



COLORADO
Division of Reclamation,
Mining and Safety
Department of Natural Resources

1313 Sherman Street, Room 215
Denver, CO 80203

December 23, 2016

Ken Mushinski
Cotter Corporation
P.O. Box 1750
Canon City, CO 81215

RE: Schwartzwalder Mine; DRMS File No. M-1977-300; Technical Revision (TR-23)

Dear Mr. Mushinski,

The Division has identified several other comments and questions that must be addressed prior to the Division's decision due date.

1. The design drawings provided in Attachment C for the storm water diversion ditches are not stamped by a licensed professional engineer. As required by Rule 6.4.21(10)(a), please provide design drawings which have been certified by a licensed professional engineer for all Environmental Protection Facilities.
2. The Operator has indicated the storm water diversion ditches have been designed to accommodate a 100-year flood event with a peak discharge of 60 cfs. Appendix E (pg. 51) of the 1983 Amendment, states the estimated peak discharge above the east/south Waste Rock Pile (WRP) is 119 cfs for the 100-year flood event. The peak discharge for the west/north WRP was not analyzed. Please provide the Division with a hydrologic analysis which demonstrates 60 cfs is the appropriate peak discharge for the design of the storm water diversion ditches.
3. The design drawings show the storm water diversion ditches terminate several feet above the toe of slope of the WRP's. The design should include a means to safely convey the diverted flow from the base of the diversion ditches to Ralston Creek. Please describe how storm water will be safely conveyed to Ralston Creek so that erosion of the WRP's or the access roads does not occur.
4. The design drawings show weep drains will be placed vertically in the storm water diversion ditches. In the Division's experience, horizontal weep drains are less subject to plugging and sediment deposition. Please provide a technical justification for constructing vertical weep drains.
5. The design drawings for the storm water diversion ditches do not address freeboard. Please indicate if the design of the storm water diversion ditches accounts for freeboard. If so, specify the freeboard. The Division recommends the design provide for one foot of freeboard or half the velocity head.
6. The Southern WRP Ditch Typical Section on Sheet No. 27 of the design drawings shows placement of fill adjacent to the storm water diversion ditch. Please specify the nature of the fill and describe how it will be compacted.



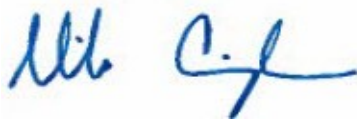
7. The Division requests detail call-outs for all plan profiles for Sheets No. 22-28 of the design drawings. All features should be labeled on the detail call-outs and referenced on the plan and profile drawings.
8. Please specify if rebar will be used with the concrete lined storm water diversion ditches. If so, specify the rebar size, spacing, and clearance. In addition, provide specifications for the type of concrete to be used.
9. The construction schedule provided in Attachment A contains a task for disposing of waste in the Minnesota Adit. Please provide an inventory of all of the materials (with approximate volumes) to be placed in the Minnesota Adit. In addition, please clarify if the materials to be disposed of will be contained to the Minnesota Adit or if they will be placed in the glory hole.
10. In regards to the construction schedule provided in Attachment A, the Division will conduct inspections during the following phases of the alluvial valley excavation:
 - a. Prior to Site Clean Up
 - b. Prior to Excavation of Alluvial Fill
 - c. Prior to placement of temporary soil cap (if necessary)
 - d. Prior to Construction of WRP Diversion Channels
 - e. Post Project Completion

Please commit to notifying the Division in writing, at least two weeks prior to the commencement of each of the above listed construction phases so that inspections may be scheduled. The Division may schedule additional inspections as required.

Please remember that the decision date for this Technical Revision is December 30, 2016. 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,



Michael A. Cunningham
Environmental Protection Specialist

CC: Wally Erickson, DRMS
Tim Cazier, DRMS
Steve Cohen, Cotter Corporation