



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

July 26, 2018

Mr. Mike Schaffner
Cripple Creek & Victor Gold Mining Company
P.O. Box 191
Victor, CO 80860

**Re: Project, Permit No. M-1980-244;
Technical Revision (TR-101) Preliminary Adequacy Review**

Dear Mr. Schaffner:

On April 27, 2018 the Division of Reclamation, Mining and Safety (Division) received a request for a Technical Revision (TR-101) addressing the following:

Stormwater Management Evaluation

The decision date for TR-101 was extended to July 27, 2018. Please be advised that if you are unable to satisfactorily address any concerns identified in this review before the decision date, **it will be your responsibility to request an extension of the review period.** If there are outstanding issues that have not been adequately addressed prior to the end of the review period, and no extension has been requested, the Division may deny this Technical Revision (TR). The following comments are based on the Division's review of the request for TR-101:

- 1) **Table formatting:** A majority of the tables in the submittal use color to highlight which features of various stormwater structures are acceptable (green shading) and those requiring upgrades (red shading). Although the red shaded cells in the tables are not too difficult to read in digital form (e.g., on computer monitors), the deep red background behind the black text provides little contrast and makes reading these cells difficult on the hard copies. As these tables may be referenced frequently over the period in which upgrades are performed please, please provide reformatted tables to improve readability. Suggestions include using white text in the red cells, or perhaps changing the red shading to what Excel calls lavender:

Text

Text

- 2) **EMP Impoundments:** Section 2.5.2 summarizes the storage volume requirements and hydrologic analyses. The Division could not find any discussion related to any possible jurisdictional status with respect to our sister agency, the Colorado Office of the State Engineer (OSE) Dam Safety program. The Division does not expect volume or surface area requirement limits to cause any jurisdictional oversight by the OSE, but given the steep terrain, embankment heights might. Please review the OSE's Rules and Regulations for Dam Safety

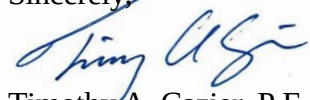


and Dam Construction, Rules 4.2.5.1 and 2 to determine if existing and/or upgraded embankments require Dam Safety oversight and provide a summary in your response for each EMP reviewed.

- 3) ECOSA Toe Berm: The evaluation indicates CC&V believes the ECOSA toe berm should not be classified as an EMP. The Division disagrees for two reasons: 1) the potential for stormwater runoff from the ECOSA to have metals and low pH is significant based on water quality results from the ECOSA seep, and 2) runoff from the west side of the SGOSA is captured by DC-EMP-8b which reports to EMP-8b which is an EMP with a required design storage capacity of two times the 10-year, 24-hour storm runoff volume. Please reclassify the ECOSA toe berm as an EMP and provide the necessary design upgrades to the ECOSA toe berm to satisfy the two times the 10-year runoff volume criteria.
- 4) Geotextile use: Section 4.2 discusses using 8-ounce non-woven geotextile underlayment for riprap-lined channels. The Division's engineer's experience with riprap on non-woven geotextile is that on longitudinal slopes greater than about 10 to 12 percent, design peak flows wash the riprap right off the geotextile. In order to avoid maintenance after storms approaching the design storm, the Division recommends (but does not require at this time) using a granular filter under riprap for longitudinal slopes greater than 10 percent.
- 5) Closing Remarks: Section 5.0 attempts to summarize necessary upgrades to ponds, diversion channels and spillways, but is somewhat confusing. For example, channel DC-EMP8a appears to be a newly required channel, but implies there upgrades necessary related to capacity and riprap. If this channel does not exist, as indicated in Table 3.1, why are there concerns with capacity and riprap. Also the use of the word "absent" is confusing. For example, channel DC-EMP18N is followed by "absent", yet Table 3.1 indicates it exists. Please provide a more thorough summary of what specific (e.g., non-existent channel requires full design; riprap not present, but necessary; pond inlet protection not present, but necessary; etc.), if any upgrades are necessary for each structure.
- 6) Drawings 050 and 200: Previous EMP upgrades have led to violations related to affecting area outside the affected area boundary (specifically EMP 9a). As the current permit boundary is coincident with the affected area boundary, please include the Amendment 12 permit boundary on Drawings 050 and 200.

If you have any questions or need further information, please contact me at (303)866-3567 x8169.

Sincerely,



Timothy A. Cazier, P.E.
Environmental Protection Specialist

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