

State of New Mexico
Energy, Minerals and Natural Resources Department

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Mining and Minerals Division



January 22, 2020

Ms. Samantha Kretz, Environmental Engineer
GCC Rio Grande, Inc.
Tijeras Mine and Mill
P.O. Box 100
Tijeras, New Mexico, 87059

RE: Comment Letter: Engineering Summary for Quarry 1 Post-Mining Topography (PMT) Design at the GCC Tijeras Plant, dated December 30, 2019

Dear Ms. Kretz,

The New Mexico Mining and Minerals Division (“MMD”) received the submittal from GCC Rio Grande (“GCC”) titled, “*Engineering Summary for Quarry 1 Post-Mining Topography (PMT) Design at the GCC Tijeras Plant*”, dated December 30, 2019

MMD has conducted a review of this document and has the following comments:

1. In the Introduction, Water & Earth Technologies, Inc. (“WET”) mentions that the Quarry 1 area will drain into Sediment Pond 1. Please discuss how this drainage will function at closeout when Sediment Pond 1 is removed.
2. In the *Maximum Slope Length and Drainage Diversity* section WET talks about a K-Factor of 0.33 used for topdressing. Please discuss how this K-Factor was chosen for the soil type that will be used for topdressing. MMD is assuming that WET will be using the same redbed material for top dressing that has been used in the past for reclamation on this site. Please confirm this assumption.
3. Provide a map showing where the specific Slope Gradients in Table 1 are located.
4. The *Grading Tolerances* section talks about a tolerance of plus or minus 1-ft for final grade. Does this tolerance include the 2-ft minimum of topdressing, or is this prior to the placement of topdressing? MMD will require at least a 2-ft minimum of topdressing in all areas.
5. In an area where no topsoil is added due to a 2-ft minimum of topsoil material already being present, the area must be ripped to a depth of 1ft prior to seeding/mulching.
6. In *Drain Design* it is mentioned that the SEDCAD was to model the drains. Please provide the SEDCAD output for the channels.
7. The Small Drain paragraph under *Drain Design* states “sub-watershed D1 was used for channel design in the SEDCAD Channel Utility to ensure at least 1 foot of freeboard above the peak water surface elevation and for calculating rock size.” Was freeboard incorporated into the channel design parameters for all of the drains? If so, please provide the depth of freeboard as well as the factor of safety for all the channels.
8. Please provide explanations or calculations for any channel parameters that were not calculated within SEDCAD.

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9. Please provide support for the size of the material that is being used to construct all three types of drains.

Per Section R in the Revision 18-1 Updated Closeout Plan Permit. GCC is required to complete reclamation of the Quarry 1 area with a completion date of 2023. MMD recognizes that the *Engineering Summary for Quarry 1 Post-Mining Topography (PMT) Design at the GCC Tijeras Plant, dated December 30, 2019*, is an integral piece to completing this task. In addition to the PMT document referenced in this comment letter GCC will be required to submit a full Reclamation Work Plan to move forward with the process of reclaiming Quarry 1. This plan should include items such as but not limited to seed mix and revegetation information, borrow source (topdressing) information, material and handling plan, etc.

Please contact me at (505) 476-3413 or at clinton.chisler@state.nm.us if you have any questions.

Sincerely,



Clinton M. Chisler, Permit Lead
Mining Act Reclamation Program ("MARP")

Enclosure

cc: Holland Shepherd, Program Manager, MARP

Mine File (BE001RE)