



STATE OF
COLORADO

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TR122 preliminary adequacy review

1 message

Zuber - DNR, Rob <rob.zuber@state.co.us>

Mon, Dec 21, 2020 at 4:01 PM

To: Basil Bear <basilbear@wolverinefuels.com>, Tamme Bishop <tamme.jestover@bresnan.net>

Basil and Tamme -

I hope you are both doing well.

I have attached the Division's review of TR-122 for Bowie #2. As always, do not hesitate to contact me for clarification of any items in this letter. I look forward to working with you guys over the next few weeks to address these items.

Have a good Christmas.

Rob

Rob Zuber, P.E.
Environmental Protection Specialist II
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December 21, 2020

Basil Bear
Bowie Resources, LLC
P.O. Box 1488
Paonia, CO 81428

**Re: Bowie No. 2 Mine, Permit C-1996-083,
Technical Revision Number 122 (TR-122), Preliminary Adequacy Review**

Dear Mr. Bear:

The Division received the TR-122 submittal on November 18, 2020. In addition to the numbered adequacy items below, we have two requests to improve clarity within the TR-122 submittal and within the Bowie No. 2 Permit Application Package (PAP).

Regarding the TR-122 submittal, the Division requests that the list of revised pages and maps be updated in your adequacy response. This could revise errors such as those for Volume III: the pages in Volume III are for Exhibit 8, not Appendix B.

To insure that the PAP in the Division imaging system is accurate, please address the following. Appendix B in Volume XI of has been changed multiple times. The Division requests that BRL submit a complete copy of the entire appendix as part of the TR-122 submittal package to prevent any confusion. In your adequacy response, it should be made clear that the old version of this appendix should be replaced with the new version.

Adequacy Items

1. In Volume III, page EXH 8-29I (possibly, it should be 8-29i), it appears that the page numbers referencing the SEDCAD model are not correct. Please check this and revise as appropriate.
2. In Volume XI, page 5 states that a 10-year storm will generate 2.9 acre feet of runoff from the Pond J watershed. This appears to be incorrect per page B-4 of Appendix B in the TR-122 submittal; the total runoff volume on B-4 is 3.03 acre feet. Please address this by changing the text on this page, or explain the apparent discrepancy in your adequacy response.
3. Within the text of Volume XI (mostly likely on page 6), additional explanation should be added. While the underdrain design proposed with TR-122 does address seepage from the Fire Mountain Canal, additional text should state that this water control system will also control other potential sources of groundwater around Gob Pile #3. In particular, it should explain why the east side of the gob pile does not require an underdrain such as the one that is constructed under the west side of the pile.
4. While reviewing the text in Volume XI, some issues on page 6 came to light. The text on this page discusses a "three feet wide by one feet wide drain for the East subdrainage system." There appear to be typographical errors in this phrase. Also, this appears to contradict page 7, which states that the cross-section is four square feet.
5. The four square feet on page 7 of Volume XI text also appears to contradict page 4b of this same volume. The figure on page 4b (Gob Pile #3 Drying/Placement Location Operational Sedimentation Control



- Plan) shows the typical section as two feet by one foot. Please address this apparent discrepancy.
6. On page 7 of Volume XI there appears to be an error. Perhaps the value of 9.6 cubic feet per minute should be 64. Please check this and revise as appropriate. Also, the reference is listed twice but only needs to be listed once.
 7. On pages B-5 and B-6 (Appendix B) the flow over the pond spillway is 45.4 cfs. On page B-51 (SEDCAD for the 25-year event) the peak discharge is 67.7 cfs. Please discuss if/how these two flows are related, and edit the text or SEDCAD as necessary.
 8. On pages B-5 and B-6 (Appendix B) the width of the spillway is listed as 8 feet. In Map 22-J, however, the bottom width is 5 feet. Please check this and revise as appropriate.
 9. Please discuss in your response letter (and update any submitted pages, as appropriate) the construction plans for ditches, given some discrepancies. Ditch D-1 and Ditch D-2 are examples. Within the table on page B-2 (operations summary of ditches and culverts), these ditches are listed as V-shaped ditches, but in the SEDCAD model they are trapezoidal ditches with a 10-foot bottom (D-1) and a 5-foot bottom (D-2).
 10. There is a discrepancy with the design flow for Ditch J7. It is 32.6 cfs in the summary table but 30.86 cfs in SEDCAD. Please address this. Also, the summary table may have errors for Ditch J21 (the type and bottom width are not clear).
 11. Please explain some possible errors in the SEDCAD pages for the 25-year event. On page B-48 the design storm is described as a 24-hour event, but on page B-49 it is said to be a 6-hour event.
 12. Please explain why pages in the SEDCAD models appear to be mixed together for different model runs. For example, pages B-54 and B-55 have "25-year" in the footer, but they are in the section for the 100-year model.

The following adequacy items relate to maps. Please check that other related maps also address the items. For example, culverts and ditches on Map 20 should match their counterparts on Maps 21-1 through 21-4.

13. On Map 15-3 the sediment control BMP near the Filter Building may be located incorrectly (perhaps it should be north of Deer Trail Ditch). Please check this and revise as appropriate.
14. Map 20 does not clearly show the method for conveying flow from ditch J11 to culvert J4. Please revise the map to show this. Also, there are two "C-J4" labels, and this appears to be an error.
15. Map 20 does not show culvert J9 crossing the Fire Mountain Canal. Please revise the map.
16. Map 20 does not clearly show the method for conveying flow from culvert D2 to culvert J9 (over the Deer Trail Ditch and across a slope). Please revise the map to show this.
17. Map 20 does not indicate the route of flow the leaves Pond C. It is not clear if this flow enters the Pond J system or not. Please revise the map to make this clearer.
18. On Map 22-J the word "Emergency" is misspelled. This should be edited if other changes are made to this map.

Thank you,



Robert D. Zuber, P.E.
Environmental Protection Specialist II

Cc via email: Tamme Bishop, J.E. Stover & Associates, Inc.