



**Michelle Lujan Grisham**  
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**NEW MEXICO  
ENVIRONMENT DEPARTMENT**

Ground Water Quality Bureau

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**James C. Kenney**  
Cabinet Secretary

**Jennifer J. Pruett**  
Deputy Secretary

**MEMORANDUM**

Date: May 21, 2020

To: Holland Shepherd, Program Manager, Mining Act Reclamation Program

Through: Anne Maurer, Mining Environmental Compliance Section

From: Amber Rheubottom, Mining Environmental Compliance Section  
Alan Klatt, Surface Water Quality Bureau

Subject: **NMED Comments, Quarry 1 Reclamation Plan, GCC Rio Grande, Inc., Tijeras Mine and Mill, New Mexico Mining Act Permit No. BE001RE**

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The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) on March 12, 2020 requesting NMED review and provide comments on the above-referenced MMD permitting action. The request is to review and provide comments on a workplan for the reclamation of Quarry 1 on the Tijeras Mine and Mill Site. MMD requested comments on the workplan within 60 days of receipt in accordance with Section 19.10.5.503 C. NMAC. NMED requested a 15-day extension, which was granted on May 1, 2020. NMED has the following comments.

**Background**

GCC Rio Grande, Inc. (GCC) proposes to reclaim a portion of Quarry 1 consisting of 27.2 acres. Proposed reclamation includes stabilization of Quarry 1 where slope failure has occurred, backfilling excavated areas, grading and seeding reclaimed areas.

**Air Quality Bureau**

The Air Quality Bureau previously commented on the Tijeras Mine and Mill closeout plan for the requested environmental determination. The Air Quality Bureau has no additional comments.

### **Surface Water Quality Bureau**

The Surface Water Quality Bureau has no comments.

### **Mining Environmental Compliance Section (MECS)**

The MECS has the following comments:

1. Main text, Section 4.1 – “*...removing the slope failure...*” GGC should elaborate on the method used to remove the slope failure. Additionally, the location of the slope failure should be noted on Appendix A Figure 1 and resubmitted. Also the location of the slope failure should be on all forthcoming maps, so the area may be monitored during and following reclamation.
2. Main text, Section 4.2 – “*...facility Stormwater BMP’s will remain in place...*” It is likely that additional stormwater management will be needed to separate the area to be reclaimed from other operational areas. Areas to consider include the southwest area, near the peak outside of Quarry 1, and the northwest side. GGC should provide a figure or description of how this will be achieved.
3. Appendix B, Table 1 – “*...slope 15%, maximum slope length 273...*” NMED recommends limiting slope lengths on reclaimed slopes to 200 feet in length.
4. Appendix B, Grading Tolerance – “*Deviations outside of the grading tolerances must be approved by the site Engineer*” NMED recommends final as-built drawings of Quarry 1 be submitted following the completion of reclamation work. The final as-builts should note areas where the plan deviated from what is submitted herein.

### **NMED Summary Comment**

NMED finds that reclamation as proposed in the workplan will be protective of the environment if done in accordance with the approved permits, pollution controls, and the comments above.

If you have any questions, please contact Kurt Vollbrecht at (505) 827-1095.

cc: Jerry Schoeppner, Director, EMNRD-MMD  
Clint Chisler, Lead Staff, EMNRD-MMD  
Kurt Vollbrecht, Program Manager, MECS  
Shelly Lemon, Bureau Chief, GWQB-SWQB



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**James C. Kenney**  
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**Jennifer J. Pruett**  
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DATE: April 29, 2020

TO: Kurt Vollbrecht, Manager, Mining Environmental Compliance Section, Ground Water Quality Bureau

FROM: Alan Klatt, Watershed Protection Section, Surface Water Quality Bureau

SUBJECT: Request for Comments, Quarry 1 Reclamation Plan, GCC Rio Grande Inc., Tijeras Mine and Mill, New Mexico Mining Act Permit No. BE001RE

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On March 12, 2020 Surface Water Quality Bureau (SWQB) received a request for comments regarding the subject application and reclamation plan. The proposed reclamation plan describes the post-mining topography (PMT) for Quarry 1 which covers approximately 27.2 acres and uses short slope lengths to minimize surface erosion. To maintain and protect surface water quality, SWQB has prepared the following comments:

SWQB Comment 1: To achieve short slope lengths and minimize surface erosion, the PMT requires a drainage density of 451 linear feet per acre. SWQB recommends that this drainage density be compared to the undisturbed drainage density of the surrounding area and that the reclamation plan discuss the potential impacts that may be associated with altering the drainage density. For example, restoring reclaimed drainage networks to a greater drainage density may produce some undesirable effects, such as increased flood peaks and steeper valley-side slopes (Elliot, 1990, p.10<sup>1</sup>).

SWQB Comment 2: SWQB recommends that the reclamation plan describes how it was determined that a curve number of 77 most accurately predicts runoff for the reclamation area.

SWQB Comment 3: Before routing drainages D1, D25, and D28 through Sediment Pond 1, SWQB recommends that more detailed plans be developed to ensure that these drainages will not mobilize captured sediments and that other alternatives have been considered such as routing these drainages around the reclaimed sediment pond.

SWQB Comment 4: SWQB requests copies of annual inspection reports that include monitoring, evaluations, and repair work.

For questions related to these comments, please contact Alan Klatt, SWQB, at 505-827-0388.

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<sup>1</sup>Elliott, J.G., 1990, Geomorphic Evaluation of Erosional Stability at Reclaimed Surface Mines in Northwestern Colorado: U.S. Geological Survey, Water-Resources Investigative Report 90-4132, accessed online: <https://pubs.usgs.gov/wri/1990/4132/report.pdf>