



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: Starks Quarry	MINE/PROSPECTING ID#: M-2001-114	MINERAL: Sandstone (silica, stone, quartzite)	COUNTY: Larimer
INSPECTION TYPE: Monitoring	INSPECTOR(S): Amy Eschberger	INSP. DATE: March 11, 2021	INSP. TIME: 09:30
OPERATOR: Loukonen Bros. Stone Company	OPERATOR REPRESENTATIVE: Michael Loukonen	TYPE OF OPERATION: 110c - Construction Limited Impact	

REASON FOR INSPECTION: Normal I&E Program	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$31,415.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: March 18, 2021

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>N</u>	(EX) EXPLOSIVES----- <u>NA</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>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>N</u>	

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

OBSERVATIONS

This was a normal monitoring inspection of the Starks Quarry (Permit No. M-2001-114) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division). The operator was represented by Michael Loukonen during the inspection. The site is located less than one mile southwest of Masonville, CO in Larimer County. The main access to the site is from the south off of Co Rd 27. A permit sign was posted at the gated entrance to the site. It should be noted, this permit is located adjacent to and partially overlaps with another 110c permit held by the same operator called the Weaver Quarry, Permit No. M-1986-085. **Photos 1-10** taken during the inspection are included with this report.

This is a 110c quarry operation permitted for 9.12 acres (see enclosed Google Earth image of site) to mine sandstone for landscaping and construction use. The quarry is situated on the eastern side of a ridge. The sandstone is pried loose along bedding planes, cut by machines, and stacked on pallets for sale. No blasting methods are used by this operation. All materials are extracted by hand tools or light equipment. The operation began mining from an existing quarry located near the center, eastern edge of the permit area, expanding it generally westward and northward. According to the approved permit (see enclosed mining plan map), the site will be mined in two phases, the first of which includes the central and southern portions of the permit area, and the second of which includes the northern portion of the permit area.

Disturbance at the site includes the active quarry located at the center of the permit area, waste rock stockpiles, and overburden/topsoil material bermed along the western edge of the quarry. What appeared to be overburden/topsoil material is also stockpiled at the northwestern edge of the quarry. The highwall is estimated to be approximately 8 feet in height and 460 feet in length, with near vertical slopes. The rest of the quarry area includes exposed sandstone with natural slopes of 2H:1V to 2.5H:1V. The Division estimates total disturbance at the site to cover 3.05 acres. The current highwall is located within 30-60 feet of the private (paved) road which runs adjacent to the western edge of the permit boundary. Therefore, the quarry cannot be expanded further westward without potentially impacting the stability of the road. The quarry could be expanded southward or northward within the permit area.

The site was not active at the time of the inspection. However, according to the operator, the site is active every year in accordance with its intermittent status (less than 180 days per year). The operator is currently working to acquire laborers for this summer. The permit boundary is delineated with posts. The operator had corrected some of the boundary marker locations in response to a problem cited after the Division's last inspection conducted on April 23, 2015. The posts appeared to be in the same locations as shown in the photos submitted with the operator's corrective action response received on June 2, 2015. It should be noted, the northern portion of the permit area which has not yet been disturbed by the operation was impacted by the 2020 Cameron Peak wildfire.

As mentioned above, the permit area for this site partially overlaps the operator's smaller Weaver Quarry permit area (see enclosed Google Earth image of site showing both permit areas). In previous inspection reports, the Division has recommended the operator submit a Conversion application to change one of the 110c permits to a 112c permit that covers all the affected lands at the site. Upon the Division's approval of this application, the operator could then request a full release of the remaining 110c permit (covered under the new 112c permit area). Doing this would remove any ambiguity regarding the permit boundary and the activities authorized by the permit. If the operator chooses not to submit a Conversion application to combine the permit areas, the Division recommends the operator be very careful not to conduct activities in a permit area which are not approved for that particular permit, and to be diligent in maintaining the boundary markers for both permits so the permit areas can easily be differentiated by both mine staff and Division inspectors. Additionally, since the Weaver Quarry includes the shop/storage/processing area below the ridge, that permit could not be released

until mining at the Starks Quarry has concluded.

The approved post-mining land use for the site is rangeland. The reclamation plan calls for backfilling any highwalls to a minimum 2H:1V slope, spreading out waste rock stockpiles across disturbed land at an average one foot depth, replacing approximately 3 inches of topsoil on disturbed land, and revegetating the land with the following seed mixture: Sideoats Grama, Little Bluestem, Slender Wheatgrass, Western Wheatgrass, and Blue Grama. It should be noted, the portion of the Weaver Quarry disturbance located within the Starks Quarry permit area (within the overlap area) will be reclaimed under the Weaver Quarry permit.

After conducting this inspection, the Division reassessed the required financial warranty for reclaiming the estimated 3.05 acres of disturbance at the site. The currently held financial warranty amount of \$31,415.00 was found to be adequate for reclaiming the disturbance in accordance with the approved reclamation plan.

This concludes the report.

Any questions or comments regarding this inspection report should be forwarded to Amy Eschberger at the Colorado Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, via telephone at 303-866-3567, ext. 8129, or via email at amy.eschberger@state.co.us.

PHOTOGRAPHS



Photo 1. View looking southwest across active quarry area.



Photo 2. View looking west across active quarry area.



Photo 3. View looking northwest across active quarry area.



Photo 4. View looking west at waste rock piled at northern edge of active quarry area.



Photo 5. View looking northwest at overburden/topsoil stockpile stored at northwestern edge of active quarry area.



