




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: CEMEX Sandstone Quarry	MINE/PROSPECTING ID#: M-1977-361	MINERAL: Sandstone	COUNTY: Boulder
INSPECTION TYPE: Monitoring	WEATHER: Clear	INSP. DATE: February 13, 2023	INSP. TIME: 11:45
OPERATOR: CEMEX, Inc.	OPERATOR REPRESENTATIVE: Cita Cisse, Robin Bay	TYPE OF OPERATION: 110c - Construction Limited Impact	
REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$409,366.00	
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None	
INSPECTOR(S): Patrick Lennberg	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: February 21, 2023	

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>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>	(RS) RECL PLAN/COMP-- <u>N</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION-- <u>Y</u>	(ST) STIPULATIONS----- <u>Y</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</u>	

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

OBSERVATIONS

The CEMEX Sandstone Quarry was inspected by Patrick Lennberg with the Division of Reclamation, Mining and Safety (Division/DRMS). The inspection was completed as part of the Division's routine monitoring program. The site was last inspected by the Division on June 3, 2020 as part of the routine monitoring program. Cita Cisse and Robin Bay representing the Operator, CEMEX, Inc., accompanied me during the inspection. The weather was clear and mild.

The site is 110c Construction Materials permit for 9.9 acres to extract sandstone for use in the cement manufacturing process at the Operator's nearby cement plant. The quarry is located in Boulder County, approximately 1 mile southeast of Lyons, CO. The site is accessed from the east off of US-36 by taking a private road passing through the commercial stoneyard owned by the Loukonen Brother Stone Company. A mine sign was posted at the primary mine entrance as required by Rule 3.1.12 but is severely faded and needs to be replaced. The post-mining land use for this site is wildlife habitat. The affected lands are owned by the Operator with an easement across the stoneyard.

The operation utilizes blasting methods to mine the sandstone. Up until recently, mined rock was hauled directly off site to the crusher facility at the Operator's nearby Dowe Flats Mine (Permit No. M-1993-041). However, now that Dowe Flats has entered into final reclamation the material is hauled directly to the Operator's cement plant (Lyons Quarry; Permit No. M-1977-208). Currently, the Operator uses material from the quarry a few times a year. The pit has been mined to a maximum depth of approximately 120 feet. Highwalls are 20-100 feet in height and range from near vertical to 05H:1V. There is an imported backfill stockpile near the northern pit boundary that is available to reclaim the southern pit area. There is additional topsoil stockpiles along the southeastern and southwestern edges of the southern pit area for use in reclamation. Additional topsoil may be imported to the site from the Operator's Dowe Flats Mine. However, when reclamation activities at the Dowe Flats site end topsoil will have to be obtained from another location. The pit floor area was dry and there were no significant signs or erosion.

The approved reclamation plan calls for leaving the highwalls with slope gradients of approximately 0.5H:1V. The 0.5H:1V cut slopes will be interspersed with small sections of vertical highwall designed to promote raptor habitat. A bench will be cut into the top of the highwall that ranges from 10-15 feet wide with a 10-foot high backslope that varies from 0.1H:1V to 0.5H:1V. The Operator will also construct a fence at least 6 feet back from the crest of the highwall with signage that will serve as a visual and physical safety barrier. The pit floor will be graded to a 2% slope toward the southeast. A drainage channel will be constructed in the southeast corner of the pit with 2H:1V cut slopes leading down to a 48 inch culvert to be installed under the South Ledge Ditch (an ephemeral drainage) and 2H:1V fill slopes over the culvert to maintain a consistent grade in the ditch. The culvert outlet channel will be lined with riprap. Growth media will be spread on all fill slopes and any cut slopes not steeper than 2H:1V at a depth of 12-18 inches, including the pit floor (estimated to cover 5.64 acres) and the drainage area (estimated to cover 0.21 acre). All retopsoiled areas will be seeded with an upland native seed mixture consisting of grasses, forbs, and shrubs. All haul roads will be reclaimed except for the main access road that enters the pit from the east. Entrances to reclaimed roads will be blocked by barriers of native rock or earthen berms to prevent vehicular access, while continuing to allow wildlife access.

The Division evaluated the financial warranty and determined the current bond amount held by the Division is adequate at this time. However, there is a portion of topsoil material to be sourced from the Dowe Flats site.

During the next inspection the reclamation cost estimate will increase to account for a change in source location for additional topsoil material, unless some reclamation activities begin at the quarry to reduce the liability at the site.

Photographs taken during the inspection are attached.

Please contact Patrick Lennberg (303)866-3567 ext. 8114 or email at patrick.lennberg@state.co.us if you have any questions regarding this report.

Inspection Contact Address

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PHOTOGRAPHS



Photo 1: Faded mine sign at the primary mine entrance needing replacement



Photo 2: Road leading into quarry area



Photo 3: Typical highwalls of quarry



Photo 4: Active quarry area in the southeastern portion of permit area



Photo 5: Approved imported backfill material for use during reclamation



Photo 6: Pit floor area along the eastern portion of the permit



Photo 7: Highwalls along the western boundary of the permit area



Photo 8: Highwalls along the southern boundary of the permit area