

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

1313 Sherman Street, Room 215 Denver, Colorado 80203

September 8, 2017

John P. Ary Fremont Paving & Redi-Mix, Inc. 839 MacKenzie Avenue Cañon City, CO 81212

RE: Technical Revision (TR-04) Adequacy Review, Pueblo East Pit, Permit File No. M-2000-041

Dear Mr. Ary,

On August 16, 2017, TR-04 was filed with the Division addressing changes to the Reclamation Plan of the Pueblo East Pit, Permit No. M-2000-041. Please be advised that on September 15, 2017, the application for TR-04 may be deemed inadequate and denied unless the following adequacy items are addressed to the Division's satisfaction. Subsequent to receipt and review of the Operator's response to these items, the Division may identify additional items. Please respond to these adequacy issues with a letter summarizing each response, to the numbered items below, in a cover letter titled "Adequacy Review Response TR-04; M-2000-041".

- 1. Within AM-01 Exhibit M Other Permits and Licenses, the Operator identified a Dam Safety Permit and a Reservoir Construction Permit are required prior to commencement of final reclamation of Phase I Parcel 4. Please clarify whether these permits are still required and if so, whether a copy of the approved permits will be submitted with TR-04 materials.
- 2. Within AM-01, the Operator committed to submitting a Technical Revision to address specifics for reservoir bank vegetation for final reclamation. Please clarify whether TR-04 will address seeding details of reservoir bank vegetation.
- **3.** The maps submitted with TR-04 identify the property boundary but do not label or delineate the permit boundary. Please confirm this property boundary is the permit boundary and revise the legend accordingly on the Existing Conditions (Sheet 2). Portions of the slurry wall platform, slurry wall, and crest road are shown north of the northern property line on the Slurry Wall Platform Plan (Sheet 5) and Final Reservoir Grading Plan (Sheet 10). Please note, proposed activities occurring outside of the approved permit boundary will require an amendment to increase the size of the permit to include these areas.
- **4.** Please confirm the various stockpiles located on the reservoir floor on the Existing Conditions (Sheet 2) will be removed as shown in Final Reservoir Grading Plan (Sheet 10). Please note, pursuant to Rule 3.1.5(7), if stockpiles are to remain, slopes within 5 feet above to 10 feet below the expected water line can be no steeper than 3H:1V. The current plan depicted on the Reservoir Excavation Plan (Sheet 3) and Reservoir Excavation Sections (Sheet 4) shows the southwest



squeegee stockpile having 2H:1V slopes at or just below the high water level and are thereby in conflict with Rule 3.1.5(7).

- **5.** The Typical Slurry Wall Detail depiction on the Slurry Wall Details (Sheet 9) misidentifies the Bentonite Slurry Wall. Please correct this call out and re-submit Sheet 9.
- 6. The Crest Road Detail (Typical) and Road Detail (Typical) depictions on the Final Reservoir Grading Plan (Sheet 10) does not show the slurry wall trench cap as depicted on the Slurry Wall Details (Sheet 9). Please correct these depictions and re-submit Sheet 10.
- 7. Please submit details and locations of various reservoir infrastructure (piping, pump stations, inlets/outlets, etc.). If these details are not known at this time, please commit to submitting a later Technical Revision to provide these details.
- 8. The maps submitted with TR-04 identify the 100-year FEMA Flood Limits. This line transects the Phase I Parcel 4 reservoir. Please discuss if the operation has caused this limit to change based on current or final configuration of the site and if the Operator intends to submit a Letter of Map Amendment (LOMA) with FEMA.
- **9.** The proposed lined reservoir is within the 100-year flood plain of the Arkansas River. Please provide a flood analysis and flood control plan for Division review and approval, addressing how the operation will safely convey the expected 100-year flood event throughout the life of mine and during final reclamation, in accordance with the applicable portions of Rule 6.5(1), (2) and (3).

The flood analysis should quantify the velocity and volume of flows expected on site from a 100year flood event, as well as the elevation of the 100-year base flood event and its relation to the elevation of any proposed spillways and reservoir embankments. The flood control plan shall propose mitigation measures such as pit side armoring, river side armoring, inflow and outflow channels, or other appropriate measures. The Operator shall provide the flood elevations to be expected for the 100-year flood scenario and specific mitigation measures which will be implemented to control erosion and protect offsite lands from damage during flood events, in accordance with Rules 3.1.5(3) and 3.1.6(1), (2) and (3).

10. Pursuant to Rules 3.1.5(3) and 3.1.6, please submit a groundwater impact analysis predicting the potential shadowing and mounding effects of the proposed slurry wall of Phase I Parcel 4 at the Pueblo East Pit.

If the analysis determines a shadow or mounding effect will occur offsite impacting a groundwater user, the Operator must explain all mitigation measures to be implemented and trigger points which would put mitigation measures into effect. Typically, a trigger point of a 2 feet change from historic ground water levels may be acceptable. The mitigation measures must include a scenario for the installation of a French drain to direct groundwater around the slurry wall and restore groundwater levels to the historic elevation in area of groundwater mounding.

Please describe the effect of potential mounding will have on proposed reclamation of Phase I Parcels 1-3 where wetlands are to be developed by backfilling within a specific elevation of the static groundwater level. Please explain how potential mitigation efforts will alleviate any mounding effects.

- 11. Please submit a monitoring plan for potential shadowing and mounding effects of the slurry wall.
- **12.** Please provide specific details on the construction of the slurry wall and a thorough cost estimate for the entire project. This cost estimate should also include the costs to construct any flood mitigation structures as discussed in Adequacy Review Item 8.

Following appropriate responses to this adequacy letter, the Division will calculate a financial warranty associated with the complete construction of the slurry wall and will provide the Operator a copy of the estimate for review. Please note, the portion of the financial warranty which the Division currently holds for the previously approved plan to construct a clay liner will be applied to the proposed slurry wall's required financial warranty.

- **13.** Please discuss details regarding the compaction and construction of the proposed embankment in the northwest portion of the Phase I Parcel 4 area. Please submit information regarding Quality Assurance and Quality Control for this embankment.
- **14.** In accordance with Rule 6.5, please submit a stability analysis for the proposed slurry wall and the northwest embankment. Please note, the Division's acceptable minimum factor of safety for static conditions is 1.3, for a rapid drawdown scenario is 1.2, and seismic of 1.1.

This concludes the Division's adequacy review of this Technical Revision. As a reminder, please be advised the Pueblo East Pit Technical Revision may be deemed inadequate, and the request may be denied on September 15, 2017, unless the above mentioned adequacy review items are addressed to the satisfaction of the Division. If more time is needed to complete the reply, the Division can grant a 30-day extension to the decision date. This will be done upon receipt of a written waiver of the Operator's right to a decision by September 15, 2017. The request must be received no later than the deadline date. Please note, a request for additional time will waive the automatic approval clause within Rule 1.9.1 and the new decision date will no longer have the same clause.

If you need additional information or have any questions, please contact me at Division of Reclamation, Mining and Safety, 1313 Sherman Street, Room 215, Denver, CO 80203, by telephone at **303-866-3567 x8132**, or by email at <u>elliott.russell@state.co.us</u>.

Sincerely,

Elliott R. Russell Environmental Protection Specialist

Wally Erickson, Division of Reclamation, Mining & Safety

CC: