




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: Beech Hill Quarries	MINE/PROSPECTING ID#: M-1981-277	MINERAL: Sandstone	COUNTY: Boulder
INSPECTION TYPE: Monitoring	INSPECTOR(S): Patrick Lennberg	INSP. DATE: July 28, 2022	INSP. TIME: 10:30
OPERATOR: Loukonen Bros. Stone Company	OPERATOR REPRESENTATIVE: Michael Loukonen	TYPE OF OPERATION: 112c - Construction Regular Operation	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$81,740.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: August 22, 2022

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: Markers

PROBLEM: The affected area boundary markers are missing or incorrectly placed. This is a problem for failure to maintain boundary markers around the affected area as required by Section 3.1.12(2) of the rule.

CORRECTIVE ACTIONS: The operator shall conduct a survey of the boundary markers in the correct location. The operator shall submit a Technical Revision to update the Mining Plan Map to the Division that clear shows the approved permit boundary along with the coordinates of the individual permit boundary corners.

CORRECTIVE ACTION DUE DATE: 10/21/22

OBSERVATIONS

The Beech Hill Quarries 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 February 24, 2016 as part of the routine monitoring program. Michael Loukonen representing the Operator, Loukonen Brothers Stone Company, accompanied me during the inspection. The weather was clear but there had been heavy rainfall in the early morning hours the day of inspection.

The Beech Hill Quarries is located approximately 3 miles north of Lyons, Colorado. The site can be accessed following Stone Canyon Drive north for 4.3 miles until it turns into Steamboat Valley Road. The approved primary post-mining land use is rangeland. A mine sign was posted at the mine entrance pursuant to Rule 3.1.12. However, the Division was unable to find all the permit boundary markers and this has been cited as a problem within this report. The Operator shall submit a Technical Revision to update the Mining Plan Map to the Division that clearly shows the approved permit boundary along with the coordinates of the individual permit boundary corners.

This is a 112c operation permitted for 190 acres. The affected acreage is 190 acres but only 31 acres are to be disturbed at any one time. The permit is to mine sandstone for building construction and decorative use. The mine is located on property owned by the Operator. The area has been mined since the early 1900's and has been in the family since that time as well.

Currently the Operator removes sandstone from six separate quarries within the permit area. The quarries are Katri, Emil, Kupio, Soumi, Gust and Helsinki. There are three additional areas that are also used or have been used in the past. They are the dump, a storage area and a staging area. The staging area was added through the approval of TR-1. Over time the Emil and dump area have merged together, more or less, as have the Soumi and Kupio. Since 2014 the Soumi and Kupio quarries have been referred to as the Paras Kivi Quarry on the annual maps. In total it appears the Operator has disturbed 27 acres to date. The Division recommends the Operator change the currently approved defined disturbance areas, identified in the CN-1, be removed and have the disturbance area just be a general 31 acres at any one time. This change can be completed through the same Technical Revision to be submitted for the problem citation above.

The sandstone is removed using a front end loader or by hand with pry bars. The Operator stores some product on site; however, most of the saleable sandstone is taken to the stone yard in Lyons, Colorado. The quarrying of sandstone generates a substantial amount of sandstone rubble, which has a limited market as a saleable product. The Operator typically stockpiles the sandstone rubble around the perimeter of the active quarry areas. The material may remain in one place for many years or may move around the quarry so that the Operator can access different layers of the sandstone formation. The sandstone rubble is also used to create level working areas within the quarries. The staging area, approved to be 6 acres in size, is in an area that has not been mined. Approximately 2.5 acres are covered 2-5 feet of overburden material. Some of the quarries were active at the time of inspection.

Quarries are left in a disturbed state until such time as the Operator has determined there is no saleable material within a quarry. Due to the variability in the quality of the sandstone and market demand, the Operator can maintain a greater operational flexibility by not performing concurrent reclamation. The

approved Reclamation Plan states that all quarries will be backfilled with overburden, all highwalls will be eliminated and the quarries will be graded to match the surrounding topography. To date little to no reclamation has occurred. Most highwalls are 20-25 feet height, vary in length and slope. Some highwalls are near vertical while others are 1H:1V or shallower.

As part of CN-1 in 1999 – 2000 the Operator submitted maps indicating where mining activities would occur including the coordinates of those areas. It was understood that mining would only be limited to those areas. During permit review, prior to the inspection, it was determined that those coordinates given at that time are not accurate. Currently, the Operator has disturbed less area than is currently approved but the specific areas of disturbance do not match those that were approved. The Division recommends the Operator submit a Technical Revision to remove the specific disturbance areas and updating a map that shows the coordinates of each permit boundary corner. This map will aid in future inspections and eliminate ambiguity as to where the permit boundary corners are located. From the map included in this report it appears the eastern part of the Kupio quarry is getting close to the permit boundary. If mining activities occur outside the approved permit boundary a possible violation may be cited.

As mentioned earlier in this report, heavy rains passed through the area in the early morning hours. Several of the quarries had ponded water in them. The Operator was reminded that they are not allowed to detain stormwater for longer than 72 hours unless they receive an approved discharge permit from CDPHE.

