

10/30/19 Maars Memorial Bond Review COC068246

1. 08/01/ 1977 Maars Memorial DRMS application was approved by both BLM and CDRMS
 - Estimates cost of reclamation to be \$1,000.00
 - Accounts for grasses, shrubs, trees, equipment, and labor
 - Rec plan includes leaving the highwall, and grading/reseeding of the quarry floor
 - Mining includes using a front-end loader, haul truck, drilling, and explosives (concurrent with approved Plan of Ops)
 - Total affected area would not exceed 2 acres
2. 09/14/1981 Reclamation Bond was posted –
 - Corporate Surety Bond amount posted at \$11,000.00
 - Bond included 6 combined permits (including Maars Memorial)
 - **Cancelled on 02/24/1988**
3. 03/09/1988 DRMS ILOC and FWLOC -
 - Bond amount shown as \$1,000.00
 - Ref. 2016 bond review notes for details regarding correspondence and bond reviews from 1988-2014
4. 11/17/2016 Reclamation bond last assessed -
 - The DRMS inspection proposed increasing the bond amount to \$3,040.00 (based on reclamation program calculations conducted on 08/12/2016).
 - This coincides approximately with the US Dollar's inflation that has taken place since 1977. The inflation from 1977 - present (\$1,000.00 - \$3,983.36) is about \$540 more than the DRMS adjustment; however, it doesn't appear this difference is significant given the relatively minimal reclamation work to be done.
 - Given the ops haven't changed since it was filed (drilling, blasting, loading, and hauling to Canon) and the approved reclamation will consist of grading (leaving the current highwall), topsoil spreading, and seeding the floor, **BLM determined that the DRMS adjustment to \$3,040.00 was adequate to cover the cost of reclamation.** BLM is a co-obligee on the current bond.
5. 10/30/2019 BLM 3 years bond review –
 - Per regulation 43 CFR 3809.552 (b) – BLM reviews all Plan of Operation financial guarantees to ensure the posted bond is still sufficient to meet all reclamation requirements.
 - BLM conducted a bond review using Sherpa software accounting for the following parameters: reseeding, spreading/recontouring of topsoil and mob of equipment. The bond review determined an increase of \$229 totaling \$3,269 which is 5% > than current bond.
 - Additionally, CPI data inflation from August 2015 to September 2019 is 6.61% (increase of \$200.94) total of \$3,240.82 and is 5% > than the current bond.
 - Source: https://www.bls.gov/data/inflation_calculator.htm
 - *NOTE - The BLM-Royal Gorge Field Office will issue the submittal of a new reclamation bond if a 5% increase from the original reclamation bond (≥ 152.00 increase for Maars Memorial bond) occurs from either a bond review in Sherpa or CPI inflation. This is a standard that was set by the BLM-RGFO that applies to all bonds > \$500,000.*
 - As both the Sherpa bond review and CPI inflation data determined an increase > 5% of the current bond. The current reclamation bond has been determined to be insufficient and an additional amount of \$229.00 will be required to meet all reclamation requirements.

As of 10/30/19, the bond has increased \$229 with a total bond set at \$3,269

Project Title

Project Name **Maars Memorial Bond Re**


Description **Plan of Operations 3 year Bond Review**

Company Name **Colorado Quarries**

Evaluator **BLM**

Date **Thursday, October 31, 2019**

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Project Parameters

Project Location	Colorado
Region	Remaining Counties
Distance to Support	40.0 miles
Distance to Dump Site	41.0 miles
Distance to Hazardous Waste Dump	miles
Special Rate Wage Adjustment	percent
Special Rate Burden Adjustment	percent
Post Closure Monitoring Period	months

Hourly Labor Costs (Wages plus Fringe Benefits)

Supervisors	\$36.61 /hour
Loader Operators	\$31.66 /hour
Scraper Operators	\$28.19 /hour
Bulldozer Operators	\$31.39 /hour
Backhoe Operators	\$26.15 /hour
Grader Operators	\$32.64 /hour
Haul Truck Drivers	\$19.55 /hour
Breaker Operators	\$26.15 /hour
Tractor Operators	\$16.08 /hour
Service Truck Drivers	\$24.01 /hour
Construction Workers	\$22.46 /hour
Mechanics	\$33.15 /hour
Demolition Laborers	\$22.43 /hour
Site Work Laborers	\$20.54 /hour

Supply Costs

Diesel Fuel	\$2.577 /gallon
Gasoline	\$2.262 /gallon
Electric Power	\$0.092 /kWh
Off-site Mainenance Labor	\$30.88 /hour

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Spread and Contour**Spread/Contour Topsoil****Spreader****In-place Density****Swell Factor****Loose Density****Bulldozer Blade Capacity****Bulldozer Availability****Bulldozer Blade Efficiency****Bulldozer Traction Efficiency****Dozing Distance****Volume Spread****Bulldozer Speed - Dozing****Bulldozer Speed - Transport****Bulldozer Speed - Return****Total Cycle Time****Job Cost****Bulldozer # 1****168 pounds/cubic yard****63 percent****103 pounds/cubic yard****4.15 cubic yard****85.1 percent****95.0 percent****70.0 percent****150 feet****1,800 cubic yards****2.10 miles per hour****3.70 miles per hour****4.50 miles per hour****1.70 minutes****\$2,108****Evaluator: BLM**
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Seed**Indian Ricegrass**

Seed Variety

Application Method

Area

Application Rate

Haul Distance

Job Cost

Indian Ricegrass

Aerial

0.25 acres

7.00 pounds/acre

40.00 miles

\$27

Sand Dropseed

Seed Variety

Application Method

Area

Application Rate

Haul Distance

Job Cost

Sand Dropseed

Aerial

0.25 acres

1.00 pounds/acre

40.00 miles

\$4

Western Wheatgrass

Seed Variety

Application Method

Area

Application Rate

Haul Distance

Job Cost

Western Wheatgrass

Aerial

0.25 acres

10.00 pounds/acre

40.00 miles

\$9

Plant**Rocky Mountain Juniper**

Plant Variety

Surface Area

Application Rate

Tree Shelters

Tree Mats

Job Cost

Rocky Mountain Juniper

0.25 acres

1,200 plants per acre

None Required

None Required

\$79

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Equipment Requirements

Bulldozer

4.15 horsepower

Helicopter Fuel Truck

15,000 pound gvw

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Crew Requirements

Project Foremen

4.2 hours

Bulldozer Operators

23.4 hours

Laborers

3.2 hours

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Equipment Mobilization Costs

Bulldozer

\$100

Total Mobilization Cost

\$100

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Project Job Costs

Spread/Contour Topsoil	\$2,108
Indian Ricegrass	\$27
Sand Dropseed	\$4
Western Wheatgrass	\$9
Rocky Mountain Juniper	\$79

Total	\$2,226
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Administrative and Overhead Charges

Project Operation and Maintenance Costs		\$2,325
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Project Contingency	7.00 percent	\$163
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Contractor's Profit	10.00 percent	\$233
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Liability Insurance	1.50 percent	\$15
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Bond Premium	0.00 percent	\$0
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Engineering and Design	6.00 percent	\$140
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Agency Indirect Costs	14.00 percent	\$326
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Agency Contract Management	21.00 percent	\$68
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Total Project Overhead Cost		\$944
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Bond Cost Estimate

Earth Moving	\$2,108
Site Work	\$0
Planting and Seeding	\$118
Closures	\$0
Demolition	\$0
Disposal	\$0
Monitoring	\$0
ISL Remediation	\$0
Mobilization	\$100
Administration	\$944
Required Bond Value	\$3,269

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