



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources

1313 Sherman St. Room 215
Denver, CO 80203

March 6, 2018

Mr. Matt Carnahan
Oldcastle SW Group, Inc. dba Four Corners Materials
P.O. Box 1969
Bayfield, CO 81122-1969

Re: Bayfield Pit No. 1, Permit No. M-1987-038, Financial Warranty Increase, Revision No. SI-1

Dear Mr. Carnahan:

In an effort to ensure the Financial Warranty for the above referenced site adequately reflects the actual current costs of fulfilling the requirements of the approved reclamation plan, the Colorado Division of Reclamation, Mining and Safety (Division) has updated the reclamation cost estimate (copy enclosed). ***Therefore, pursuant to Section 34-32.5-117(4) of the Colorado Land Reclamation Act, adequate Financial Warranty must be submitted to the Division within 60 days of the mailing date of this letter.*** The additional amount needs to be accepted prior to **Friday, May 04, 2018**. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted.

Staff calculations estimate the cost to reclaim the above referenced site to be \$52,982.00. This is an increase of \$4,707.00 over the \$48,750.00 currently held by the Division. This estimate is based on conditions observed during the February 6, 2018 inspection.

Please make arrangements with Barbara Coria at the Division of Reclamation, Mining and Safety Denver Office, phone no. 303.866.3567, ext. 8148 for submittal of the financial warranty. Any questions regarding completion, execution and/or submittal of financial warranty forms should also be directed to Barbara Coria. If you require additional information, have questions or concerns, please contact me at the DRMS Grand Junction Field Office, by phone at 970-243-6368 or by email at lucas.west@state.co.us.

Sincerely,

Lucas West

Environmental Protection Specialist
Division of Reclamation, Mining and Safety
1313 Sherman Street, Room 215
Denver, CO
Phone: (970) 243-6368



Cc: Russ Means, Senior Environmental Protection Specialist

Enclosure: Reclamation Cost Estimate Worksheets

COST SUMMARY WORK

Task description: Cost Summary

Site: Bayfield Pit No. 1

Permit Action: 2018 Update

Permit/Job#: M1987038

PROJECT IDENTIFICATION

Task #: 000

State: Colorado

Abbreviation: None

Date: 3/6/2018

County: La Plata

Filename: M038-000

User: LJW

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
001	dewater pit to reclaim slopes	PUMPING	1	63.33	\$2,673.00
002	Reduce highwalls to 3:1 and general dozing around site	DOZER	1	9.52	\$2,290.00
003	Rip compaction in disturbed area	RIPPER	1	18.70	\$4,627.00
004	Replace Topsoil on Disturbed Areas	DOZER	1	31.19	\$7,503.00
005	Revegetation	REVEGE	1	15.00	\$17,182.00
006	Mobilize Reclamation Equipment	MOBILIZE	1	6.51	\$5,271.00
<u>SUBTOTALS:</u>				144.25	\$39,546

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02
Performance bond: 1.05
Job superintendent: 72.13
Profit: 10.00

Total = \$798.83

Total = \$415.23

Total = \$5,268.73

Total = \$3,954.60

TOTAL O & P = \$10,437.39

CONTRACT AMOUNT (direct + O & P) = \$49,983.39

LEGAL - ENGINEERING - PROJECT MANAGEMENT:

Financial warranty processing (legal/related costs): 500.00

Total = 500.00

Engineering work and/or contract/bid preparation: 0.00

Total = \$0.00

Reclamation management and/or administration: 5.00

\$2,499.17

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$13,436.56

TOTAL BOND AMOUNT (direct + indirect) = \$52,982.56

PUMPING WORK

Task description: Dewater pit to reclaim slopes

Site: Bayfield Pit No. 1

Permit Action: 2018 Update

Permit/Job#: M1987038

PROJECT IDENTIFICATION

Task #: 001

State: Colorado

Abbreviation: None

Date: 3/6/2018

County: La Plata

Filename: M038-001

User: LJW

Agency or organization name: DRMS

HOURLY EQUIPMENT COST

	Description	Quantity
Make and Model:	Centrifugal pump - 40M, 4 in.	1
Attachment 1:	Suction hose - 4 in. diam., 25 ft.	3
Attachment 2:	Discharge hose - 4 in. D., 25 ft.	3
Labor Unit 1:	Pump operator	1
Horsepower:	45	
Shift Basis:	1 per day	
Weight:	0.70	
	(US Tons)	

Cost Breakdown:

		Utilization %
Ownership Cost/Hour:	\$3.95	NA
Operating Cost/Hour:	\$10.27	100
Operator Cost/Hour:	\$27.98	NA
Total Unit Cost/Hour:	\$42.20	
Total Fleet Cost/Hour:	\$42.20	

PUMPING QUANTITIES

Initial Pond Volume:	392,040.00		Conversion factor:	7.4805
Final Pond Volume:	2,932,655.22	gallons		
Total Pond Inflow Surface Area:	2	Sq. ft.	Unit inflow rate in gph/sq. ft.:	0.0000
Total Pond Inflow Volume per Hour:	0.00	gallons		