The Division evaluated the financial warranty and determined the current bond amount held by the Division is adequate at this time. Please note if no reclamation is done the financial warranty will increase during the next inspection.

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: Mine sign at the primary mine entrance



Photo 2: Staging Area 2.5 acres



Photo 3: Katri quarry 1.5 acres



Photo 4: Emil quarry 5.75 acres including the Dump area



Photo 5: Emil quarry to the left and Dump to the right of the picture



Photo 6: Kupio quarry 7.7 acres, looking west



Photo 7: Kupio quarry 7.7 acres, looking north



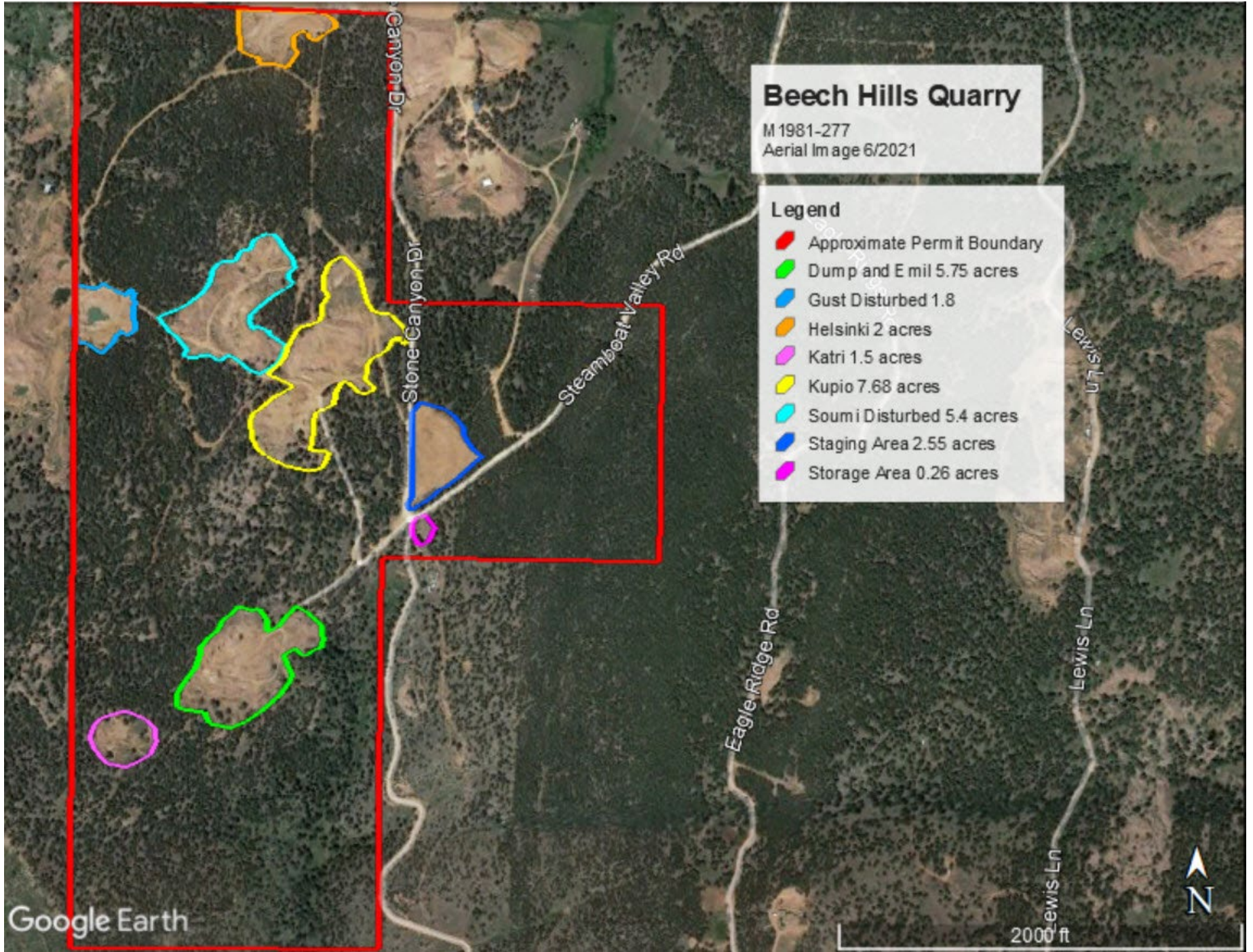
Photo 8: Soumi quarry 5.4 acres, looking south



Photo 9: Gust quarry 1.8 acres, looking south



Photo 10: Helsinki quarry 2 acres



GENERAL INSPECTION TOPICS

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

(AR) RECORDS----- <u>N</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>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>PB</u>	(SP) STORM WATER MGT PLAN---- <u>N</u>	(RS) RECL PLAN/COMP-- <u>Y</u>
(ES) OVERBURDEN/DEV. WASTE----- <u>N</u>	(SC) EROSION/SEDIMENTATION--- <u>Y</u>	(ST) STIPULATIONS----- <u>N</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