


**COLORADO**Division of Reclamation,  
Mining and Safety

Department of Natural Resources

**MINERALS PROGRAM INSPECTION REPORT****PHONE: (303) 866-3567**

The Division of Reclamation, Mining and Safety has conducted an inspection of the mining operation noted below. This report documents observations concerning compliance with the terms of the permit and applicable rules and regulations of the Mined Land Reclamation Board.

<b>MINE NAME:</b> Iverson Mine	<b>MINE/PROSPECTING ID#:</b> M-2011-001	<b>MINERAL:</b> Borrow material	<b>COUNTY:</b> Weld
<b>INSPECTION TYPE:</b> Monitoring	<b>INSPECTOR(S):</b> Peter S. Hays	<b>INSP. DATE:</b> August 10, 2018	<b>INSP. TIME:</b> 09:30
<b>OPERATOR:</b> Martin Marietta Materials, Inc.	<b>OPERATOR REPRESENTATIVE:</b> Julie Mikulas	<b>TYPE OF OPERATION:</b> 112c - Construction Regular Operation	

<b>REASON FOR INSPECTION:</b> Priority	<b>BOND CALCULATION TYPE:</b> Partial Bond	<b>BOND AMOUNT:</b> \$275,300.00
<b>DATE OF COMPLAINT:</b> NA	<b>POST INSP. CONTACTS:</b> None	<b>JOINT INSP. AGENCY:</b> None
<b>WEATHER:</b> Clear	<b>INSPECTOR'S SIGNATURE:</b> 	<b>SIGNATURE DATE:</b> September 17, 2018

**The following inspection topics were identified as having Problems or Possible Violations. OPERATORS SHOULD READ THE FOLLOWING PAGES CAREFULLY IN ORDER TO ASSURE COMPLIANCE WITH THE TERMS OF THE PERMIT AND APPLICABLE RULES AND REGULATIONS. If a Possible Violation is indicated, you will be notified under separate cover as to when the Mined Land Reclamation Board will consider possible enforcement action.**

**INSPECTION TOPIC:** Backfilling & Grading

**PROBLEM:** Survey stakes indicating cuts from the existing grade were observed during the previous inspection. The landowner was concerned the overall site grade has been reduced to provide fill material for the breaches and diversion structures repairs at the site. The Operator stated the grading work is required to comply with the Letter of Map Revision (LOMR) required by the Federal Emergency Management Agency (FEMA). The Operator is required to grade the site to the pre-mining grade or lower for the LOMR.

**CORRECTIVE ACTIONS:** The Operator must submit proof of the approved LOMR to document the requirement to regrade the site when available.

**CORRECTIVE ACTION DUE DATE:** 4/30/19

**INSPECTION TOPIC:** Backfilling & Grading

**PROBLEM:** Areas of settling near the inlet and outlet structures were marked by Mr. Iverson and observed during the inspection. The settled area need to be backfilled to stabilize the areas.

**CORRECTIVE ACTIONS:** The Operator must submit proof of backfilling the areas by the corrective action date.

**CORRECTIVE ACTION DUE DATE:** 10/17/18

**INSPECTION TOPIC:** Revegetation

**PROBLEM:** Tamarisk (salt cedar) trees are present within or have volunteered into the permit area and are becoming established. This is a problem for failure to employ weed control methods for a state listed noxious weed species within the permitted area, and to reduce the spread of weeds to nearby areas as required by Rule 3.1.10(6).

**CORRECTIVE ACTIONS:** The Operator shall implement the existing weed control plan and submit proof of the Tamarisk treatment by the corrective action date.

**CORRECTIVE ACTION DUE DATE:** 10/17/18

## **OBSERVATIONS**

The Iverson Mine was inspected by Peter Hays and Tim Cazier with the Division of Reclamation, Mining and Safety (Division/DRMS) to investigate a complaint submitted by Mr. Tim Iverson, the landowner. The citizen complaint (CT-02) from Mr. Iverson was received by the Division on June 25, 2018. A copy of the complaint was sent to the Operator by the Division on June 27, 2018.

The complaint inspection began by meeting Mrs. Julie Mikulas with Martin Marietta Materials, Inc. (MMM) and Mr. Jeff Butson with Tetra Tech. The site was observed and Mr. Iverson's concerns were discussed on-site. The Division met with Mr. Iverson and Mr. John Allis, Jr., P.E. with TZA following the meeting with MMM and Tetra Tech. The complaint, release request response and items discussed during the inspection are listed below:

On June 18, 2018, the Operator submitted a final reclamation release request for the site. In the request letter the Operator stated Mr. Iverson tilled back up approximately half of the site with a disc or a harrow without discussing it with MMM. The tilling turned up larger rocks from below the surface, mixed the overburden and topsoil layers and limited the viability of the seed according to the Operator. On June 29, 2018, Mr. Iverson submitted a response to the release request stating the disc harrow reach is 4 to 6 inches, which is not deep enough to mix or reach the overburden, MMM removed and never replaced the topsoil at the site and large rocks and debris from the three (3) prior reclamation attempts are making agricultural activities unsafe for equipment and the equipment operator. MMM withdrew the final release request on July 23, 2018.

**TZA Report:**

Mr. Iverson hired TZA Water Engineers (TZA) to evaluate the reclamation plan at the Iverson Mine. The evaluation addressed Mr. Iverson's concerns the reclamation is not constructed properly and not adequate to survive future floods. The TZA report recommended the following improvements be made to stabilize the site and prevent the breach of the riverside berm during future flooding events.

1. The low area in the riverside berm located at the northwest corner of the lake should be uniformly graded to elevation 4686.0 feet which is approximately equal to the pre-mining elevation and is above the 2-year flood elevation of 4685.3 feet.
2. The riverside berm should be protected with riprap on both the riverbank and pitside for the critical section of the berm extending from the inlet spillway approximately 3,200 feet around the river bend at the northwest corner of the lake. The riprap erosion protection should conform to the typical sections and requirements in the UDFCD Guidelines.

3. The inlet and outlet spillways should be increased in width to 100 feet as required by the UDFCD Guidelines. Concrete cut off walls for the spillway should be founded on sheet pile designed in accordance with the UDFCD Drainage Criteria Manual. Riprap erosion protection should meet the requirements of the UDFCD Guidelines and have a granular filter designed in accordance with the UDFCD Drainage Criteria Manual.

The Division will require MMM to submit a formal response to the TZA report. Mr. Butson stated the response report would be submitted to the Division in a few weeks. A copy of the Tetra Tech report will be forwarded to Mr. Iverson and TZA when available. The Division will review the Tetra Tech response report and issue a decision in the future.

Mr. Iverson stated the east end of the west inlet spillway is settling based on survey data. The Division requests Mr. Iverson submits the survey data indicating the settling for review.

TZA requested the site be backfilled to the pre-mining elevation of 4686 feet. TZA stated pre-mining topographic data was available for the site. The Division requests TZA submit the topographic data for Division review.

#### Topsoil depth:

On June 19, 2018, MMM submitted topographic survey maps of the site for the subgrade and topsoil elevations. The surveys indicated the required six (6) inches of topsoil was replaced at the site. The surveys were submitted by MMM in response to a problem cited by the Division as part of the previous complaint investigation on March 17, 2016. The Operator has complied with the permit requirement to replace at least six (6) inches of topsoil on-site during reclamation.

#### Large Rocks and debris:

Mr. Iverson marked the locations of large rocks and concrete chunks with orange cones. MMM requested Mr. Iverson leave the orange cones in place so a drone survey of the site could be completed to locate the rocks and concrete to allow MMM to return in the future to remove the debris.

#### Settled Areas near spillways:

Mr. Iverson marked areas of settling on his property with spray paint near the inlet and outlet structures. The Division agrees the settled area needs to be backfilled to stabilize the areas. MMM agreed to backfill the settled areas around the inlet and outlet spillways. As cited as a problem above, the Division will require MMM to submit proof of backfilling the areas by the corrective action date.

#### Agricultural use:

The approved post-mining land use for the Iverson Mine is wildlife habitat, not agriculture. Therefore, the Division will not require MMM to reclaim the site for agricultural use. The Division suggests Mr. Iverson allow MMM to complete reclamation at the site and not till the site.

#### Noxious Weeds:

Tamarisk, as Colorado Weed Management Association List B noxious weed was observed along the lake shoreline. As cited as a problem above, the Operator must implement the approved weed control plan for the site and submit proof of Tamarisk treatment by the corrective action date.

**Elevation:**

Mr. Iverson marked several areas with spray paint to indicate areas of improper elevation. As cited as a problem during the March 17, 2016 inspection, survey stakes indicating cuts from the existing grade were observed during the inspection. The landowner was concerned the overall site grade has been reduced to provide fill material for the breaches and diversion structures repairs at the site. The Operator stated the grading work is required to comply with the Letter of Map Revision (LOMR) required by the Federal Emergency Management Agency (FEMA). The Operator is required to grade the site to the pre-mining grade or lower for the LOMR. The Operator must submit proof of the approved LOMR to document the requirement to regrade the site when available. This problem is currently unresolved with a current resolution due date of April 30, 2019.

Photographs taken during the inspection are attached.

**Inspection Contact Address**

Mrs. Julie Mikulas  
Martin Marietta Materials, Inc.  
1800 N. Taft Hill Road  
Fort Collins, CO 80521

Ec: Michael Cunningham, DRMS



## PHOTOGRAPHS



View of inlet structure



View of inlet structure





View of settling at the north end of the west inlet cutoff wall



View of settling and survey mark at the north end of the east inlet cutoff wall





View of untilled area on left and tilled area on right



View of large rocks and concrete in the southeast corner of the site





Tamarisk located on the west shoreline of the lake



View of outlet spillway from road looking at the lake





View of the outlet spillway looking toward the river



View of typical settling near the outlet spillway





View of concrete in the eastern portion of the site

### GENERAL INSPECTION TOPICS

The following list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each

(AR) RECORDS----- <u>Y</u>	(FN) FINANCIAL WARRANTY----- <u>Y</u>	(RD) ROADS----- <u>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>N</u>	<b>(BG) BACKFILL &amp; GRADING----- <u>PB</u></b>	(EX) EXPLOSIVES----- <u>N</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>N</u>	(TS) TOPSOIL----- <u>N</u>
(MP) GENL MINE PLAN COMPLIANCE- <u>Y</u>	(FW) FISH & WILDLIFE----- <u>N</u>	<b>(RV) REVEGETATION---- <u>PB</u></b>
(SM) SIGNS AND MARKERS----- <u>N</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>N</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	

Y = Inspected and found in compliance / N = Not inspected / NA = Not applicable to this operation / PB = Problem cited / PV = Possible violation cited