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

September 26, 2024

Jason Burkey
Oldcastle SW Group, Inc. dba United Companies
2273 River Road
Grand Junction, CO 81502

Re: Debeque Sand and Gravel Resource - File No. M-2011-054
Oldcastle SW Group, Inc. dba United Companies
Surety Increase (SI-2)
Surety Increase due to inflation

Dear Jason Burkey:

On September 26, 2024 the Division of Reclamation, Mining and Safety increased the current Financial Warranty for this permit to $958,942.00, in accordance with Rule 4.2.1 of the Rules and Regulations. This is an increase of $254,697.00.

Surety Increase due to inflation

Please see the September 24, 2024 inspection report for details regarding why this surety increase is required.

On September 26, 2024, the Division ordered amendment of the current Financial Warranty or submittal of a new Financial Warranty reflecting the increase, within 60 days.

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, 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 if the amount of any increased Financial Warranty has not been provided by November 25, 2024.

Bond Held:	$704,245.00
Prior Liability:	$704,245.00
Change in Liability:	$254,697.00

Revised Liability:	$958,942.00
Prior Permit Acreage:	45.04
Change in Permit Acreage:	0.00
Revised Permit Acreage:	45.04
Prior Affected Acreage:	35.70
Change in Affected Acreage:	0.00
Revised Affected Acreage:	35.70

If you have any questions, please contact me by telephone at (970) 210-1272, or by email at Amy.yeldell@state.co.us.

Sincerely,

Amy Yeldell

Amy C. Yeldell
Environmental Protection Specialist

M-GR-04

COST SUMMARY WORK

Task description: **Post 2024 inflationary update**

Site: **Debeque Sand and Gravel Resource**

Permit Action: SI-2

Permit/Job#: M2011054

PROJECT IDENTIFICATION

Task #: ACY
State: Colorado
Abbreviation: None
Date: 9/26/2024
County: Mesa
Filename: M054-ACY
User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Dewater 10 acres of Pond	PUMPING	1	282.46	$15,968
02a	Backfill 10 ac of Pond	SCRAPER1	2	170.45	$598,131
03a	Topsoil 20.5 ac of disturbance	SCRAPER1	2	16.76	$58,828
04a	Reveg 20.5 ac	REVEGE	1	30.00	$64,369
05a	Initial mobilization of reclamation crew and equipment	MOBILIZE	1	3.60	$10,318
05b	Secondary mobilization of reclamation crew and equipment	MOBILIZE	1	3.60	$1,661
			SUBTOTALS:	**506.87**	**$749,275**

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance:	2.02	Total =	$15,135
Performance bond:	1.05	Total =	$7,867
Job superintendent:	120.00	Total =	$9,512
Profit:	10.00	Total =	$74,928
		TOTAL O & P =	$107,443
		CONTRACT AMOUNT (direct + O & P) =	$856,718

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs):	$500	Total =	$500
Engineering work and/or contract/bid preparation:	4.25	Total =	$36,411
Reclamation management and/or administration:	5.00		$42,836
CONTINGENCY:	3.00	Total =	$22,478

TOTAL INDIRECT COST = $209,667

TOTAL BOND AMOUNT (direct + indirect) = $958,942

PUMPING WORK

Task description: **Dewater 10 acres of Pond**

Site: **Debeque Sand and Gravel Resource**   Permit Action: SI-2   Permit/Job#: M2011054

PROJECT IDENTIFICATION

Task #:	01A	State:	Colorado	Abbreviation:	None
Date:	9/26/2024	County:	Mesa	Filename:	M054-01a
User:	ACY				

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

	Description	Quantity
Make and Model:	Submersible pump - 460v, 8 in.	2
Attachment 1:	Suction hose - 6 in. diam., 25 ft.	2
Attachment 2:	Discharge hose - 6 in. D., 25 ft.	3
Labor Unit 1:	Pump operator	1

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

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	$20.02	NA
Operating Cost/Hour:	$8.28	100
Operator Cost/Hour:	$28.23	NA
Total Unit Cost/Hour:	$56.53	