Source of estimated volume: DRMS estimations

PUMPING TIME

Maximum Pump Capacity:	40,000	gph/pump
Estimated Suction Head:	10	feet
Estimated Discharge Head:	5	feet
Total Head:	15	feet
CPB Pump Capacity:	39,900	gph/pump
Site Altitude:	6,770	feet
Adjusted Pumping Capacity:	39,900	gph
Initial Unadjusted Pumping Time:	73.50	hours
Inflow during Initial Pumping:	0	gallons
Net Unadjusted Pumping Time:	73.50	Hours
Altitude Adjustment Factor:	0.9400	(3% rule)
Pump Efficiency Factor:	0.9167	(55 min./hr.)
Total Adjusted Pumping Time:	63.33	hours

JOB TIME AND COST

Total job time:	63.33	Hours
Unit cost: \$0.000911 /Gallon	Total job cost:	\$2,673

BULLDOZER WORKTask description: Reduce highwalls to 3:1 and general dozing around siteSite: Bayfield Pit No. 1Permit Action: 2018 UpdatePermit/Job#: M1987038**PROJECT IDENTIFICATION**Task #: 002State: ColoradoAbbreviation: NoneDate: 3/6/2018County: La PlataFilename: M038-002User: LJWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$100.59</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$87.23</u>	<u>100</u>
Ripper own.		
Cost/Hour:	<u>\$10.94</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$41.85</u>	<u>NA</u>
Total unit Cost/Hour:	<u>\$240.61</u>	
Total Fleet Cost/Hour:	<u>\$240.61</u>	

MATERIAL QUANTITIESInitial Volume: 7,958Swell factor: 1.250Loose volume: 9,948 LCYSource of estimated volume: Division of Reclamation, Mining & SafetySource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 50 feetUnadjusted hourly production: 2,110.5 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push gradient: -10 %Average site altitude: 6,700 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packed**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:	0.800	(SSD-AC)
Push gradient:	1.225	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4952

Adjusted unit
production: 1,045.12 LCY/hr

Adjusted fleet
production: 1045.12 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.230/LCY

Total job time: 9.52 Hours

Total job cost: \$2,290

BULLDOZER RIPPING WORK

Task description: Rip compaction in disturbed area

Site: Bayfield Pit No. 1

Permit Action: 2018 Update

Permit/Job#: M1987038

PROJECT IDENTIFICATION

Task #: 003

State: Colorado

Abbreviation: None

Date: 3/6/2018

County: La Plata

Filename: M038-003

User: LJW

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:	\$100.59	NA
Operating Cost/Hour:	\$87.23	100
Ripper Ownership Cost/Hour:	\$10.94	NA
Ripper Operating Cost/Hour:	\$6.82	100
Operator Cost/Hour:	\$41.85	NA
Total Unit Cost/Hour:	\$247.43	
Total Fleet Cost/Hour:	\$247.43	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA

Bank Volume: NA

BCY NA

Area: 13.00 acres

Rip Depth (ft): 1.00

Volume: 20,973

BCY or CCY

Source of estimated quantity: DRMS estimation

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	<u>2.00</u>	mph
Average Ripping Width:	<u>7.67</u>	degrees
Average Ripping Length:	<u>200.00</u>	feet
Average Dozer Speed:	<u>88.00</u>	feet
Average Maneuver Time:	<u>0.25</u>	feet
Production per unit area:	<u>0.838</u>	acres/hour

Job Condition Correction Factors

Unadjusted Hourly Unit Production: 0.838 Acres/hr

Site Altitude: 6,700 feet

Altitude Adj: 1.00 (CAT HB)

Job Efficiency: 0.83 (1 shift/day)

Net Correction: 0.83 multiplier

Adjusted Hourly Unit Production: 0.70 Acres/hr

Adjusted Hourly Fleet Production: 0.70 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 18.70 Hours

Unit cost: \$355.923 Per acre Total job cost: \$4,627

BULLDOZER WORKTask description: **Replace Topsoil on Disturbed Areas**Site: **Bayfield Pit No. 1**Permit Action: 2018 UpdatePermit/Job#: M1987038**PROJECT IDENTIFICATION**Task #: 004State: ColoradoAbbreviation: NoneDate: 3/6/2018County: La PlataFilename: M038-004User: LJWAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D9T - 9SUHorsepower: 405Blade Type: Semi-UniversalAttachment: 3-shank ripperShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	<u>\$100.59</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$87.23</u>	<u>100</u>
Ripper own. Cost/Hour:	<u>\$10.94</u>	<u>NA</u>
Ripper op. Cost/Hour:	<u>\$0.00</u>	<u>0</u>
Operator Cost/Hour:	<u>\$41.85</u>	<u>NA</u>

