



Response to Construction Materials Reclamation Permit Amendment Application Consideration

DATE: December 7, 2020

TO: Eric C. Scott, Environmental Protection Specialist

FROM: Sarah Brucker, Water Resources Engineer 

RE: Morrison Quarry, File No. M-1973-021 - AM07
Applicant/Operator: Aggregate Industries - WCR, Inc., (303) 716-5312
Sections 10 & 11, Twp 5 South, Rng 70 West, 6th P.M., Jefferson County
Water Division 1, Water District 9

COMMENTS: The subject application is the seventh amendment to a quarry operation located approximately one mile south of the Town of Morrison. The amendment seeks to add 3.5 acres to the currently permitted 361.3 acres to incorporate the mine access road, scale, and truck wash area into the permit boundary. The amendment also seeks to revise bench configurations for the South Quarry, to present quarry configuration with bench and highwall configurations for the West Quarry, and to develop a mining bottom elevation for the West Quarry and confirm the mining bottom elevation for the South Quarry.

The mining operations described in this amendment consist of two phases. Phase 1, which is anticipated to have a duration of approximately 12 years, involves continued full development of the South Quarry below an elevation of 7,000 feet and above 6,440 feet. This will include use of a steepened highwall configuration below the current quarry floor of approximately 6,800 feet and re-mining the existing highwalls from 7,000 feet to 6,800 feet. The maximum bench height will be 70 feet and the minimum bench width will be 30 feet. Phase 1 will also include the concurrent development of the West Quarry, with mining occurring from approximate elevations of 7,360 feet to 7,000 feet. For benches above an elevation of 7,000 feet, the maximum highwall height will be 40 feet and the minimum bench width will be 60 feet. Below an elevation of 7,000 feet, the maximum highwall height will be 70 feet and the minimum bench width will be 30 feet. Mining below 7,000 feet will be considered part of the South Quarry operations and will proceed to an elevation of approximately 6,440 feet during Phase 1. Phase 2, which is anticipated to have a duration of approximately 13 years, will complete mining operations and lower the bottom of the South Quarry to an elevation of 6,195 feet.

This office previously requested that the applicant be required to install piezometers around the South Quarry to measure the groundwater level and demonstrate that excavation is not exposing groundwater. The applicant began a monthly groundwater monitoring program in August of 2020 using a series of five wells, two of which are located at the South Quarry. Both wells in the South Quarry have a bottom elevation of just under 6,400 feet. Once mining has proceeded to an elevation of 6,454 (anticipated by 2029), either the depth of the wells will be increased or new wells will be installed. Based on data from September 25, 2020, the well east of the South Quarry had a water level elevation of 6,461.3 feet, and the well south of the South Quarry had a water level elevation of 6,588.8 feet. If water level data indicates that mining at the site has exposed groundwater, the excavation will be considered a well and



will require an approved substitute water supply plan or decreed plan for augmentation to replace the evaporative losses to the stream system. All mining at the site must cease and all exposed groundwater must be backfilled until such time as the applicant has obtained such approval.

Water for mining operations at the site is pumped from Morrison Quarry No. 2 (WDID 0903317), which is filled by two surface water diversions off Bear Creek known as Morrison Municipal Intake (WDID 0901031) and Morrison Municipal Intake No. 2 (WDID 0901020). Water use at the Morrison Quarry is approximately 50 acre-feet per year.

Stormwater falling on the site is managed through a combination of grading, berns, check dams, and settling ponds. Any stormwater runoff intercepted by this operation that is not diverted or captured in priority must be released to the stream system or infiltrate into the ground within 72 hours; otherwise the operator will need to make replacements for evaporation.

Subject to continuation of the groundwater elevation monitoring program, this office has no concerns regarding the proposed amendments. The Division of Reclamation, Mining and Safety and/or the applicant may contact the State Engineer's Office with any questions.