




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.

MINE NAME: Cottonwood Pit	MINE/PROSPECTING ID#: M-1988-042	MINERAL: Sand and gravel	COUNTY: Weld
INSPECTION TYPE: Monitoring	INSPECTOR(S): Peter S. Hays	INSP. DATE: August 29, 2016	INSP. TIME: 10:00
OPERATOR: Martin Marietta Materials, Inc.	OPERATOR REPRESENTATIVE:	TYPE OF OPERATION: 112c - Construction Regular Operation	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: IT.Bondcalculationtype.CD.Desc	BOND AMOUNT: \$421,700.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: October 12, 2016	

GENERAL INSPECTION TOPICS

This list identifies the environmental and permit parameters inspected and gives a categorical evaluation of each. No problems or possible violations were noted during the inspection. The mine operation was found to be in full compliance with Mineral Rules and Regulations of the Colorado Mined Land Reclamation Board for the Extraction of Construction Materials and/or for Hard Rock, Metal and Designated Mining Operations. Any person engaged in any mining operation shall notify the office of any failure or imminent failure, as soon as reasonably practicable after such person has knowledge of such condition or of any impoundment, embankment, or slope that poses a reasonable potential for danger to any persons or property or to the environment; or any environmental protection facility designed to contain or control chemicals or waste which are acid or toxic-forming, as identified in the permit.

(AR) RECORDS----- <u>Y</u>	(FN) FINANCIAL WARRANTY----- <u>Y</u>	(RD) ROADS----- <u>N</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(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>	(RV) REVEGETATION---- <u>N</u>
(SM) SIGNS AND MARKERS----- <u>Y</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(CI) COMPLETE INSP---- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	(ST) STIPULATIONS----- <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

OBSERVATIONS

The Duckworth Pit was inspected by Peter Hays with the Division of Reclamation, Mining and Safety (Division/DRMS) as part of the Division's monitoring inspection program. Mrs. Julie Mikulas with Martin Marietta Materials, Inc. was present during the inspection. The site was previously inspected by the Division on March 20, 2012.

The mine sign and boundary markers were observed as required by Rule 3.1.12.

The Division currently holds a reclamation bond in the amount of \$1,603,000.00, which includes the cost to install a slurry wall at the site. The warranty is adequate to complete reclamation at the site based on the observations from this inspection.

Mining extraction is complete at the site. The site is in final reclamation. The approved post mining land use for the site is recreation. The approved Reclamation Plan states the site will be reclaimed to two (2) open water ponds with 3H:1V slopes. During the inspection, the Operator stated the ponds were sealed with clay liners, which differs from the approved Reclamation Plan. The Division will require the Operator to submit an amendment application to change the post mining land use from recreation to developed water storage. The Operator stated the amendment application was being prepared by their consultant. The amendment is expected to be submitted to the Division in the fall on 2016. The SEO required leak testing for the reservoirs was underway according to the Operator.

The site vegetation consisted of kochia and annual weeds. The Operator stated the upland areas and the reservoir slopes above the anticipated water line would be topsoiled and seeded with the approved mixture in the fall of 2016. The approved Reclamation Plan requires 3 to 6 inches of topsoil be replaced at the site. The reservoir slopes were stable and little to no erosion features were observed. The pit floors will be regraded to clean up the floors to create a more uniform reservoir bottom. A survey of the pit slopes was completed by the Operator. The Division requests a copy of the survey results be submitted with the future amendment application to verify the final reservoir grading.

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

PHOTOGRAPHS



Duckworth Pit mine sign



View of Phase 2 reservoir looking north from SW corner



View of Phase 2 reservoir looking NE from SW corner



View of Phase 2 reservoir looking east from SW corner



View of Phase 2 reservoir looking south from NW corner



View of Phase 2 reservoir looking SE from NW corner



View of Phase 2 reservoir looking east from NW corner



View of Phase 1 reservoir looking north from SE corner



View of Phase 1 reservoir looking NW from SE corner



View of Phase 1 reservoir looking west from SE corner