

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Dylan Fuge
EMNRD - Deputy Cabinet Secretary

Albert Chang, Director
Mining and Minerals Division



Electronic Transmission

February 27th, 2024

Samantha Kretz, Environmental Engineer
GCC Rio Grande Inc.
P.O. Box 100
Tijeras, NM 87059

RE: MMD Comments on Tijeras Mine and Mill Closure/Closeout Plan, Revision 23-1, Permit No. BE001RE

Dear Samantha Kretz,

The New Mexico Mining and Minerals Division (“MMD”) received an application to Revise Permit No. BE001RE, Tijeras Mine and Mill (Revision 23-1) operated by GCC Rio Grande, Inc. Revision 23-1, referred to as the “Revision Application for The Mine Closeout Plan at GCC Rio Grande Tijeras Mine and Mill” (“Application”). The Application, assigned Revision 23-1 by MMD, proposes to update the 5-year Closeout Plan. The application received from the operator can be downloaded from MMD’s website at <https://www.emnrd.nm.gov/mmd/be001re-tijeras-mine-modification-23-1/>.

MMD has conducted a technical review of the Revision 23-1 Application and, in accordance with 19.10.5.506.E NMAC, provided the Application to, and requested comments from, the New Mexico Environment Department (“NMED”), New Mexico Office of the State Engineer (“NMOSE”), New Mexico Department of Game and Fish (“NMDG&F”), New Mexico Historic Preservation Division (“NMDCA”) and New Mexico Forestry Division (“NMFD”). Comments received from these state agencies are listed below. Review and respond to all agency comments that were received, in addition to the responses to MMD Technical Comments.

Agency and Technical Comments

1. New Mexico Department of Game and Fish (See attachment 1)

- a. Section 5.3.1, Geomorphic Grading and Backfilling -NMDG&F supports the incorporation of highwalls into the post-mining reclamation plan. However, in order for the highwalls to provide functional habitat for nesting raptors, ravens, and other avian species, NMDG&F recommends including the creation of ledges and cavities in the highwall design. NMDG&F also recommends further enhancing the habitat value of the highwalls by creating an undulating or irregular profile and by placing talus material along the toe of each highwall to provide habitat for small mammals and reptiles. In the more gently sloping and flat areas of reclaimed habitat, the NMDG&F further suggests incorporating brush and rock/boulder piles to enhance habitat diversity and provide shelter and protection from predators for local, smaller-bodied, terrestrial wildlife species.
- b. Section 3.1, Post Mining Land Use - NMDG&F has ongoing concerns that a future change in land ownership of the mine and mill site from GCC to another private entity may result in a change in land use that would adversely impact a section of the Tijeras Canyon Safe Passage Project for wildlife. Of specific concern is an I-40 underpass with an associated animal detection system that is located near Public School Road. Wildlife fencing is used to direct wildlife into the underpass and safely across I-40 at the site of the animal detection system, thereby providing important habitat connectivity between the Manzano and Sandia Mountains. Future residential development on the western portion of the mine permit area could significantly impair or prevent wildlife from utilizing the underpass. The Department recommends that any future land sale or transfer pursued by GCC provides for the establishment and protection of an adequate wildlife corridor that maintains connectivity to the I-40 safe passage underpass. Because the western portion of the mine permit area is bordered by the Cibola National Forest, the Department believes that incorporating a wildlife corridor as an extension of the adjacent National Forest land would be the most effective way to preserve habitat connectivity to this underpass. The Department strongly recommends that GCC continue discussions with the USFS regarding a possible land exchange to ensure that critical wildlife habitat connectivity between the Manzano and Sandia Mountains is preserved and protected.

2. New Mexico Environment Department (See attachment 2) - Mining Environmental Compliance Section (MECS), Surface Water Quality Bureau (SWQB), Air Quality Bureau (AQB).

- a. MECS submitted comments to MMD on the applicant's Modification 20-1 application on April 29, 2020. NMED requested a Notice of Intent to Discharge (NOI) to be submitted to address an evaluation of the off-specification coal. This comment still stands.
- b. SWQB supports the Closeout Plan's restoration goal to re-establish the channels and re-establish functions that were impacted from mining.