Total unit Cost/Hour: \$240.61Total Fleet Cost/Hour: \$240.61**MATERIAL QUANTITIES**Initial Volume: 13,982Swell factor: 1.250Loose volume: 17,478 LCYSource of estimated volume: Assume 13 Acres to be topsoiled and revegedSource of estimated swell
factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 100 feetUnadjusted hourly
production: 1,243.2 LCY/hrMaterials consistency description: Compacted fill or embankment 0.9Average push
gradient: -5 %Average site altitude: 6,700 feetMaterial weight: 2,550 lbs/LCYWeight description: Earth - Dry packed**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:	0.800	(SSD-AC)
Push gradient:	1.115	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.4508

Adjusted unit
production: 560.43 LCY/hr

Adjusted fleet
production: 560.43 LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.429/LCY

Total job time: 31.19 Hours

Total job cost: \$7,503

REVEGETATION WORKTask description: RevegetationSite: Bayfield Pit No. 1Permit Action: 2018 UpdatePermit/Job#: M1987038**PROJECT IDENTIFICATION**Task #: 005State: ColoradoAbbreviation: NoneDate: 3/6/2018County: La PlataFilename: M038-005User: LJWAgency or organization name: DRMS**FERTILIZING****Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
8-32-16, 16-20-0	200.00	pound	\$0.32	\$64.00
			Total Fertilizer Materials Cost/Acre	\$64.00

Application

Description	Cost /Acre
Tractor towed spreader (MEANS 32 01 90.13 0120)	\$144.62
Total Fertilizer Application Cost/Acre	\$144.62

TILLING

Description	Cost /Acre
Disc harrowing, 6" deep (MEANS 32 91 13.23 6100)	\$106.29
Total Tilling Cost/Acre	\$106.29

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Nespar	1.90	6.15	\$14.73
Arizona Fescue - Redondo	0.90	10.33	\$10.66
Blue Grama - Lovington	0.20	3.26	\$3.25
Crested Wheatgrass - Fairway	1.00	4.59	\$3.34
Streambank Wheatgrass - Sodar	2.30	7.50	\$14.01
Western Wheatgrass - Barton	4.00	10.10	\$30.36
Totals Seed Mix	10.30	41.94	\$76.34

Application

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Description	Cost /Acre
	\$0.00
Total Seed Application Cost/Acre	\$0.00

MULCHING and MISCELLANEOUS**Materials**

Description	Units / Acre	Unit	Cost / Unit	Cost /Acre
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$261.00	\$522.00
Total Mulch Materials Cost/Acre				\$522.00

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$66.02
Power mulcher (MEANS 32 91 13.16 0350)	\$99.32
Total Mulch Application Cost/Acre	\$165.34

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: 13 Cost /Acre: \$1,078.59
 Estimated Failure Rate: 25% Cost /Acre*: \$972.30
 *Selected Replanting Work Items: FERTILIZING,SEEDING,MULCHING

Initial Job Cost: \$14,021.67
 Reseeding Job Cost: \$3,159.98
 Total Job Cost: \$17,182
 Job Hours: 15.00

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Mobilize Reclamation Equipment**Site: **Bayfield Pit No. 1**Permit Action: **2018 Update**Permit/Job#: **M1987038****PROJECT IDENTIFICATION**Task #: **006**State: **Colorado**Abbreviation: **None**Date: **3/6/2018**County: **La Plata**Filename: **M038-006**User: **LJW**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:	\$16.63	\$18.37	\$22.33
Operating Cost/Hour:	\$44.38	\$46.13	\$50.07
Operator Cost/Hour:	\$27.66	\$27.66	\$27.66
Helper Cost/Hour:	\$0.00	\$25.39	\$25.39
Total Unit Cost/Hour:	\$88.67	\$117.55	\$125.45

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 D9T - 9SU	66.13	\$111.53	\$125.45	1	\$236.98	\$125.45	\$250.00
Centrifugal pump - 40M, 4 in.	0.70	\$3.35	\$88.67	1	\$92.02	\$88.67	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$12.22	\$88.67	1	\$100.89	\$88.67	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$7.03	\$88.67	1	\$95.70	\$88.67	\$250.00

Subtotals: **\$525.59** **\$391.46** **\$1,000.00****ROADABLE EQUIPMENT:**

Machine Description	Total Cost/hr/ unit	Fleet Size	Haul Trip Cost/hr/ fleet	Return Trip Cost/hr/ fleet
Light Duty Pickup, 4x4, 3/4 T.	\$12.26	1	\$12.26	\$12.26

Subtotals: **\$12.26** **\$12.26**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region:	DURANGO	
Total one-way travel distance:	22.00	miles
Average Travel Speed:	35.00	mph

Total Non-Roadable Mob/Demob Cost *	\$5,255.22
* two round trips with haul rig:	
Total Roadable Mob/Demob Cost **	\$15.41
** one round trip, no haul rig:	

Transportation Cycle Time:

	Non-Roadable Equipment	Roadable Equipment
Haul Time (Hours):	0.63	0.63
Return Time (Hours):	0.63	0.63
Loading Time (Hours):	1.00	NA
Unloading Time (Hours):	1.00	NA
Subtotals:	3.26	1.26

JOB TIME AND COST

Total job time: 6.51 Hours

Total job cost: \$5,271