



**State of New Mexico**  
**ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT**  
**and the**  
**ENVIRONMENT DEPARTMENT**

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Cabinet Secretary, NMED

**Electronic Transmission**

March 17, 2022

Mr. Bruce Norquist, Facilities Manager  
Rio Grande Resources Corporation  
Mt. Taylor Mine  
P.O. Box 1150  
Grants, NM 87020

**Re: Comments on Construction Quality Assurance Report (CQAR) of the Disposal Cell: Section 9.E.1.a, Permit C1002RE, Revision 13-2, Mt. Taylor Mine**

Dear Mr. Norquist,

The Energy, Minerals and Natural Resources Department, Mining and Minerals Division (MMD) and the New Mexico Environment Department (NMED) received a letter, dated May 14, 2021, entitled *Submission of the Construction Quality Assurance Report (CQAR) of the Disposal Cell: Section 9.E.1.a, Permit C1002RE, Rev. 13-2; Mt. Taylor Mine*. The letter included a submittal entitled *Construction Quality Assurance Report ("CQAR") Waste Rock Pile/Disposal Cell, Mt. Taylor Mine, Rio Grande Resources Corp.* (RGR) dated May 7, 2021. MMD and NMED (the Agencies) have reviewed the CQAR and have the following comments.

General Comments:

1. A Professional Engineer's (PE) stamp is needed.
2. A Table of Contents is recommended.
3. The CQAR is lacking summaries, descriptions, and data in a number of areas as specified below.
4. The figures are not labeled in a clear way. Please revise.

Specific Comments:

1. Page 2, 2<sup>nd</sup> paragraph, last sentence: should also include approval by MMD of the Disposal Cell expansion.
2. Section 1.2, Purpose and Scope, page 2: should include more information about the clay and vegetative cover material sources and include or refer to a borrow material handling plan.
3. Section 2.3, Construction Specifications and Drawings, page 3: a table of key construction dates, a list of equipment used, and a list of the materials and quantities placed into the existing disposal cell are needed.

Re: Comments on Construction Quality Assurance Report (CQAR) of the Disposal Cell: Section 9.E.1.a, Permit CI002RE, Revision 13-2, Mt. Taylor Mine

March 17, 2022

Page 2 of 3

4. Table 1., Drawings issued for construction: these should be included in the CQAR. This may be redundant with the receipt of the drawings in other submittals but are recommended to be include with the CQAR.
5. Section 3.1, Construction Quality Summary, Section 3.1.1, Conformance with Design, and Section 3.1.2, Conformance with Permj Requirements, page 5:
  - a. a pre-construction topographic map is recommended;
  - b. a table showing the measured thicknesses of the clay cap (and clay liner, if applicable) is needed;
  - c. additional cross-sectional drawings of the disposal cell are needed;
  - d. notation in the summary that the revegetation of the SWRP, and site monitoring including radiation surveys that are not yet completed is needed.
6. Figure 2 (Sheet No. SW01-AB)- Item 8 - The access ramps only have 6" gravel over the radon barrier. Please indicate if this was approved in the design. Please confirm if radon testing was conducted in these locations. Item 10 - Is water ponding here or free draining to the south stormwater pond? It is not clear based on the topography shown in the figure, how the pile integrates with existing site features and topography. Please include a discussion or revise the figure to show how the regraded pile ties into the existing topography.
7. Figure 3 (Sheet No. SW02AB) - Waste Rockfill is labeled in the lower cross section. Please add a section in the text describing the material placed here. The following needs to be included in the discussion: the dimensions and thickness (one lift or additional ones) of the Waste Rockfill and the estimated volume of each lift if available. Please include a figure showing this in plan-view. Also, please provide details on where the construction waste material was placed. Finally, add a table in the text, showing the location and volume of waste material placed (i.e. 20 tons from pond 2, etc.).
8. Figure 4 (Sheet No. SW06-AB) – Please confirm if testing was performed on the east section of the top cell where the Item 1 label is shown). It appears that the label may be blocking the test locations in this area.
9. Figure 5 (Disposal Cell Cover Soil Compaction Test Locations, performed in 2020) - The north side of the drawing shows a small hill or depression at the base of the clay cover with the clay cover shown on the southern side. Is this an accurate depiction of the site conditions? Please explain or revise this figure.
10. Additional Comments, Attachment A, As-Built Figure and Drawings:
  - a. Sheet No. SW01-AB, Waste Rock Pile/Disposal Cell As-Built – February 2021: Color coded areas of the SWRP and Disposal Cell are shown corresponding to clay cap and vegetative growth media thicknesses but there is no data or table of the clay cap and vegetative cover material thickness test measurements in the CQAR.
  - b. Sheet No. SW01-AB, Waste Rock Pile/Disposal Cell As-Built – February 2021: A Drainage Bench is shown, however, a corresponding drawing of the drainage channel profile is not included in the CQAR.
  - c. Sheet No. SW01-AB, Waste Rock Pile/Disposal Cell As-Built – February 2021: Additional cross-sectional drawings through the northwest to southeast and northeast to southwest sections of the SWRP and Disposal Cell are recommended.
  - d. Sheet No. SW01-AB, Waste Rock Pile/Disposal Cell As-Built – February 2021: A horizontal footprint showing the maximum extent of the Disposal Cell should be shown.
  - e. Sheet No. SW06-AB: Clay liner compaction test locations are shown but there is no data or table of the liner compaction test results in the Attachment C.5, Compaction Tests.
11. Attachment C, Daily Diaries and Soil Test Results:
  - a. Sections C.2 through C.6 should each have a summary that has the requirements, specifications, and procedures and how they were met.
  - b. Section C.5, Compaction Tests, Summary of Densities for Growth Media (2020-2021): Are these data shown on the As-Built Drawings?