- c. SWQB: The Closeout Plan does not specify that floodplain restoration will be included as part of the conceptual restoration design. The conceptual restoration design should include the channel floodplain widths that are provided in Table 5.1 of the Closeout Plan.
- d. SWQB: The riprap sizing equation in Section 5.2 should account for future discharges. For example, the New Mexico Bureau of Geology and Mineral Resources reports in “Climate Change in New Mexico Over the Next 50 Years: Impacts on Water Resources” that the true precipitation from the 100-yr storm may actually be closer to that which is currently projected for a 500-yr storm¹. Designing structures for future storm events will reduce erosion that may result from failed structures and protect water quality.

3. New Mexico Mining and Minerals Division

- a. As required by 19.10.5.506.B(3) NMAC, please provide a topographic map of the anticipated surface configuration of the permit area upon completion of the closeout plan (i.e. theoretical closeout after mine closure in 2028). Map A-6 lacks topographic lines within the design limit.
- b. Section 2.6, Hydrology states that NMED determined that a Discharge Permit is not required for the Tijeras Mine and Mill, but has requested that GCC provide a Notice of Intent (NOI) for the coal refuse pile currently located in Quarry 7. Please respond to NMED comment A. and provide a timeline for when GCC will submit a NOI to NMED. See attachment 2.
- c. Section 2.8 Wildlife. Did GCC do any wildlife surveys to see if any of the species listed in Table 2-5 were present?
- d. Section 2.10 Other Site Aspects. As a future permit condition, MMD will require that a slope stability analysis be performed for the highwalls and steep rock slopes anticipated to remain at closeout at the Tijeras Mine.
- e. Appendix E: Slope Stability Approach and Monitoring missing...? Figure A-6 does not include anything about the slope stability analysis.
- f. Section 3.1 Proposed Post-Mining Land Use. As a future permit condition, MMD will require that GCC submit a building inspection report stamped by a PE for the office building and warehouse every 5 years to demonstrate that the buildings designated as Industrial/commercial PMLU are fit for occupancy.
- g. Section 5.1 Description of Closeout Activities, Plant Facilities. Please delineate where concrete slabs will remain in place for the PMLU of industrial/commercial, and where they will be reclaimed at closeout in Figure A-5. MMD will require that a minimum of 2 feet of reclamation cover material be placed over concrete foundations that have been broken up, and a minimum of 3 feet of cover over concrete slabs that remain in place.
- h. Section 5.2 Description of Closeout Activities, Channel Restoration. Please elaborate on why 10-feet was chosen for the Apachitos Canyon bottom width channel design and discuss what storm event this is designed for (e.g. 100-yr, 24-hr).

- i. Section 5.2 Description of Closeout Activities, Channel Restoration. At closeout, all permanent stormwater conveyance channels should be designed to withstand a 100-yr, 24-hr storm event, at a minimum.
- j. Section 5.2 Description of Closeout Activities, Channel Restoration. Native riparian species should be planted after stream restoration activities have been completed.
- k. Section 5.3.1 Description of Closeout Activities, Quarries, Roads, and Kiln Dust Disposal Area, Geomorphic Grading and Backfilling. Will any reclamation cover material be placed on any of the haul or exploration roads?
- l. Section 5.3.2 Soil Cover Excavation, Stockpiling, and Placement. Please provide a table outlining the amount of cover material needed at closeout for each disturbed area unit and the amount of currently available reclamation cover material (Redbed) to demonstrate that there is an adequate amount of cover material at closeout.
- m. Section 5.3.2 Soil Cover Excavation, Stockpiling, and Placement. MMD recommends that GCC seed and mulch the Redbed stockpiles to encourage soil weathering and development. Additional best management practices for constructing and maintaining reclamation cover material stockpiles can be found on our website: <https://www.emnrd.nm.gov/mmd/mining-act-reclamation-program/guidelines/>
- n. Table 5-2. Reclamation Seed Mixture in Section 5.3.4.2 Revegetation Methods has a clerical error: Apache plume should be listed as a shrub, not a forb.
- o. Table 5-2. Reclamation Seed Mixture in Section 5.3.4.2 Revegetation Methods. 40 PLS/sq ft seems very low, especially for broadcast rates. Please provide explanation on how 40 PLS was determined.
- p. Section 5.3.4.2 Revegetation Methods. Please include the location of the reference areas on a map.
- q. Table 5-4. Proposed vegetation success criteria in Section 5.3.4.2 Revegetation Methods. Please clarify what the approved shrub density standard is for the Tijeras Mine. Is it also considered to be 90-percent of the shrub density in the reference area? (wording from the approved permit: *Shrub Density of native woody plant species shall be established to the approved density with an 80-percent statistical confidence.*)
- r. Section 6.3 Groundwater Quality. Will the two water wells within the permit area be left in place at Closeout to facilitate the PMLU of Industrial/commercial use?
- s. Figures A-3. GCC Tijeras Mine and Mill Site Map - Aerial and A-4. GCC Tijeras Mine and Mill Post-mining land uses depict that the northeast CKD disposal area will have a PMLU of industrial/commercial while the west cap quarry will have a PMLU of wildlife habitat. Please