Total Fleet Cost/Hour: $56.53

PUMPING QUANTITIES

Initial Pond Volume:	250.00		Conversion factor:	325850.5800
Final Pond Volume:	**81,462,645.00**	gallons		
Total Pond Inflow Surface Area:	435,600	Sq. ft.	Unit inflow rate in gph/sq. ft.:	0.1758
Total Pond Inflow Volume per Hour:	76,578.48	gallons		

Source of estimated volume: 10 ac pond 25 ft deep

PUMPING TIME

Maximum Pump Capacity:	170,000	gph/pump
Estimated Suction Head:	5	feet
Estimated Discharge Head:	30	feet
Total Head:	35	feet
CPB Pump Capacity:	163,200	gph/pump
Site Altitude:	4,880	feet

Adjusted Pumping Capacity:	326,400	gph
Initial Unadjusted Pumping Time:	249.58	hours
Inflow during Initial Pumping:	19,112,394	gallons
Net Unadjusted Pumping Time:	308.13	Hours
Altitude Adjustment Factor:	1.0000	(3% rule)
Pump Efficiency Factor:	0.9167	(55 min./hr.)
Total Adjusted Pumping Time:	282.47	hours

JOB TIME AND COST

Total job time: **282.47** Hours

Unit cost: $0.000159 /Gallon   Total job cost: **$15,968**

CIRCES Cost Estimating Software

SCRAPER TEAM WORK

Task description: **Backfill 10 ac of Pond**

Site: **Debeque Sand and Gravel Resource** Permit Action: SI-2 Permit/Job#: M2011054

PROJECT IDENTIFICATION

Task #: 02A State: Colorado Abbreviation: None
Date: 9/26/2024 County: Mesa Filename: M054-02a
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	Cat D8T - 8SU
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance –Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	50	50	NA	NA
Ownership cost/hour:	$281.32	$173.32	$173.32	$173.32	NA	NA
Operating cost/hour:	$319.35	$109.71	$54.86	$54.86	NA	NA
%Utilization-ripper:	NA	NA	30	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	$14.53	$0.00	NA	NA
Ripper op. cost/hour:	NA	$0.00	$2.39	$0.00	NA	NA
Operator cost/hour:	$57.52	$40.04	$40.04	$40.04	NA	NA
Unit Subtotals:	$658.19	$323.07	$285.13	$268.21	NA	NA
Number of Units:	4	1	1	1	0	0
Group Subtotals:	Work:	$2,955.83	Support:	$553.34	Maint:	$0.00

Total work team cost/hour: **$3,509.17**

MATERIAL QUANTITIES

Initial volume: 354,093 CCY Swell factor: 1.135
Loose volume: **401,896** LCY

Source of estimated volume: 10 ac backfilled 22 ft deep
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Scraper Bowl (volume) Basis:

Material weight: 2,700 lbs/LCY
Material description: Sand and clay - Loose
Rated Payload: 81,600 pounds
Payload Capacity: 30.22 LCY

Struck Volume: 24.00 LCY
Heaped Volume: 34.00 LCY
Average Volume: 29.00 LCY
Adjusted Capacity: **29.00** LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 4880 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: 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	600.00	0.00	5.00	5.00	1867	0.46

Haul Time: **0.46** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	0.00	5.00	5.00	2795	0.39

Return Time: **0.39** minutes

Total Scraper team cycle time: **2.45** minutes
Adjusted for job conditions: 1,178.94 LCY/Hour
Selected Number of Scrapers: 2 Scraper(s)
Adjusted single scraper team (unit) hourly production: 1,178.94 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: **2,357.88** LCY/Hour

Unadjusted unit production/hour: 1,420.41 LCY/Hour
Optimal Number of Scrapers per push dozer: ____________

JOB TIME AND COST

Fleet size: 2 Team(s) Total job time: **170.45** Hours

Unit cost: $1.488 /LCY Total job cost: **$598,131**

SCRAPER TEAM WORK

Task description: **Topsoil 20.5 ac of disturbance**

Site: **Debeque Sand and Gravel Resource** Permit Action: SI-2 Permit/Job#: M2011054

PROJECT IDENTIFICATION

Task #: 03A State: Colorado Abbreviation: None
Date: 9/26/2024 County: Mesa Filename: M054-03a
User: ACY

