

September 5, 2018

Russell Larsen
Northwest Aggregates, Inc.
556 Struthers Ave
Grand Junction, CO 81501



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

1313 Sherman Street, Room 215
Denver, CO 80203

RE: Moon Pit No. 2, Permit No. M-1977-443, Reclamation Costs Update and Notice of Surety Increase (SI-2)

Dear Mr. Dennis:

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).

Division calculations estimate the cost to reclaim the above referenced site to be \$23,704.51 rounded up to \$23,705. This is an increase of \$7,348 over the \$16,357 currently held by the Division. This estimate is based on conditions observed during the July 10, 2018 inspection. ***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 **Monday, November 05, 2018**. Please review the enclosed figures as soon as possible and contact our office if any calculation errors are noted.

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, or have questions or concerns, please feel free to contact me. Amy Yeldell at the Division of Reclamation, Mining and Safety, 1313 Sherman St., Room 215, Denver, CO 80203. Direct contact can be made by phone at 970-254-8511 or via email at amy.yeldell@state.co.us

Sincerely,

Amy Yeldell
Environmental Protection Specialist

Ec: Wally Erickson, Senior EPS, Grand Junction DRMS
Jon Muller, Kilgore Companies
Enc: Financial Warranty Cost Estimate



COST SUMMARY WORK

Task description: Post inspection update 7-10-18

Site: Moon Pit No 2

Permit Action: 2018-07

Permit/Job#: M1977443

PROJECT IDENTIFICATION

Task #: ACY

State: Colorado

Abbreviation: None

Date: 8/30/2018

County: Moffat

Filename: M443-ACY

User: ACY

Agency or organization name: DRMS

TASK LIST (DIRECT COSTS)

Task	Description	Form Used	Fleet Size	Task Hours	Cost
01a	Highwall Reduction	DOZER	1	3.31	\$733.00
02a	Rip pit floor and access roads	RIPPER	1	6.85	\$1,543.00
03a	Topsoil distribution	DOZER	1	6.15	\$1,283.00
04a	Revegetate affected area	REVEGE	1	8.00	\$11,509.00
05a	Initial mobilization of reclamation crew/equipment	MOBILIZE	1	3.33	\$2,809.00
06a	Secondary mobilization	MOBILIZE	1	3.33	\$1,668.00
<u>SUBTOTALS:</u>				30.97	\$19,545

INDIRECT COSTS

OVERHEAD AND PROFIT:

Liability insurance: 2.02
Performance bond: 1.05
Job superintendent: 0.00
Profit: 10.00

Total = \$394.81

Total = \$205.22

Total = \$0.00

Total = \$1,954.50

TOTAL O & P = \$2,554.53

CONTRACT AMOUNT (direct + O & P) = \$22,099.53

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

\$1,104.98

CONTINGENCY: 0.00

Total = \$0.00

TOTAL INDIRECT COST = \$4,159.51

TOTAL BOND AMOUNT (direct + indirect) = \$23,704.51

TOTAL BOND AMOUNT (Rounded) = \$23,705.00

BULLDOZER WORKTask description: **Highwall Reduction**Site: **Moon Pit No 2**Permit Action: **2018-07**Permit/Job#: **M1977443****PROJECT IDENTIFICATION**Task #: **01A**State: **Colorado**Abbreviation: **None**Date: **8/30/2018**County: **Moffat**Filename: **M443-01a**User: **ACY**Agency or organization name: **DRMS****HOURLY EQUIPMENT COST**Basic Machine: **Cat D8T - 8SU**Horsepower: **310**Blade Type: **Semi-Universal**Attachment: **3-shank ripper**Shift Basis: **1 per day**Data Source: **(CRG)****Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$93.62	NA
Operating Cost/Hour:	\$73.35	100
Ripper own. Cost/Hour:	\$8.93	NA
Ripper op. Cost/Hour:	\$3.89	50
Operator Cost/Hour:	\$41.52	NA

Total unit Cost/Hour: **\$221.31**Total Fleet Cost/Hour: **\$221.31****MATERIAL QUANTITIES**Initial Volume: **1,354**Swell factor: **1.250**Loose volume: **1,693 LCY**Source of estimated volume: **650 LF of 15' high wall 1:1 to 3:1 cut & Fill**Source of estimated swell factor: **Cat Handbook****HOURLY PRODUCTION**Average push distance: **50 feet**Unadjusted hourly production: **1,400.0 LCY/hr**Materials consistency description: **Compacted fill or embankment 0.9**Average push gradient: **5 %**Average site altitude: **6,380 feet**Material weight: **2,550 lbs/LCY**Weight description: **Earth - Dry packed****Job Condition Correction Factor**

		<u>Source</u>
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	(FND-RF)
Push gradient:	0.903	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	0.902	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.3651

