

# STATE OF COLORADO

## DIVISION OF RECLAMATION, MINING AND SAFETY

Department of Natural Resources

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DATE: October 17, 2012

TO: Bob Oswald

FROM: Kate Pickford & Travis Marshall

RE: Hydrology Review of Star Mines Operation, LLC, Revenue Mine, File M-2012-032, 112d-1 application, Ouray County

The Division has reviewed the hydrologic content of Star Mines Operation, LLC, Revenue Mine, File M-2012-032, 112d-1 application, and submits the following comments:

1. The submitted plan states that water sample results will be submitted to the Division annually with the annual report. The Division believes that the water sample results should be submitted quarterly. If, at some point in the future, the Division decides that annual submittal is appropriate, the operator will be able to submit a technical revision to change the frequency of submittal.
2. The Division also believes that the applicant should have a monitoring plan in place in the event that any of the analytes exceed water quality standards. In the event of an exceedance, the Division believes that the operator should repeat the sampling within two weeks of receipt of the sample results. If the results still show an exceedance, the operator should supply the Division with the test results within 30 days of the second sampling event.
3. The bulk of the previous water samples consisted of an abbreviated suite of analytes. The more recent tests have consisted of a more extensive suite. The Division believes that 5 quarters of the more extensive suite must be submitted to the Division for review before final decisions regarding water quality can be identified. The operator should be prepared to submit necessary Technical Revisions, based on the 5 quarters of water sampling results.

4. The proposed monitoring plan for the site incorporates the use of piezometers alone, and no sampling wells. The Division believes that water sampling well or wells are appropriate to monitor the water seeping from the waste rock pile, and the applicant should propose the appropriate location for these wells.
5. The Division believes that a baseline for the water contained in the current retention pond is necessary for continued monitoring of the site. The Division believes that the applicant should supply the Division with at least two quarters of pond water sampling based on the expanded suite of analytes, with the possibility of the need to supply further quarterly samples based on the results of the first two quarters.
6. The Division is concerned that the Colorado Department of Public Health and the Environment (CDPHE) may not be satisfied with the quality of the water discharging from the site at the completion of the project, even if the quality of the water has not degraded over the duration of the mining operations. The Division believes it is advisable that the applicant obtain an agreement with CDPHE that the discharge permit will be released if the water quality does not degrade as a result of the mining activities.