




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: Sprague Red Lyons	MINE/PROSPECTING ID#: M-1981-057	MINERAL: Sandstone (silica, stone, quartzite)	COUNTY: Boulder
INSPECTION TYPE: Surety Release Inspection	INSPECTOR(S): Amy Eschberger	INSP. DATE: February 21, 2019	INSP. TIME: 10:00
OPERATOR: Arkins Park Stone Corporation	OPERATOR REPRESENTATIVE: Shari Swenson, John Holliday	TYPE OF OPERATION: 112c - Construction Regular Operation	

REASON FOR INSPECTION: Surety Release Requested	BOND CALCULATION TYPE: Complete Bond	BOND AMOUNT: \$47,050.00
DATE OF COMPLAINT: NA	POST INSP. CONTACTS: None	JOINT INSP. AGENCY: None
WEATHER: Clear	INSPECTOR'S SIGNATURE: 	SIGNATURE DATE: February 28, 2019

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>N</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>Y</u>
(SM) SIGNS AND MARKERS----- <u>Y</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>N</u>	(ST) STIPULATIONS----- <u>N</u>
(AT) ACID OR TOXIC MATERIALS----- <u>N</u>	(OD) OFF-SITE DAMAGE----- <u>N</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 was a surety release inspection of the Sprague Red Lyons site (Permit No. M-1981-057) conducted by Amy Eschberger of the Division of Reclamation, Mining and Safety (Division) in response to an Acreage Reduction request (AR-1) and a Surety Reduction request (SR-1) filed with the Division on January 18, 2019. The Division was accompanied by Shari Swenson and John Holliday during the inspection. The site is located approximately one mile north of Lyons, CO in Boulder County. The site is accessed via Steamboat Valley Road. **Photos 1-12** taken during the inspection are included with this report.

This is a 112c operation previously permitted for 59.7 acres to mine sandstone for building materials and riprap use. The sandstone deposit is approximately 20-30 feet thick, and is quarried by hand using picks, bars, and shovels, and with loaders. The operator is approved to utilize blasting techniques for loosening stone as needed. Quarried stone is processed on pit floors. Flagstone is stacked on pallets, and strip stone is run through a hydraulic stone cutter to be cut into veneer or dimension stone. Waste rock not sold as riprap is compacted and incorporated into work decks or staging areas adjacent to the quarries. This rock can also be used as backfill material for reclamation. The operation includes three quarry areas, Quarries 1 and 2 (connected) which are located in the northern portion of the permit area, and Quarry 3 which is located in the southern portion of the permit area.

Historic mining disturbances are scattered throughout the site, including rubble piles and small excavations. These areas will not require reclamation as long as the current operation does not re-disturb them. The Mined Land Reclamation Board found a violation against the operator in 1999 for offsite damage due to the operation having pushed quarry waste rock off the west side of Steamboat Valley Road, down Eagle Canyon. The operator incorporated these offsite areas into the permit with the Conversion application approved in 1999. The conversion also expanded the permit area to align with the property boundaries. The old waste rock piles present along the western edge of Steamboat Valley Road are to remain as-is. However, the operator is not authorized to place any additional rock off the western edge of the road.

The operation is approved to affect up to 35.8 acres within the permit area. The operation had a surety increase in 2017 to account for the existing disturbance of approximately 15 acres. The approved post-mining land use for the site is a combination of rangeland and residential. For reclamation, quarry areas will be backfilled with 6 inches of overburden/waste rock and graded to 3H:1V or flatter to blend with existing topography. Pre-existing steep rock ledges in the quarries may be reclaimed by placing large stones on portions of the slopes to form steps which can be retopsoiled and revegetated. Disturbed land will receive 6-8 inches of topsoil and be revegetated with a native grass seed mixture. Additionally, the operator will plant six Ponderosa pine trees and six Rocky Mountain juniper trees per acre. Existing roads will remain after reclamation for use by the landowner.

The reclamation plan for Quarry 3 was revised with Technical Revision No. 1 (TR-1; approved on November 30, 2018) to allow the quarry to remain as-is for residential use, including leaving a small section of steep highwall as a natural amphitheater. The Division was provided with a notarized letter from the new landowner on October 5, 2018 agreeing with these changes to the reclamation plan for Quarry 3. This letter also provides the operator legal access to the affected lands for mining and reclamation. The AR-1 submittal included an executed structure agreement for the new structures constructed on site which are owned by the new landowner (residential home, well, underground utilities). These structures are shown on the site map provided with AR-1. By submitting an updated legal right of entry and structure agreements for the new landowner and his structures, the operator has complied with the Division's recommendations outlined in the inspection report sent on August 3, 2018.

AR-1 requests releasing 16 acres from the southern edge of the permit area, including the Quarry 3 area and areas undisturbed by the operation (see enclosed Google Earth image of site). The operator had the site surveyed for AR-1 by Coffey Engineering & Surveying, which found the existing permit area to actually be 58.16 acres in size (consistent with the actual property boundary) and not 59.7 acres, as stated in the 1999 Conversion application. Therefore, the Division issued an Administrative revision (AD-1) to the permit on February 22, 2019 to correct the permit acreage for the site to 58.16 acres.

The Division inspected the entire 16 acre area proposed for release in AR-1. The portion of this area located west of Steamboat Valley Road is forested land undisturbed by this operation. A few small historic rubble piles exist in this area. The Division observed the post marking the southwestern corner of the existing permit boundary (at the bottom of the canyon), but was unable to find a marker for the proposed new southwestern corner. The operator will need to relocate the post approximately 200 feet northward to mark the new southwestern boundary corner.

The Division inspected the Quarry 3 area, where a few workers were present constructing the residential building on the pit floor. Boulder County issued a residence permit for the site in May of 2018. Therefore, the operation appears to be in compliance with the county with regard to construction of the new residence. This activity is also in compliance with the approved mine permit, which allows for residential use of the reclaimed lands. In accordance with TR-1, the small L-shaped section of highwall (10-12 feet in height) located at the northwestern edge of the pit will be utilized by the new landowner as a natural amphitheater. The exposed sandstone along the eastern pit edge will remain as-is, dipping toward the pit with slope gradients ranging from 2H:1V to 3H:1V. The large product and waste rock that had been stockpiled on the pit floor were removed in 2017/2018. A small portion of waste rock was left for the landowner to use in constructing the pad site for the new residence. Native grasses and pine trees have volunteered into the quarry area. However, the area will not be revegetated by the operator, per TR-1. The Quarry 3 area appears to be reclaimed in accordance with its approved post-mining land use. Historic rubble piles are present at the southern and eastern edges of Quarry 3. These piles were not re-disturbed by the operation and therefore, do not require reclamation.

The Division inspected the lands located east of Quarry 3 proposed for release in AR-1. These lands were not disturbed by the operation, and they are well-vegetated with native grasses, shrubs, and some pine trees. The Division observed the marker at the southeastern corner of the existing permit boundary (near an existing power pole), but was unable to find a marker for the proposed new southeastern corner. The operator will need to relocate the marker approximately 600 feet northward to delineate the new southeastern boundary corner. There are two additional corners in the proposed new permit boundary, located between Quarries 2 and 3, near Steamboat Valley Road. The boundary corner closest to Quarry 2 was marked. However, the operator will need to mark the boundary corner closest to Quarry 3, adjacent to the road.

After conducting the inspection, the Division approved the Acreage Reduction request (AR-1) on February 22, 2019, releasing 16 acres from the permit area. This gives a new permit area of 42.16 acres for the site. The Division approved the Surety Reduction request (SR-1) on February 28, 2019, for a reduction of \$6,385.00. This reduces the required financial warranty to \$40,665.00 for reclaiming Quarries 1 and 2, and a small disturbed area located east of Quarry 2. These areas have not expanded since the last bond estimate was calculated in 2017. Therefore, the remaining disturbance in the permit area consists of 10.22 acres (14.97 acres total disturbance - 4.75 acres Quarry 3 disturbance).

This concludes the report.

PHOTOGRAPHS



Photo 1. View looking west across southwestern portion of permit area proposed for release in AR-1. This area was not disturbed by the operation.



Photo 2. View looking south down drainage located at western edge of portion of permit area proposed for release in AR-1. Post marking existing southwestern boundary corner (circled) needs to be relocated to new southwestern boundary corner.



Photo 3. View looking east across southwestern portion of permit area proposed for release in AR-1. This area was not disturbed by the operation.



Photo 4. View looking east across Quarry 3 from its access road off Steamboat Valley Road. This quarry is proposed for release in AR-1. A residence is under construction in this quarry, in accordance with the approved post-mining land use.



Photo 5. View of small L-shaped section of steep highwall to remain at northwestern edge of Quarry 3 for use by the new landowner as a natural amphitheater.



Photo 6. View looking southeast across Quarry 3 proposed for release in AR-1, showing residence under construction on pit floor.



Photo 7. View looking south across eastern pit wall of Quarry 3 to remain as-is for reclamation, with slope gradients of 2H:1V to 3H:1V.



Photo 8. View looking southwest across portion of permit area between Quarries 2 and 3 proposed for release in AR-1. This area appears to be undisturbed by the operation.



Photo 9. View looking southeast across portion of permit area located east of Quarry 3 proposed for release in AR-1. This area appears to be undisturbed by the operation.



Photo 10. View looking west (toward Quarry 3) across southeastern portion of permit area proposed for release in AR-1. This area appears to be undisturbed by the operation.



Photo 11. View looking northeast showing post (circled) marking new boundary corner located south of Quarry 2.



Photo 12. View looking southeast showing approximate location (circled) where marker needs to be placed to delineate new boundary corner located northwest of Quarry 3, adjacent to Steamboat Valley Road.

Inspection Contact Address

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5975 NCR 27
Loveland, CO 80538

Encl: Google Earth image of site showing area proposed for release in AR-1

EC: Shari Swenson, Arkins Park Stone Corp. at: shari@arkinsparkstone.com

M1981-057 / Sprague Red Lyons / Arkins Park Stone Corporation

Red outline = 42.16 acres = New permit area (after AR-1 approval)

Orange outline = 16 acres = Area released in AR-1

(Image data from 5/31/2018)