Photo 6. View looking south across active quarry area. Note exposed sandstone with natural slopes of 2H:1V to 2.5H:1V.



Photo 7. View looking west across active quarry area, showing closer view of highwall approximately 8 feet in height with near vertical slopes.



Photo 8. View looking south at waste rock piled at southern edge of active quarry area.



Photo 9. View looking east across active quarry area from western permit boundary (adjacent to paved road).



Photo 10. View looking southeast showing white post (circled) marking western permit boundary (adjacent to paved road). Note blackened areas impacted by Cameron Peak wildfire.

Inspection Contact Address

Michael Loukonen
Loukonen Bros. Stone Company
12993 N Foothills Hwy
Longmont, CO 80503

Encls: Google Earth image of site showing Starks Quarry permit area
Mining Plan Map
Google Earth image of site showing both Weaver Quarry and Starks Quarry permit areas

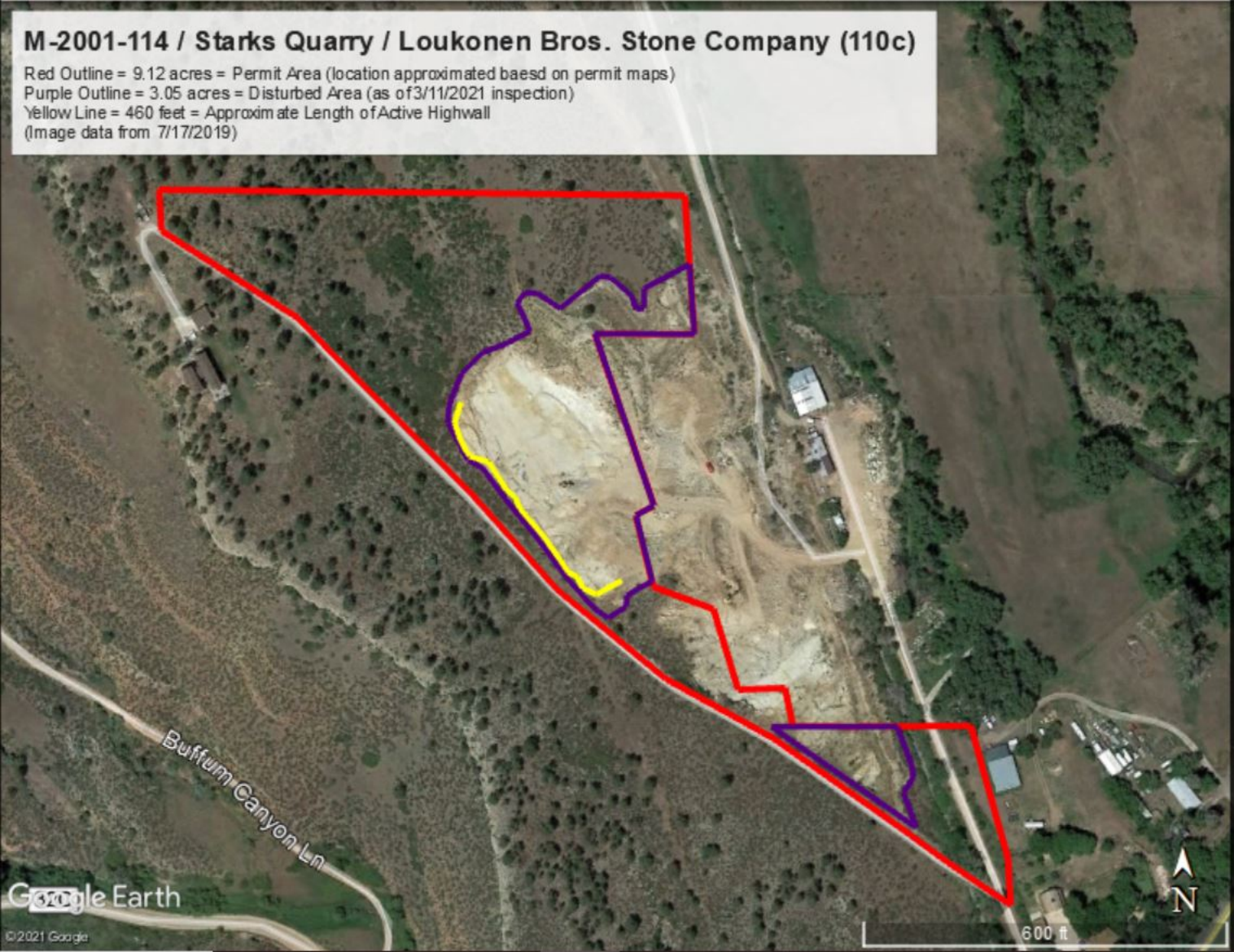
CC: Michael Cunningham, DRMS

M-2001-114 / Starks Quarry / Loukonen Bros. Stone Company (110c)

Red Outline = 9.12 acres = Permit Area (location approximated based on permit maps)

Purple Outline = 3.05 acres = Disturbed Area (as of 3/11/2021 inspection)

Yellow Line = 460 feet = Approximate Length of Active Highwall
(Image data from 7/17/2019)



From: Lowy's Brothers
 and ☐ Enforcement ☐ Inspection Store
 BY: _____

M2001-114/M1986-085 - Starks Quarry/Weaver Quarry - Loukonen Bros. Stone Company

Red Outline = 9.12 acres = Permit Area for Starks Quarry (location approximated based on permit maps)

Dark Red Outline = 7.5 acres = Permit Area for Weaver Quarry (location approximated based on permit maps)

(Image data from 7/17/2019)