Re: Comments on Construction Quality Assurance Report (CQAR) of the Disposal Cell: Section 9.E.1.a, Permit CI002RE, Revision 13-2, Mt. Taylor Mine

March 17, 2022

Page 3 of 3

- c. Section C.5, Compaction Tests, Summary of Densities for Clay Cover (2020-2021): Test results for C01, C02, C03, and No. 43 are not included.
- d. Section C.5, Compaction Tests, Compaction Test Results tables: Test data for No. 1 through 16, 43, C01, C02, and C03 are not included.
- e. Section C.5, Compaction Tests: Summary of Densities for Clay Cap are not included.
- f. Section C.6, Riprap Tests: Riprap properties such as L.A. Abrasion, sodium soundness, specific gravity, and absorption, if testing was performed, were not included. Source of the riprap, material handling and quality control summaries were not included.
- g. The table on page 48 of the PDF shows the soil classifications and results from the sieve analysis. The sieve analysis values shown for Sample Nos. 239 and 207 indicate that these samples have similar characteristics. Please explain why #239 is designated as a growth medium and #207 as clay cover given there is no difference in material characteristics based on the sieve analysis. In addition, did the material handling plan propose the number of samples to be taken in the cover material? Please add the sample collection dates to this table. Finally, do the results in this table represent all cover samples taken? If not, please add all of the other available results from the cover testing.
- h. Attachment C, C.6: Please indicate if the rip-rap was analyzed for the potential to generate contaminants regulated under 20.6.2.3103 NMAC. Please provide any available information on the type of rip-rap from the supplier and if the geochemistry of the material has been characterized. A discussion on the material composition and source needs to be added to the text.

Please contact respective MMD and NMED permit leads David Otori at 505-216-8945 and Anne Maurer at 505-660-8878 with any questions regarding the comments in this letter and for permitting issues for the Mt. Taylor Mine.

Sincerely,

Joseph Fox  
Digitally signed  
by Joseph Fox  
Date: 2022.03.16  
11:08:16 -06'00'

for  
Anne Maurer  
Mining Environmental Compliance Section  
Ground Water Quality Bureau - NMED



David Otori  
Mining Act Reclamation Program  
Mining and Minerals Division-EMNRD

cc: Joe Fox, Acting Program Manager – NMED-MECS, ([joseph.fox@state.nm.us](mailto:joseph.fox@state.nm.us))  
Holland Shepherd, Program Manager, EMNRD-MMD ([holland.shepherd@state.nm.us](mailto:holland.shepherd@state.nm.us))  
Mine File (CI002RE)