



COLORADO

Division of Reclamation,
Mining and Safety

Department of Natural Resources
1313 Sherman Street, Room 215
Denver, Colorado 80203

November 15, 2017

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

RE: Adequacy Review #2 (TR-04), 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. The Division has reviewed the content of the TR-04 and the October 19, 2017 adequacy responses and submits the following comments. Please be advised that on December 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 #2 TR-04; M-2000-041".

15. In response to Adequacy Review Item #3, the Operator has moved the slurry wall alignment within the permit boundary on the north edge of Phase I Parcel 4, however, portions of the crest road and slurry wall platform remain outside of the permit boundary. Although the Operator states the County Special Use Permit has approved of these activities, which are all located on the same property, the Division cannot authorize off-site disturbance to occur. However, in this situation, since these are miscellaneous features associated with the slurry wall and that a separate mine reclamation permit has been issued for the lands immediately north of the Pueblo East Pit, the Division will approve these activities if a concurrent Technical Revision is filed for the Stonewall Springs Quarry Gravel Pit, Permit No. M-2012-045. This TR will need to verify that the two sites share the boundary and clarify what activities will be occurring within the permitted area.
16. Please provide the HEC-RAS Model as referenced within the September 2017 Flood Analysis and Flood Control Plan (Appendix D).
17. Within the September 2017 Flood Analysis and Flood Control Plan (Appendix D), the Operator is proposing a spillway as an inflow/outflow structure during the 100-year flood event. The Final Reservoir Grading Plan (Sheet 10) depicts the spillway on the Spillway Profile along Slurry Wall Alignment cross section. Please demonstrate the capacity of the spillway is appropriately sized to convey the 100-year flood event. The 60-foot wide spillway is centered on an approximate 100-foot wide drainage way. No armoring is proposed on the 20 feet on each end of the spillway. If flood waters exceed the size of the concrete portion of the spillway, these edges will likely erode



and compromise the spillway. Please demonstrate, in accordance with 3.1.6(3), all portions of the inflow/outflow path will remain stable during the 100-year flood event, including the 20 feet of unarmored slopes on each side of the spillway.

- 18.** The spillway structure, as depicted on the Final Reservoir Grading Plan (Sheet 10), does not contain a footer. The Division has approved similar structures which have contained a footer to help prevent the structure from settling over time and overturning during a flood event. Please provide information regarding how the spillway will remain stable overtime as well as during a flood event or revise the plans accordingly.
- 19.** Please discuss the relationship between the Phase I Parcel 4 spillway and the future Phase III reservoir.
- 20.** Within the September 2017 Flood Analysis and Flood Control Plan (Appendix D), the Operator states riprap protection on the downstream portion of the spillway is not necessary due to the mild slope of the drainage swale tie-in. Please submit a cross-section which depicts the spillway and drainage swale tie-in. This cross section will be similar to the Spillway Section B on the Final Reservoir Grading Plan (Sheet 10), however, the cross section should depict from the pit floor to the natural grade of the swale.
- 21.** Within the September 2017 Flood Analysis and Flood Control Plan (Appendix D), the Operator states armoring the reservoir slope upstream of the spillway is not required because any inflow to the reservoir through the spillway that results in head cutting and slope failure would only cause damage to property owned by the landowner. In accordance with 3.1.6(3), all surface areas of the affected land shall be stabilized and protected as to effectively control erosion. Additionally, a head cut would compromise the spillway structure and the slurry wall. Please provide a demonstration that the reservoir side slope will remain stable as flood waters flow into the reservoir from the spillway or revise the plan to include appropriate rip-rap, a concrete apron, or other erosion control measures on the reservoir side slope below the spillway. Erosion control measures should be depicted on the cross-section discussed in Adequacy Review Item #20.
- 22.** In response to Adequacy Review Item #10, the Operator states that if groundwater mounding exceed two feet, a perforated drain pipe would be installed to restore groundwater levels to less than two feet of mounding. To demonstrate the mitigation measure is feasibly and can be installed entirely within the affected lands, please provide the conceptual plans for a drain pipe and commit to, in the event groundwater mounding exceeds two feet, submitting the detailed mitigation plans for review and approval by the Division through the Technical Revision process. Alternatively, the Operator may submit these details for review and approval during the TR-04 process whereby, in the event groundwater mounding exceeds two feet, the Operator shall notify the Division and immediately implement the approved plan.
- 23.** The proposed groundwater mounding monitoring plan utilizes Well 1 (Permit No. 279124), which is located 200 feet west of the permit boundary on the neighboring property. This well is not owned by the Operator nor the mine site landowner, and therefore is not safeguarded through the life of mine. To ensure there are no adverse impacts to off-site groundwater users, the

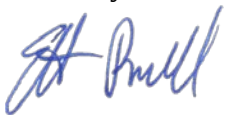
Division will require an addition monitoring well, located up-gradient of the back-filled pit and within the permit boundary to be controlled by either the Operator or the mine site landowner. This location will also more accurately monitor the effects of groundwater mounding.

24. Within the Groundwater Monitoring Plan (Appendix H), the Operator states wells will be initially monitored on a monthly basis until the completion of the slurry wall construction then quarterly for the life of mine. Please define the completion of the slurry wall construction. Additionally, the Division believes monthly monitoring should occur for at least one year after the completion of the slurry wall to help define the groundwater regime and understand immediate mounding effects. Please revise the plan accordingly.
25. In response to Adequacy Review Item #12, the Operator included the Table 1 Cost Estimate to construct the slurry wall. Within Table 1 Cost Estimate, the costs associated with the five tasks under “Work Items by Fremont Paving” were not provided. Please provide the cost estimate to complete each of these work item tasks.

This concludes the Division’s second adequacy review of TR-04. As a reminder, please be advised the Pueblo East Pit Technical Revision may be deemed inadequate, and the request may be denied on December 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. The request for more time must be received no later than the deadline date.

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 elliott.russell@state.co.us.

Sincerely,



Elliott R. Russell
Environmental Protection Specialist

CC: Wally Erickson, Division of Reclamation, Mining & Safety