Adjusted unit production: 511.14 LCY/hr

Adjusted fleet production: **511.14** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.433/LCY

Total job time: **3.31** Hours

Total job cost: **\$733**

BULLDOZER RIPPING WORK

Task description: Rip pit floor and access roads

Site: Moon Pit No 2 Permit Action: 2018-07 Permit/Job#: M1977443

PROJECT IDENTIFICATION

Task #: 02A State: Colorado Abbreviation: None
Date: 8/30/2018 County: Moffat Filename: M443-02a
User: ACY

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:	<u>\$93.62</u>	<u>NA</u>
Operating Cost/Hour:	<u>\$73.35</u>	<u>100</u>
Ripper Ownership Cost/Hour:	<u>\$8.93</u>	<u>NA</u>
Ripper Operating Cost/Hour:	<u>\$7.78</u>	<u>100</u>
Operator Cost/Hour:	<u>\$41.52</u>	<u>NA</u>
Total Unit Cost/Hour:	<u>\$225.20</u>	
Total Fleet Cost/Hour:	<u>\$225.20</u>	

MATERIAL QUANTITIES

Selected estimating method: Area

Alternate Methods:

Seismic: NA Bank Volume: NA BCY NA
Area: 4.00 acres Rip Depth (ft): 2.00 Volume: 12,907 BCY or CCY

Source of estimated quantity: Mine plan map / inspection observations

HOURLY PRODUCTION

Seismic:

Seismic Velocity: NA feet/second

Area:

Average Ripping Depth:	<u>2.56</u>	<u>mph</u>
Average Ripping Width:	<u>7.08</u>	<u>degrees</u>
Average Ripping Length:	<u>100.00</u>	<u>feet</u>
Average Dozer Speed:	<u>88.00</u>	<u>feet</u>
Average Maneuver Time:	<u>0.25</u>	<u>feet</u>
Production per unit area:	<u>0.703</u>	<u>acres/hour</u>

Job Condition Correction Factors

Unadjusted Hourly Unit Production:	<u>0.703</u>	<u>Acres/hr</u>
Site Altitude:	<u>6,380</u>	<u>feet</u>
Altitude Adj:	<u>1.00</u>	<u>(CAT HB)</u>
Job Efficiency:	<u>0.83</u>	<u>(1 shift/day)</u>
Net Correction:	<u>0.83</u>	<u>multiplier</u>

Adjusted Hourly Unit Production: 0.58 Acres/hr
Adjusted Hourly Fleet Production: 0.58 Acres/hr

JOB TIME AND COST

Fleet size: 1 Grader(s) Total job time: 6.85 Hours

Unit cost: \$385.719 Per acre Total job cost: \$1,543

BULLDOZER WORKTask description: Topsoil distributionSite: Moon Pit No 2Permit Action: 2018-07Permit/Job#: M1977443**PROJECT IDENTIFICATION**Task #: 03AState: ColoradoAbbreviation: NoneDate: 8/30/2018County: MoffatFilename: M443-03aUser: ACYAgency or organization name: DRMS**HOURLY EQUIPMENT COST**Basic Machine: Cat D8T - 8SUHorsepower: 310Blade Type: Semi-UniversalAttachment: NAShift Basis: 1 per dayData Source: (CRG)**Cost Breakdown:**

		<u>Utilization %</u>
Ownership Cost/Hour:	\$93.62	NA
Operating Cost/Hour:	\$73.35	100
Ripper own. Cost/Hour:	\$0.00	NA
Ripper op. Cost/Hour:	\$0.00	0
Operator Cost/Hour:	\$41.52	NA

Total unit Cost/Hour: \$208.49Total Fleet Cost/Hour: \$208.49**MATERIAL QUANTITIES**Initial Volume: 5,378Swell factor: 1.000Loose volume: 5,378 LCYSource of estimated volume: 5 ac. at 8" depthSource of estimated swell factor: Cat Handbook**HOURLY PRODUCTION**Average push distance: 75 feetUnadjusted hourly production: 1,017.1 LCY/hrMaterials consistency description: Loose stockpile 1.2Average push gradient: 0 %Average site altitude: 6,380 feetMaterial weight: 1,600 lbs/LCYWeight description: Top Soil**Job Condition Correction Factor**

		<u>Source</u>
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:	0.800	(FND-RF)
Push gradient:	1.000	(CAT HB)
Altitude:	1.000	(CAT HB)
Material Weight:	1.438	(CAT HB)
Blade type:	1.000	(PAT)

Net correction: 0.8593

Adjusted unit production: 873.99 LCY/hr

Adjusted fleet production: **873.99** LCY/hr

JOB TIME AND COST

Fleet size: 1 Dozer(s)

Unit cost: \$0.239/LCY

Total job time: **6.15** Hours

Total job cost: **\$1,283**

REVEGETATION WORKTask description: Revegetate affected areaSite: Moon Pit No 2Permit Action: 2018-07Permit/Job#: M1977443**PROJECT IDENTIFICATION**Task #: 04AState: ColoradoAbbreviation: NoneDate: 8/30/2018County: MoffatFilename: M443-04aUser: ACYAgency 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)	\$106.29
Weed control spraying (MEANS 31 31 16.13 3100)	\$193.60
Total Tilling Cost/Acre	\$299.89

SEEDING

Seed Mix	Rate – PLS LBS / Acre	Seeds per SQ. FT	Cost /Acre
Indian Ricegrass - Nespar	2.00	6.47	\$15.50
Sand Dropseed	0.10	11.94	\$1.11
Crested Wheatgrass - Nordan	4.50	20.66	\$18.45
Needle and Thread	1.50	3.96	\$63.75
Western Wheatgrass - Native	2.00	5.05	\$14.34
Totals Seed Mix	10.10	48.08	\$113.15

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
Herbicide - 2,4D @ 1.0 pt/ac	1.00	ACRE	\$2.81	\$2.81
Herbicide - Transline @ 1.0 pt/ac	1.00	ACRE	\$16.87	\$16.87
Straw, delivered {MEANS 31 25 14.16 1200}	2.00	TON	\$288.00	\$576.00
Total Mulch Materials Cost/Acre				\$595.68

Application

Description	Cost /Acre
Crimping, with tractor {DMG survey data}	\$68.78
Power mulcher (MEANS 32 91 13.16 0350)	\$92.78
Weed spray, truck, non-aquatic area, nox. [DMG]	\$73.22
Total Mulch Application Cost/Acre	\$234.78

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: 6 Cost /Acre: \$1,475.50
 Estimated Failure Rate: 30% Cost /Acre*: \$1,475.50
 *Selected Replanting Work Items: TILLING,SEEDING,MULCHING

Initial Job Cost: **\$8,853.00**
 Reseeding Job Cost: **\$2,655.90**
 Total Job Cost: **\$11,509**
 Job Hours: **8.00**

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: **Initial mobilization of reclamation crew/equipment**Site: **Moon Pit No 2**Permit Action: **2018-07**Permit/Job#: **M1977443****PROJECT IDENTIFICATION**

Task #: **05A** State: **Colorado** Abbreviation: **None**
 Date: **8/30/2018** County: **Moffat** Filename: **M443-05a**
 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:	\$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 D8T - 8SU	47.71	\$93.62	\$117.55	1	\$211.17	\$117.55	\$250.00
Drill/Broadcast Seeder with Tractor	25.00	\$15.54	\$88.67	1	\$104.21	\$88.67	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$8.33	\$88.67	1	\$97.00	\$88.67	\$250.00

Subtotals: **\$412.38** **\$294.89** **\$750.00**

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	\$19.39	1	\$19.39	\$19.39

Subtotals: **\$19.39** **\$19.39**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: CRAIG
 Total one-way travel distance: 15.00 miles
 Average Travel Speed: 45.00 mph

Total Non-Roadable Mob/Demob Cost * \$2,796.27
 * two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$12.93
 ** one round trip, no haul rig:

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: \$2,809

EQUIPMENT MOBILIZATION/DEMOBILIZATIONTask description: Secondary mobilizationSite: Moon Pit No 2Permit Action: 2018-07Permit/Job#: M1977443**PROJECT IDENTIFICATION**Task #: 06AState: ColoradoAbbreviation: NoneDate: 8/30/2018County: MoffatFilename: M443-06aUser: ACYAgency or organization name: DRMS**EQUIPMENT TRANSPORT RIG COST**Shift basis: 1 per dayCost Data Source: CRG DataTruck 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
Drill/Broadcast Seeder with Tractor	25.00	\$15.54	\$88.67	1	\$104.21	\$88.67	\$250.00
Power Mulcher (Bowie LD-90)	6.00	\$8.33	\$88.67	1	\$97.00	\$88.67	\$250.00

Subtotals: **\$201.21** **\$177.34** **\$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	\$19.39	1	\$19.39	\$19.39

Subtotals: **\$19.39** **\$19.39**

EQUIPMENT HAUL DISTANCE and Time

Nearest Major City or Town within project area region: CRAIG
 Total one-way travel distance: 15.00 miles
 Average Travel Speed: 45.00 mph

Total Non-Roadable Mob/Demob Cost * \$1,654.79
 * two round trips with haul rig:
 Total Roadable Mob/Demob Cost ** \$12.93
 ** one round trip, no haul rig:

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: \$1,668