

December 23, 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; Fourth Adequacy Review for 112 Construction Materials Reclamation Permit Amendment Application (AM-02)

Dear Mr. Bieber:

The Division of Reclamation, Mining and Safety (DRMS) has completed its review of your responses (received December 10 and 21, 2021) to our December 7, 2021 third adequacy review (TAR) of your 112 Construction Materials Reclamation Permit Amendment Application (AM-02) for the Parkdale Quarry, Permit No. M-1997-054. **The current decision date for this application is January 15, 2022.** Please be advised that if you are unable to satisfactorily address any concerns identified in this review before the decision date, **it will be your responsibility to request an extension of the review period.** If there are outstanding issues that have not been adequately addressed prior to the end of the review period, and no extension has been requested, the DRMS may deny this application.

The following items must be addressed by the applicant in order to satisfy the requirements of C.R.S. 34-32.5-101 et seq. and the Mineral Rules and Regulations of the Mined Land Reclamation Board. The responses received on December 10 and 21 adequately addressed our comments from our third adequacy letter. However, these responses resulted in new comments requiring edits, clarification and explanations. Therefore the comments below are new and the numbers have no relation to previous comment numbers.

6.4.6 EXHIBIT G – Water Information

A. General Comments:

- i. Section 4.2.1 – Remove direction reference “southeast” from this paragraph – it conflicts with the surface topography arrows on Figure 5.
- ii. Section 4.2.3 – Remove sentence “The gross alpha radiation level was corrected for Uranium, but was not corrected for Radon as specified in Table 1 of the Interim Narrative Standard.” This data should also be removed from Table 7 as the applicant does not have the Radon data to allow it to be properly calculated and compared against the applicable standard. Applicant will need to collect necessary radionuclide data to compare properly against applicable standards.



- iii. Section 5.2 - Remove discussion of setting standards for radionuclides in fourth paragraph of this section beginning with “The maximum concentration/activity..” DRMS will evaluate radionuclide data and apply the Interim Narrative Standard as appropriate after a minimum of five full quarters of data are collected and submitted.
- iv. Section 5.2.2 – Include statement that “All non-dedicated sampling equipment will be appropriately decontaminated prior to sampling and between sampling locations.”
- v. Section 5.2.2 – Include statement that “All samples will be collected in appropriate containers, preserved as required by method, and maintained and shipped at appropriate temperatures and within appropriate holding times as specified by the laboratory and/or analytical method.
- vi. Any changes made to the contents of the following tables should be accurately reflected in the text of the plan where necessary. Surface water monitoring locations on Currant Creek and Tallahassee Creeks are inconsistently named with respect to upstream and downstream locations. In order to avoid future potential confusion, please rename/renumber the locations such that they consistently increase in the downstream direction.

B. Table 7 Comments:

- i. Parameter heading has typo “fotenote”
- ii. The row identified in this table as Gross Alpha should be referred to as “Total Alpha Activity”
- iii. “Adjusted Gross Alpha” should be referred to as “Gross Alpha – Reg 41” to eliminate confusion with respect to which values should be compared to Regulation 41. The footnote for this row should specify how this value is obtained (by excluding alpha activity from Radon and Uranium from the total alpha activity).
- iv. Data currently shown in the Adjusted Gross Alpha row should be removed - no Radon data was collected and therefore this value cannot be properly calculated and shown relative to the applicable standard. The row can be retained as a place-holder for future properly calculated data.
- v. Only one value of 15 pCi/L needs to be shown in the Standards box for Gross Alpha – Reg 41
- vi. First sentence in Footnote 2 should be removed.
- vii. Please provide a reference for the Gross Beta “screening level” of 50 pCi/L shown in Table 7, and make sure all values above 50pCi/L are properly shaded. For consistency, please continue to collect and report gross beta activity level data for all background sampling events.
- viii. There should be no standard value shown or data highlighted/shaded/footnoted for Radium 226 or Radium 228 levels. The standard of 5 pCi/L applies to Total Radium and the data presented in the Total Radium row is correct as shown.
- ix. Text for footnote 3 appears to be clipped/incomplete.

x. Footnote 4 should be eliminated.

C. Table 8 Comment: Both the Monitoring Frequency and Monitored Parameters columns can be removed. The Monitoring Frequency column has the same statement for all locations, and the Monitored Parameters column entries only differ between surface and groundwater locations and these parameters are provided in Table 9.

D. Table 9 Comments:

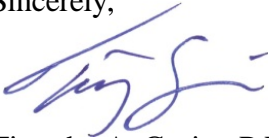
- i. Delete “ ’ ” in front of Table name..
- ii. It would be very helpful to divide Table 9 into sections as was done in Table 7 (Field parameters, Solution Parameters/Major Ions, Nutrients, Dissolved Metals, and Radionuclides). This makes data comparison much easier, and Table 7 presents radionuclide data in a more coherent way.
- iii. For Total Suspended Solids replace “R” with “value recorded and reported” (as in above columns) for consistency and remove footnote for “R”
- iv. Add units for Radon (pCi/L) and a footnote for Radon stating that although no standard has been established for Radon activity, the data is required to properly calculate Gross Alpha per Reg 41 requirements.
- v. Present Alpha activity data consistent with format in Table 7 - See comments for Table 7.
- vi. Make sure that Uranium activity levels and Radium 226/228 activity levels are included as part of this table (like in Table 7) as they are needed to properly calculate “Gross Alpha – Reg 41” for comparison to the standard.
- vii. Until all five quarters of background data are collected, Gross Beta activity data should be presented consistently with existing data in Table 7, and compared to “screening level” of 50 pCi/L. It should can be noted in footnotes that the Reg 41 standard is a dose-based standard of 4 mrem/yr.
- viii. Text after first sentence in Note (1) is not applicable to Table 9, and should be removed and placed into text of report (or Table 8 if Table 8 is retained) MW3 is also incorrectly referred to in this note as upgradient.
- ix. Note 2 does not seem to be applicable to Table 9, this text should be moved to surface water monitoring locations section of report.
- x. Note 5 needs to be corrected as previously to be consistent with Table 7

6.5 GEOTECHNICAL STABILITY EXHIBIT

F. Geotechnical Stability Exhibit: The Factor of Safety results in Tables 2 (Planar and Topple Failures) and 3 (Wedge Failures) provided in the December 21 version differ from the results in those same two tables submitted on December 10th. Please explain why the results changed, in some cases significantly, between the two versions of the Exhibit.

Please remember that the decision date for this application is January 15, 2022. As previously mentioned if you are unable to provide satisfactory responses to any inadequacies prior to this date, it will be your responsibility to request an extension of time to allow for continued review of this application. If there are still unresolved issues when the decision date arrives and no extension has been requested, the application may be denied. If you have any questions, please contact me at (303) 328-5229.

Sincerely,

A handwritten signature in blue ink, appearing to read 'Tim Cazier', with a stylized flourish at the end.

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

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