




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 Gypsum Quarry	MINE/PROSPECTING ID#: M-1977-346	MINERAL: Anhydrite, gypsum	COUNTY: Larimer
INSPECTION TYPE: Monitoring	INSPECTOR(S): Amy Eschberger, Eric Scott	INSP. DATE: August 16, 2017	INSP. TIME: 10:50
OPERATOR: Holcim (US) Inc.	OPERATOR REPRESENTATIVE: Mike Toelle	TYPE OF OPERATION: 112c - Construction Regular Operation	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Partial Bond	BOND AMOUNT: \$38,000.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: November 17, 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>NA</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 Gypsum Quarry (File No. M-1977-346) 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 12 miles northeast of Livermore, CO in Larimer County. The site can be accessed from W Co Rd 21. The approved post-mining land use is rangeland.

This is a 112c operation permitted for 110 acres to mine gypsum for use in the operator's cement plant located in LaPorte, CO (now closed). The site is situated on sedimentary rock outcrops located just west of Sand Creek. The permit area consists of a western portion (approximately 49 acres), an eastern portion (approximately 57 acres), and a haul road connecting the two areas. Mining was completed at the site many years ago, and the site has been in final reclamation since 2014. 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 complete all reclamation earthwork and seeding by September 30, 2014. The operator completed the required work and the problem was considered abated. According to annual reports submitted by the operator, approximately 60 acres were reclaimed. The disturbed land was graded to slopes of 3H:1V or flatter. Topsoil was spread on the land at an average depth of 6 inches. The land was hydroseeded with the approved rangeland seed mixture in November of 2014.

The purpose of this inspection was to evaluate reclamation success at the site. The Division first inspected the western portion of the permit area. During the last inspection of the site on June 30, 2015, the Division observed that all grading and topsoil placement had been completed in accordance with the approved reclamation plan. The Division also observed that vegetation had begun to establish in the western area, but included more weeds than grasses (particularly sweet clover). During the current inspection, the Division observed vegetative cover of the western half of this area to be well-established and diverse, including native grasses, forbs, and shrubs. However, vegetative cover across the eastern slope of this area consisted mainly of weeds (i.e., Russian thistle), with very little grasses present. Grasses were growing mainly along the base of the slope, where the seed was most likely washed down by surface runoff. The western portion of the permit area appeared to be stable with no erosion problems observed. The Division recommends the operator reseed the eastern slope in this area as soon as possible. The operator should apply mulch to this area in accordance with the approved revegetation plan, being sure to tack it in well to help prevent the new seed from washing down the slope. The Division also recommends the operator protect the area in reclamation from livestock grazing until grasses have established.

The Division next inspected the eastern portion of the permit area. During the last inspection of the site on June 30, 2015, the Division observed very little of the approved grass species present in the eastern area. The Division observed mostly sweet clover growing in this area. During the current inspection, the Division observed reclamation of this area to be more successful than observed in the western portion of the permit area. Vegetative cover included a mixture of native grasses, shrubs, and some annual weeds (i.e., Russian thistle). However, a portion of this area, from approximately mid-slope down, was more sparsely vegetated, and included more weeds than grasses. The Division recommends the operator reseed this portion of the eastern area as soon as possible.

The operator indicated all areas requiring additional revegetation efforts would be reseeded this fall. Due to the length of time that has passed since mining was completed at the site, the Division strongly encourages the operator to closely monitor the site for revegetation success and submit a release request once the site has been reclaimed in accordance with the approved reclamation plan.

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

Inspection Contact Address

Mike Toelle
Holcim (US) Inc.
3500 Highway 120
Florence, CO 81226

CC: Eric Scott, DRMS
Wally Erickson, DRMS