



March 31, 2025

Jodi Schreiber
Fremont Paving & Redi-Mix, Inc.
839 Mackenzie Ave
Canon City, CO 81212

**RE: Stonewall Springs Quarry Gravel Pit, Permit No. M-2012-045; Technical Revision TR-2
Groundwater Monitoring Plan, Pre-liminary Adequacy Review**

Dear Ms. Schreiber,

On March 17, 2025, the Division of Reclamation, Mining, and Safety (Division/DRMS) received the Technical Revision (TR-2) application proposing a Groundwater Monitoring Plan (GWMP) to be implemented for this permit. The proposed GWMP was reviewed for compliance according to the Division's July 2024 Groundwater Monitoring: Sampling and Analysis Plan Guidance Construction Materials and Hard Rock Sites guidance document (Guidance Document). After a review of the TR-2 application and the proposed GWMP, more information and/or clarification is needed prior to the Division issuing a decision. Please address the following items with a cover letter and any additional supplemental information to satisfy the deficiencies identified.

1. Background Information

1. The maps submitted with the proposed GWMP do not meet the requirements outlined in the Guidance Document, 1.1 Site Description. All maps must be prepared and signed by a registered land surveyor, professional engineer, or other qualified person. Resubmit the maps to include the qualified preparer's signature on each one.
2. In the "Background Information" section of the proposed GWMP, it is stated that the material within the slurry wall will be removed to bedrock, identified as the Pierre Shale formation, and situated at a depth of about 48 feet. In the "Central Dam and Reservoir" section, the proposed reservoir is stated to have a maximum depth of 65 feet. Provide more information about the underlying Pierre Shale and the embankment walls for the proposed reservoir to account for the 17-foot discrepancy described.
3. Provide information about recharge zones for the Arkansas River Valley alluvial aquifer in the vicinity of the Central Reservoir and the permitted area.
4. The proposed monitoring locations submitted in the GWMP of CR-24 to the northwest of the proposed slurry wall, CR-6 to the southwest of the proposed slurry wall, and MH-9 to the southeast of the proposed slurry wall, all of which have already been constructed,



appear to be adequate. At this time, it is unclear if the depth of well MH-9 is sufficient. The depth of MH-9 appears to be constructed depth of 42.5 feet which may not be adequate for the purpose of groundwater monitoring. Provide more information about the depth to the Pierre Shale for monitoring well MH-9. Additionally, provide the construction diagrams for each proposed monitoring well, CR-24, CR-6, and MH-9.

5. It is stated in the proposed GWMP in the subsection titled "Establishing Baseline Groundwater Quality" that water quality samples will be collected quarterly for five quarters, or a total of five times. According to the Guidance Document, section 1.2 Baseline Groundwater Characterization, to have baseline established, data from five consecutive quarters will be required. Revise the statement in this section to reflect the requirement of five sequential quarters of water quantity and quality data will be obtained to establish baseline groundwater characteristics.

2. Predicted Impacts to Hydrologic Balance

6. The described predicted impacts to the hydrologic balance of the area provided in the proposed GWMP, under the subsection titled "Potential Impacts of Mining on Groundwater Quantity" states that a few feet of mounding on the west side and shadowing on the east side may result after the construction of the proposed slurry walls. The form of the proposed slurry walls shows that the north side is not linear and will be constructed with a curve in the center which appears to be approximately normal to the groundwater directional flow. Provide more information about how this form will affect the hydrologic balance and give more details about the anticipated range of mounding and shadowing that can be expected after slurry wall installation. Include information about the modeling program used that are outlined in section 1.2.2 Baseline Groundwater Quantity of the Guidance Document.
7. The Guidance Document requires that discussions on impacts to the groundwater quality include water quality parameters that may be elevated as a result of the proposed operation. The submitted GWMP states that an adverse effect to the surrounding areas is not anticipated. Provide details of all potential impacts to the groundwater quality to the area, adverse or otherwise. The Division feels that the residence time of groundwater will be affected due to anticipated mounding and shadowing and the temporal change has the potential to affect the groundwater quality. Provide comments about potential water quality impacts that could result from these anticipated temporal changes in addition to any modeling results used to make the predictions. Include information about the modeling program used that are outlined in section 1.2.2 Baseline Groundwater Quantity of the Guidance Document.
8. The location of the proposed slurry wall is adjacent to the St. Barbara Sand and Gravel Mine (Permit No. M-2004-013), which has an approved slurry wall. Provide a numerical

and/or graphical model depicting the anticipated impacts to the hydrologic balance which takes into consideration the slurry wall on the St. Barabara site. Again, information about the model(s) used for developing the potential impacts should be provided in accordance with section 1.2.2 Baseline Groundwater Quantity of the Guidance Document.

9. The proposed GWMP does not include a mitigation plan or triggering events for a mitigation plan to be implemented. Develop a mitigation plan for the site with details on events that would trigger the initiation of said mitigation plan. Provide sufficient details of the steps and actions that will be taken in order to ensure a timely and effective response if necessary.

This concludes the Division's pre-liminary review of the TR-2 application for Stonewall Springs Quarry Gravel Pit, Permit No. M-2012-045. The decision date for the TR-2 application is **April 16, 2025**. Please response to the Division no later than 5 working days prior to this date **(April 9, 2025)** to allow time for the Division to review the response. If more time is needed to address the items above, it is the applicant's responsibility to submit a written extension request to the Division prior to the decision date.

If you have any question, I can be contact by email at Jocelyn.carter@state.co.us or by phone at (720) 666-1065.

Sincerely,



Jocelyn Carter
Environmental Protection Specialist

Ec: Amy Eschberger, DRMS
Patrick Lennberg, DRMS