




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: Boettcher Sand Stone Quarry	MINE/PROSPECTING ID#: M-1977-345	MINERAL: Sandstone (silica, stone, quartzite)	COUNTY: Larimer
INSPECTION TYPE: Monitoring	INSPECTOR(S): Amy Eschberger, Eric Scott	INSP. DATE: August 16, 2017	INSP. TIME: 15:30
OPERATOR: Holcim (US) Inc.	OPERATOR REPRESENTATIVE: Mike Toelle	TYPE OF OPERATION: 110c - Construction Limited Impact	
REASON FOR INSPECTION: Normal I&E Program		BOND CALCULATION TYPE: Partial Bond	BOND AMOUNT: \$10,100.00
DATE OF COMPLAINT: NA		POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 		SIGNATURE DATE: November 15, 2017

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>Y</u>
(HB) HYDROLOGIC BALANCE----- <u>Y</u>	(BG) BACKFILL & GRADING----- <u>Y</u>	(EX) EXPLOSIVES----- <u>NA</u>
(PW) PROCESSING WASTE/TAILING---- <u>N</u>	(SF) PROCESSING FACILITIES----- <u>N</u>	(TS) TOPSOIL----- <u>Y</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>N</u>	(SP) STORM WATER MGT PLAN---- <u>Y</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>Y</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>NA</u>	(OD) OFF-SITE DAMAGE----- <u>Y</u>	

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

OBSERVATIONS

This inspection of the Boettcher Sand Stone Quarry (File No. M-1977-345) was conducted by Amy Eschberger and Eric Scott of the Division of Reclamation, Mining and Safety (Division) at the request of the operator. The operator, Holcim (US) Inc. was represented by Mike Toelle during the inspection. The site is located approximately 5 miles north of LaPorte, CO in Larimer County. The site can be accessed via a private right-of-way that connects to the operator's Boettcher Limestone Quarry (File No. M-1977-348) approximately ½ mile to the east. The approved post-mining land use is rangeland.

This is a 110c operation permitted for 9.9 acres to mine sandstone for use in the operator's cement plant located in LaPorte, CO (now closed). The site is situated on the east-facing slope of a ridge. The permit area includes the quarry area and the right-of-way access road. Mining was completed at the site many years ago, and the site has been in final reclamation since 2015/2016. After inspecting the site on April 11, 2014, the Division cited a problem for failure to reclaim the site within 5 years of completion of mining as required by C.R.S. 34-32.5-116(4)(q)(I). The operator was required to submit a schedule for reclamation completion by May 30, 2014, then complete final reclamation with reasonable diligence. The Division approved Technical Revision No. 1 (TR-1) on November 24, 2015 which revised the reclamation slope configuration and seed mixture for the site. TR-1 allowed the operator to use all available material on site to backfill quarry highwalls to a 2H:1V final slope configuration. Once sloped, the disturbed area would be retopsoiled and seeded with a rangeland seed mixture recommended by Larimer County. According to annual reports submitted by the operator, reclamation was completed at the site during the first quarter of 2016. The earlier disturbed southern portion of the site was reclaimed many years previously (late 1990's or early 2000's).

During the last inspection of the site on May 23, 2016, the Division observed all final grading to be complete, including blending of the upper unconsolidated lip at the top of the slope as requested by the Division in January of 2016. The Division also observed the site had been recently seeded.

The purpose of this inspection was to evaluate reclamation success. The Division observed that all required reclamation earthwork was completed and the site appeared to be stable. No erosion problems were observed. The final reclamation configuration has resulted in a gradual slope up from the pit floor of approximately 2H:1V with a 20-30 foot bench at the top. This bench forms the base of the existing stable 1H:1V slope, which is approximately 40-50 feet wide and 250 feet in length. The Division observed the earlier reclaimed southern portion of the site to be well vegetated with native grasses, forbs, shrubs, and a few pine trees. In the northern portion of the site, the Division observed some native grasses present mainly along the base of the slope and on the pit floor. However, the Division observed very few grasses and a significant number of weeds present along the slopes in this portion of the permit area. The Division observed multiple weed species present, including state-listed noxious weed species such as Scotch thistle, Common mullein, and Leafy spurge.

Pursuant to Rule 3.1.10(6), methods of weed control shall be employed for all prohibited noxious weed species, and whenever invasion of a reclaimed area by other weed species seriously threatens the continued development of the desired vegetation. Weed control methods shall also be used whenever the inhabitation of the reclaimed area by weeds threaten further spread of serious weed pests to nearby areas. Therefore, the Division recommends the operator implement the approved weed control plan for the site as soon as possible.

Additionally, the Division recommends the operator reseed the northern portion of the permit area. Afterward, the operator will need to closely monitor revegetation success at the site and continue to implement the weed control plan as needed. Because mining was completed at the site many years ago, the Division strongly advises the operator complete final reclamation in accordance with the approved reclamation plan as soon as possible.

It should be noted that photos taken during the inspection were lost in data transfer.

Inspection Contact Address

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