Agency or organization name: DRMS

HOURLY EQUIPMENT

COSTShift basis: 1 per day

	Equipment Description
-Scraper:	Cat 637G w/push-pull
-Dozer:	Cat D8T - 8SU
Support Equipment -Load Area:	Cat D8T - 8SU
-Dump Area:	Cat D8T - 8SU
Road Maintenance –Motor Grader:	NA
-Water Truck:	NA

Cost Breakdown:

	Scraper Work Team		Support Equipment		Maintenance Equipment	
	Scraper	Dozer	Load Area	Dump Area	Motor Grader	Water Truck
%Utilization-machine:	100	100	50	50	NA	NA
Ownership cost/hour:	$281.32	$173.32	$173.32	$173.32	NA	NA
Operating cost/hour:	$319.35	$109.71	$54.86	$54.86	NA	NA
%Utilization-ripper:	NA	NA	30	NA	NA	NA
Ripper own. cost/hour:	NA	$0.00	$14.53	$0.00	NA	NA
Ripper op. cost/hour:	NA	$0.00	$2.39	$0.00	NA	NA
Operator cost/hour:	$57.52	$40.04	$40.04	$40.04	NA	NA
Unit Subtotals:	$658.19	$323.07	$285.13	$268.21	NA	NA
Number of Units:	4	1	1	1	0	0
Group Subtotals:	Work:	$2,955.83	Support:	$553.34	Maint:	$0.00

Total work team cost/hour: **$3,509.17**

MATERIAL QUANTITIES

Initial volume: 33,073 CCY Swell factor: 1.215
Loose volume: **40,184** LCY

Source of estimated volume: 12" of topsoil over 20.5 acres
Source of estimated swell factor: Cat Handbook

HOURLY PRODUCTION

Material weight: 1,600 lbs/LCY
Material description: Top Soil
Rated Payload: 81,600 pounds
Payload Capacity: 51.00 LCY

Scraper Bowl (volume) Basis:

Struck Volume: 24.00 LCY
Heaped Volume: 34.00 LCY
Average Volume: 29.00 LCY
Adjusted Capacity: **29.00** LCY

Cycle Time:

Scraper Loading Time: 1.00 Minutes
Maneuver and Spread Time: 0.60 Minutes

Job Condition Correction: Site Altitude: 4880 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: 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	600.00	0.00	5.00	5.00	1867	0.42

Haul Time: **0.42** minutes

Return Route:

Seg #	Haul Distance (Ft)	Grade (%)	Roll. Res (%)	Total Res (%)	Velocity (fpm)	Travel Time (min)
1	600.00	0.00	5.00	5.00	2795	0.39

Return Time: **0.39** minutes

Total Scraper team cycle time: **2.41** minutes
Adjusted for job conditions: 1,198.51 LCY/Hour
Selected Number of Scrapers: 2 Scraper(s)
Adjusted single scraper team (unit) hourly production: 1,198.51 LCY/Hour
Adjusted multiple scraper team (fleet) hourly production: **2,397.01** LCY/Hour

Unadjusted unit production/hour: 1,443.98 LCY/Hour
Optimal Number of Scrapers per push dozer: ____________

JOB TIME AND COST

Fleet size: 2 Team(s) Total job time: **16.76** Hours

Unit cost: $1.464 /LCY Total job cost: **$58,828**

REVEGETATION WORK

Task description: **Reveg 20.5 ac**

Site: **Debeque Sand and Gravel Resource** Permit Action: SI-2 Permit/Job#: M2011054

PROJECT IDENTIFICATION

Task #: 04A State: Colorado Abbreviation: None
Date: 9/26/2024 County: Mesa Filename: M054-04a
User: ACY

Agency or organization name: DRMS

FERTILIZING

Materials

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
8-24-24, 10-15-15, 10-20-20	200.00	pound	$0.62	$124.28
			Total Fertilizer Materials Cost/Acre	**$124.28**

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	$43.12
Total Fertilizer Application Cost/Acre	**$43.12**

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	$117.61
Total Tilling Cost/Acre	**$117.61**

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Alkali Sacaton	0.30	11.71	$8.73
Bottlebrush Squirreltail	0.90	3.97	$22.86
Muttongrass	0.20	4.13	$9.53
Western Wheatgrass - Arriba	3.20	8.08	$28.91
Saltgrass, Inland	0.50	6.93	$24.92
Bluebunch Wheatgrass - Goldar	2.40	7.71	$27.50
Totals Seed Mix	7.50	42.53	**$122.45**

