



May 2, 2018

**Via U.S. Mail and e-mail**

Mr. Tim Cazier  
Colorado Division of Reclamation, Mining, and Safety  
1313 Sherman Street, Room 215  
Denver, CO 80203

**RE: YODER PIT, PERMIT NO. M-1980-189  
EL PASO COUNTY, COLORADO  
TECHNICAL REVISION (TR-02)  
CLARIFICATION IN RESPONSE TO ADEQUACY REVIEW**

Dear Mr. Cazier,

Martin Marietta filed a request for a Technical Revision (TR-02) to modify the reclamation plan for Yoder Pit in El Paso County, Colorado, Colorado Department of Reclamation, Mining, and Safety, (DRMS) Mine ID# M-1980-189. On May 2, 2018, DRMS issues in a letter requesting clarification on two issues, as follows:

1. Rationale for removal of the riprap rundown on the north side of the pit; and
2. Clarification of the seeding method and discussion of the seed rate (per square foot).

**Rationale for Removal of the Riprap Rundown on the North Side of the Pit**

The topography on the north side of the Yoder mine pit generally drains to the southwest, away from the pit slope. Therefore the water that drains down the slope is primarily that which falls on the slope. The soil making up the site is Bijou Sandy Loam, which the Natural Resources Conservation Service describes as a somewhat excessively drained soil with a slight erosion hazard and a “K” erosion factor (susceptibility to sheet and rill erosion by water) of 0.2, which is at the low end of low to moderate susceptibility. The pit wall has an approximate 4.5 to 1 horizontal to vertical slope in the location where the riprap rundown is proposed in the current reclamation plan. Based on the slope angle and low to moderate susceptibility of the soil to sheet and rill erosion by water, the riprap rundown is judged to be unnecessary once vegetation is established on the slope. Prior to the establishment of vegetation in the area of the riprap rundown, the slope will be monitored for erosion. If significant erosion is occurring on the slope, temporary erosion control measures, such as the installation of straw wattle or erosion control blanketing will be installed.

### **Clarification of Seeding Method and Discussion of Seed Rate**

Seeding of the site will be performed using a seed drill to plant seeds. The seed application rate of 6.0 pounds per acre is unchanged from that cited in the currently approved reclamation plan. The proposed changes to the seed mix from that currently approved are intended to incorporate species better suited to the site and remove species not considered suitable. The Yoder Pit proposed and approved reclamation seed mixes are shown in the following table.

#### **Yoder Pit Proposed and Approved Reclamation Seed Mixes**

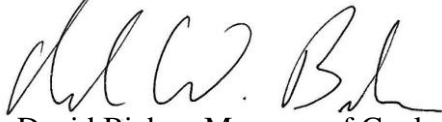
<b>Species</b>	<b>Proposed Seed Mix PLS<sup>(1)</sup> lbs./acre</b>	<b>Approved Seed Mix PLS<sup>(1)</sup> lbs./acre</b>
'Kaw' Big bluestem ( <i>Andropogon gerardii</i> )	0.47	0.00
Little Bluestem ( <i>Schizachyrium scoparium</i> )	0.00	0.54
'Cheyenne' Indiangrass ( <i>Sorghastrum nutans</i> )	0.44	0.41
'Blackwell' Switchgrass ( <i>Panicum virgatum</i> )	0.17	0.96
'Vaughn' Sideoats grama ( <i>Bouteloua curtipendula</i> )	0.39	0.96
'Arriba' Western wheatgrass ( <i>Pascopyrum smithii</i> )	0.70	0.68
Weeping Lovegrass ( <i>Eragrostis curvula</i> )	0.00	0.28
Sand Dropseed ( <i>Sporobolus cryptandrus</i> )	0.00	0.13
'Hachita' Blue grama ( <i>Bouteloua gracilis</i> )	0.13	0.13
'Critana' Thickspike wheatgrass ( <i>Elymus lanceolatus</i> ssp. <i>Lanceolatus</i> )	0.44	0.41
'Goshen' Prairie sandreed ( <i>Calamovilfa longifolia</i> )	0.30	0.29
'Lodorm' Green needlegrass ( <i>Nassella viridula</i> )	0.44	0.44
'Pryor' Slender wheatgrass ( <i>Elymus trachycaulus</i> ssp. <i>Trachycaulus</i> )	0.26	0.52
'Sodar' Streambank wheatgrass ( <i>Elymus lanceolatus</i> ssp. <i>Psammophilus</i> )	0.26	0.24
Regreen ( <i>Triticum aestivum</i> x <i>Elytrigia elongate</i> )	2.00	0.005
<b>Totals:</b>	<b>6.00</b>	<b>6.00</b>

(1) PLS – Pure Live Seed

If you have questions about this response, please contact me at (720) 245-6423 or e-mail at david.bieber@martinmarietta.com.

Sincerely,

**Martin Marietta Materials Inc.**

A handwritten signature in black ink, appearing to read "D. W. Bieber", written in a cursive style.

David Bieber, Manager of Geology/Survey, Rocky Mountain Division



STATE OF  
COLORADO

Cazier - DNR, Tim <[tim.cazier@state.co.us](mailto:tim.cazier@state.co.us)>

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## RE: M-1980-189 Preliminary Adequacy Review Letter

1 message

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**David Bieber** <[David.Bieber@martinmarietta.com](mailto:David.Bieber@martinmarietta.com)>  
To: "Cazier - DNR, Tim" <[tim.cazier@state.co.us](mailto:tim.cazier@state.co.us)>

Wed, May 2, 2018 at 2:38 PM

Good afternoon, Tim.

The additional information requested for the Yoder Pit TR02 adequacy review is appended. We will also send the information as a hardcopy via U.S. Mail.

Dave

**David W. Bieber, PG**

Manager of Geology/Survey | Rocky Mountain Division

**Martin Marietta**

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**From:** Cazier - DNR, Tim [mailto:[tim.cazier@state.co.us](mailto:tim.cazier@state.co.us)]

**Sent:** Wednesday, May 02, 2018 9:47 AM

**To:** David Bieber <[David.Bieber@martinmarietta.com](mailto:David.Bieber@martinmarietta.com)>

**Subject:** M-1980-189 Preliminary Adequacy Review Letter

**EXTERNAL MAIL**

Dave,

A hard copy of the attached file will go out with today's mail. Please be aware the decision date is May 7th, so if you can't get a response back to me by Friday (5/5) please request an extension.

Let me know if you have any questions.

Tim Cazier, P.E.

Environmental Protection Specialist

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**M1980189 - Yoder Pit TR02 - Additional Information.pdf**

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