



August 6, 2021

David Bieber  
Front Range Aggregates, LLC  
c/o Martin Marietta Materials, Inc.  
1627 Cole Boulevard, Suite 200  
Lakewood, CO 80401

**Re: Parkdale Quarry, Permit No. M-1997-054; Exhibit G Preliminary Adequacy Review for 112 Construction Materials Reclamation Permit Amendment Application (AM-02)**

Dear Mr. Bieber:

As indicated in our July 14, 2021 preliminary adequacy review letter, the DRMS was at the time, still reviewing Exhibit G, Water Information. We have completed our review of Exhibit G. Please address the adequacy items identified in the enclosed letter from Eric Scott, DRMS.

This completes the DRMS's adequacy review of the materials submitted for AM-02. The decision date for AM-02 is currently set for **August 16, 2021**. If additional time is needed to address the adequacy items, an extension request must be received by our office prior to the decision date.

If you have any questions, please contact me at (303) 328-5229.

Sincerely,

Timothy A. Cazier, P.E.  
Environmental Protection Specialist

Enclosure: Parkdale Quarry AM02, Review of Provided Exhibit G, and Adequacy Questions/Issues

ec: Michael Cunningham, DRMS  
Eric Scott, DRMS  
DRMS file  
Stephanie Carter, BLM





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

**To:** Tim Cazier DRMS EPS III  
**From:** Eric Scott DRMS EPS II  
**Date:** August 6, 2021  
**Re:** **Parkdale Quarry AM02, Review of Provided Exhibit G, and Adequacy Questions/Issues**

---

Per your July 19, 2021 request, I have reviewed Exhibit G (Groundwater Monitoring and Mitigation Plan, or MMP) as provided in the Parkdale Quarry AM02 submittal. I also reviewed portions of the BLM EIS document which discussed surface and groundwater concerns for additional background information. The following are questions or issues that will require clarification or will need to be addressed during the adequacy review process.

- A. The operator has not identified all known aquifers as required by 6.4.7(2)(b). Please identify all known aquifers.
- B. What additional permitting will be required for the sediment ponds/discharge to surface water and what discharge parameters will be monitored?
- C. What is the nature of the “periodic disturbances” to Tallahassee Creek within the existing permit area that are discussed? Is additional permitting required for these?
- D. If/when the springs identified within and near the proposed permit are affected, what is the trigger for remedial action? Are there water rights implications associated with impacting these springs?
- E. DRMS will require an additional surface water monitoring point at an upstream (background) location on Tallahassee Creek to document surface water quality conditions prior to any mining related impacts, ideally immediately after the creek enters the permit area. Please identify this location on the appropriate figures.
- F. The applicant will be required to provide surface and groundwater quality monitoring plan to provide data quarterly for a minimum of five consecutive quarters prior to any mining related disturbances in the proposed expansion area. If parameters are stable, DRMS may be willing to modify the quarterly monitoring through at TR at a later date.
- G. Applicant will need to expand the analytical sampling to include inorganic analytes appropriate for the surface water standards for the creeks/receiving body. Applicant will need to review Regulation No. 31 – The Basic Standards and Methodologies for Surface Water, and Regulation No. 32 - Classifications and Numeric Standards for Arkansas River Basin to determine what surface water standards are appropriate for the proposed monitoring, and provide those standards as part of the proposed monitoring plan.
- H. Please provide cross sections of the proposed expansion area showing the existing and proposed final surfaces with respect to the location and groundwater depths of existing and proposed monitoring wells.



- I. Please provide a groundwater contour or flow direction map of the expansion area if possible.
- J. Applicant will need to present all groundwater monitoring data compared to the most restrictive standard in Tables 1-4 of the Interim Narrative Standard (INS) for each analyte, not just Domestic Water Supply.
- K. Applicant will need to expand the analytical sampling proposed in the provided MMP to include analytes from Tables 1-4 of the INS. DRMS will allow elimination of odor, color, coliforms, asbestos, foaming agents, phenol, and chlorophenol -which we have no reason to believe this operation would impact, however, we need the full inorganic list and gross alpha and beta.
- L. Based on the data provided to-date, it appears that Table Value Standards (TVS) should apply to this site with the possible exceptions of Gross Alpha and Beta. (The initial uranium detection above standards in MW10 from the first sampling event appears to be an outlier) DRMS may revise this assessment as additional quarterly data is provided. If the Applicant disagrees, please provide rationale and alternate proposed value(s).
- M. Please address/clarify/discuss what standards the applicant intends to apply to the groundwater radionuclide data and gross alpha/beta data to be collected and why.
- N. Please discuss/clarify how the proposed additional monitoring well locations (MW-2, -4, -5 and -6) shown in Figure 6 of the MMP were selected, as well as what groundwater quality monitoring data is intended to be collected from them, and at what intervals.
- O. Please identify the proposed Point of Compliance (POC) well(s) for this site as required by Construction Materials Rule 3.1.7(6). Given the inherent uncertainties of monitoring groundwater in a fractured bedrock setting, and the extent of groundwater characterization to date, multiple POC locations may be appropriate for this site.
- P. DRMS will require that all additional wells be installed prior to mining activity in the expansion area if at all possible, rather than the proposed “phased” approach. This would provide additional useful baseline data prior to disturbance in those areas. Please address.
- Q. DRMS will require submittal of groundwater monitoring data with the annual report at a minimum. If TVS monitoring parameters are exceeded DRMS will require notification within 5 working days per Rule 3.1.7(9). Please acknowledge
- R. With respect to the monitoring measures proposed in the MMP, DRMS will need to be notified as appropriate for exceedances of TVS values for groundwater, exceedances or observed possible negative impacts to surface water, and/or groundwater quantity impacts. Please acknowledge
- S. The applicant should establish “trigger levels” or identify baseline levels for the indicators specified in Table 9 of the MMP (other than TVS analytes which have established standards). This will clarify what constitute an “increase” in specific conductivity and turbidity, or an increase or decrease from historic or pre-mining “baseline” levels for quality or quantity.

- T. Figures 3 through 6 do not show the existing permit boundary, only the proposed expansion area. Please include the existing permit boundary on all figures in Exhibit G. If any proposed points of compliance for surface water or groundwater are outside the permit boundary, please provide an explanation or move the POC to within the permit boundary.
- U. Exhibit M lists a Substitute Water Supply Plan as required. Does the SWSP account for the springs in the proposed expansion area that will be mined through, or do you have documentation from the Colorado Division of Water Resources indicating that is not necessary?
- V. The mitigation plan for the “Alteration of water quality or flow at springs” proposes the installation of a “guzzler”. Please describe how this would be installed and implemented.

Please let me know if you have any questions, or would like to discuss any of these topics further.