



**COLORADO**

**Division of Reclamation,  
Mining and Safety**

Department of Natural Resources

1313 Sherman Street, Room 215  
Denver, CO 80203

January 11, 2019

Jim Harrington  
Colorado Legacy Land, LLC  
4601 DTC Boulevard, Suite 130  
Denver, CO 80237

**RE: Schwartzwalder Mine; DRMS File No. M-1977-300; Adequacy Review No. 2 –  
Technical Revision No. 27 (TR-27)**

Dear Mr. Harrington,

The Division of Reclamation, Mining and Safety (Division) received Technical Revision No. 27 (TR27) for the above referenced operation on November 27, 2018. The decision date for this Technical Revision is January 18, 2019. The Division has identified several other comments and questions that must be addressed prior to the Division's decision due date:

1. The Operator is proposing to sample the various groundwater sumps as an aggregate sample, rather than as individual samples, as has been the past practice. The Division is concerned that by sampling the sumps in aggregate, it may prevent the detection of trends in the alluvial groundwater quality. Please provide a technical justification for changing the sampling methodology on the groundwater sumps.
2. The new submersible pump location will require the installation of a 5" High Density Polyethylene Pipe. The pipe will convey untreated water from the mine pool to the water treatment plant. As required by Rule 6.4.21(7)(e), describe any release response procedures, redundancies, and "backup" measures necessary, appropriate, and economically reasonable to control, prevent and mitigate releases of the toxic materials from the containment facility (pipeline) outside the permit area during reclamation operations.
3. Table 1. Proposed Quarterly Sampling Suite indicates total Boron is not a part of the approved surface water sampling suite. A review of the Environmental Protection Plan (EPP) shows that total Boron is to be included in the surface water sampling suite. Please ensure that surface water sampling events includes analysis for total Boron.
4. Table 1. Proposed Quarterly Sampling Suite indicates dissolved uranium is not a part of the groundwater sampling suite. A review of the EPP shows that dissolved uranium is to be included in the groundwater sampling suite. Please ensure that groundwater sampling events include analysis for dissolved uranium.



5. The Operator is proposing to eliminate certain analytes from the surface and groundwater sampling suites. The Operator's technical justification for eliminating certain analytes includes duplication of analytes between sampling suites, non-detect analytical results, and analytical results which are below applicable surface or groundwater standards. The Schwartzwalder Mine is a dynamic site with respect to water quality treatment and the mine pool chemistry. Upon approval of this Technical Revision the Operator will proceed to manage the mine pool in a different manner than it was historically managed. In addition, the Operator is currently excavating waste rock from the valley floor. The Division expects to see changes to the surface and groundwater quality as a result of these activities.

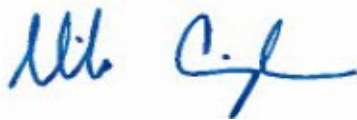
A condition of the transferring the Reclamation Permit from Cotter Corporation to Colorado Legacy Land, requires the submittal of an amendment application which includes the site wide conceptual model and provides a plan addressing the physical and chemical stabilization of the mine pool and specifically addresses the concentrations of dissolved uranium and other constituents as required under the conditions of the permit. The condition also requires notification to Denver Water and the City of Arvada, who have an interest in participating in the review of the site wide conceptual model.

Therefore, the Division believes that it would be premature to remove any analytes from the sampling suite at this time for the above stated reasons. A reduction of the sampling suite would be warranted upon approval of the required amendment or upon a demonstration the site is stable with respect to surface and groundwater quality. In order to approve the proposed Technical Revision, the Division requests the Operator withdraw the modifications to the sampling suites from consideration under TR27. Please respond.

This concludes the Division's adequacy review of this Technical Revision. Please remember that the decision date for this Technical Revision is January 18, 2019. As previously mentioned, if you are unable to provide satisfactory responses to any inadequacies prior to this date, it will be your responsibility to request an extension of time to allow for continued review of this Technical Revision. If there are still unresolved issues when the decision date arrives and no extension has been requested, the Technical Revision will be denied.

If you have any questions, please contact me at (303)866-3567 x8116.

Sincerely,

A handwritten signature in blue ink, appearing to read "M.A. Cunningham".

Michael A. Cunningham  
Environmental Protection Specialist

CC: Elizabeth Busby, Alexco Water and Environment Inc.