: 2023 Calculation Permit/Job#: M2009077

PROJECT IDENTIFICATION

Task #: 004B State: Colorado Abbreviation: None
Date: 8/11/2023 County: Elbert Filename: M077-004b
User: AME

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
	$
Total Tilling Cost/Acre	**$0.00**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
			$
Totals Seed Mix	0.00	0.00	**$0.00**

Application

Description	Cost /Acre
	$

Total Seed Application Cost/Acre	**$0.00**

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
Total Mulch Materials Cost/Acre				**$859.57**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$74.46
Total Mulch Application Cost/Acre	**$74.46**

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: 4.3
Estimated Failure Rate: 0%
*Selected Replanting Work Items: NONE

Cost /Acre: $934.03
Cost /Acre*: $0.00

Initial Job Cost: **$4,016.33**
Reseeding Job Cost: **$0.00**
Total Job Cost: **$4,016**
Job Hours: **2.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Mobilization/Demobilization**

Site: **Dill Pit** Permit Action: 2023 Calculation Permit/Job#: M2009077

PROJECT IDENTIFICATION

Task #: 005 State: Colorado Abbreviation: None
Date: 7/19/2023 County: Elbert Filename: M077-005
User: JR2

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
Cat D8T - 8SU	53.08	$255.49	$175.95	1	$431.44	$175.95	$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, 4x2, 1/2 T.	$14.82	1	$14.82	$14.82
Subtotals:			**$14.82**	**$14.82**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	COLORADO SPRINGS	
Total one-way travel distance:	70.00	miles
Average Travel Speed:	65.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$3,718.12	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$31.92	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	1.08	1.08
Return Time (Hours):	1.08	1.08
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	3.15	2.15

JOB TIME AND COST

Total job time:	**6.31**	Hours
Total job cost:	**$3,750**	