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
Herbicide - 2,4D @ 1.0 pt/ac	2.00	ACRE	$4.13	$8.25
Herbicide - Curtail @ 4.0 pt/ac	2.00	ACRE	$36.14	$72.29
Herbicide - Glyphosate (Journey)@ 1.0 pt/ac	2.00	ACRE	$3.86	$7.73
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	$492.78	$985.56
Total Mulch Materials Cost/Acre				**$1,073.83**

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	$85.37
Power mulcher (MEANS 32 91 13.16 0350)	$157.25
Weed spray, hand, aquatic area, nox. [DMG]	$199.01
Weed spray, truck, non-aquatic area, nox. [DMG]	$83.26
Total Mulch Application Cost/Acre	**$524.90**

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: 20.5 Cost /Acre: $2,242.83
Estimated Failure Rate: 40% Cost /Acre*: $2,242.83
*Selected Replanting Work Items: FERTILIZING,TILLING,SEEDING,MULCHING

Initial Job Cost: **$45,978.02**
Reseeding Job Cost: **$18,391.21**
Total Job Cost: **$64,369**
Job Hours: **30.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Initial mobilization of reclamation crew and equipment**

Site: **Debeque Sand and Gravel Resource**
Permit Action: SI-2
Permit/Job#: M2011054

PROJECT IDENTIFICATION

Task #: 05A
Date: 9/26/2024
User: ACY
State: Colorado
County: Mesa
Abbreviation: None
Filename: M054-05a

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
Submersible pump - 460v, 8 in.	0.70	$9.89	$59.44	1	$69.33	$59.44	$250.00
Cat 637G w/push-pull	59.59	$281.32	$125.64	2	$813.92	$251.28	$500.00
Cat D8T - 8SU	53.08	$187.85	$125.64	3	$940.47	$376.92	$750.00
Drill/Broadcast Seeder with Tractor	25.00	$41.02	$59.44	1	$100.46	$59.44	$250.00
Power Mulcher (Bowie LD-90)	6.00	$27.21	$59.44	1	$86.65	$59.44	$250.00
				Subtotals:	**$2,010.83**	**$806.52**	**$2,000.00**

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	$52.83	1	$52.83	$52.83
		Subtotals:	**$52.83**	**$52.83**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	GRAND JUNCTION, CO	
Total one-way travel distance:	20.00	miles
Average Travel Speed:	50.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$10,275.54	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$42.26	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.40	0.40
Return Time (Hours):	0.40	0.40
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.80	0.80

JOB TIME AND COST

Total job time:	**3.60**	Hours
Total job cost:	**$10,318**	

EQUIPMENT MOBILIZATION/DEMOBILIZATION

Task description: **Secondary mobilization of reclamation crew and equipment**

Site: **Debeque Sand and Gravel Resource** Permit Action: SI-2 Permit/Job#: M2011054

PROJECT IDENTIFICATION

Task #: 05B State: Colorado Abbreviation: None
Date: 9/26/2024 County: Mesa Filename: M054-05b
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:	$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
Drill/Broadcast Seeder with Tractor	25.00	$41.02	$59.44	1	$100.46	$59.44	$250.00
Power Mulcher (Bowie LD-90)	6.00	$27.21	$59.44	1	$86.65	$59.44	$250.00
				Subtotals:	**$187.11**	**$118.88**	**$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	$52.83	1	$52.83	$52.83
		Subtotals:	**$52.83**	**$52.83**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	GRAND JUNCTION, CO	
Total one-way travel distance:	20.00	miles
Average Travel Speed:	50.00	mph
Total Non-Roadable Mob/Demob Cost * '* two round trips with haul rig:	$1,619.01	
Total Roadable Mob/Demob Cost ** ** one round trip, no haul rig:	$42.26	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.40	0.40
Return Time (Hours):	0.40	0.40
Loading Time (Hours):	0.50	NA
Unloading Time (Hours):	0.50	NA
Subtotals:	1.80	0.80

JOB TIME AND COST

Total job time: **3.60** Hours

Total job cost: **$1,661**