elaborate on why the CKD disposal area northeast of the mill site will be considered Industrial/commercial as opposed to Wildlife Habitat at closeout.

General Cost Estimate Notes

*Please note that general cost estimates official agency reply will be at a later date.

- All facilities and equipment will be removed/demolished at closeout - is this accounted for in the RCE?
- Are restoration efforts for Apachitos and Corral Canyon included in the RCE?
- Will the two water wells within the permit area be left in place at Closeout?
- No costs for hauling cover to any of the exploration roads

Cost Estimate Comments

- Where were unit costs sourced (i.e. NM, NV, etc.)?

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Dylan Fuge
Acting Deputy Cabinet Secretary

Albert Chang, Director
Mining and Minerals Division



Electronic Transmission

November 14, 2023

HPD Log #121101
Received 11/14/2023

Courtney Wands
Department of Cultural Affairs
Historic Preservation Division
407 Galisteo St., Suite 236
Santa Fe, NM 87501

RE: Request for Comments on 5-year Closeout Plan Revision for Permit Application, GCC Rio Grande Tijeras Mine and Mill, Permit No. BE001RE, Bernalillo County

Dear Courtney Wands:

The New Mexico Mining and Minerals Division (MMD) received an application from GCC Rio Grande Tijeras Mine and Mill on June 12th, 2023 for a revision of their permit in Bernalillo County, New Mexico. Pursuant to 19.10.5.505.B NMAC, MMD is requesting comments from your agency regarding the application. The application received from the operator can be downloaded from MMD's website at <https://www.emnrd.nm.gov/mmd/be001re-tijeras-mine-modification-23-1/>.

In accordance with 19.10.5.505.B NMAC, your agency has 60 days from the date of receipt of this letter in which to provide comments. If you would like to attend the site inspection, please contact me to coordinate.

If you have any questions, please feel free to contact me at (505) 490-0967 or Alaina.osimowicz@emnrd.nm.gov.

Sincerely,

Alaina Osimowicz, Permit Lead
Mining Act Reclamation Program (MARP)/MMD

No Comment

CC: DJ Ennis, Program Manager, MARP/MMD
Carmen Rose, MARP/MMD

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Cabinet Secretary

Laura McCarthy, State Forester
Forestry Division



November 17, 2023

Alaina Osimowicz
Permit Lead
Mining Act Reclamation Program (MARP)-Mining and Minerals Division (MMD)
Energy, Minerals and Natural Resources Department (EMNRD)
1220 S. St. Francis Drive
Santa Fe, NM 87505

RE: Request for Comments on 5-year Closeout Plan Revision for Permit Application, GCC Rio Grande Tijeras Mine and Mill, Permit No. BE001RE, Bernalillo County

Thank you for the opportunity to comment on the above referenced project. I do not anticipate any impacts to State Listed Endangered Plants or Federally Listed Endangered or Threatened plants as a result of this project, as described in the application.

Please let me know if I can be of further help.

Sincerely,

A handwritten signature in blue ink, appearing to read "E. Rowe", with a long horizontal flourish extending to the right.

Erika Rowe
State Botanist/Endangered Plant Program Coordinator
EMNRD-Forestry Division
1220 S. St. Francis Dr.
Santa Fe, NM 87505
erika.rowe@emnrd.nm.gov / <http://www.emnrd.state.nm.us/SFD/>
cell: (505) 699-6371

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DIRECTOR AND SECRETARY
TO THE COMMISSION
Michael B. Sloane

STATE OF NEW MEXICO DEPARTMENT OF GAME & FISH

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Santa Fe

21 December 2023

Alaina Osimowicz, Permit Lead
Mining Act Reclamation Program
Mining and Minerals Division (MMD)
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: 5-Year Closeout Plan Revision, GCC Rio Grande Tijeras Mine and Mill, Bernalillo County, New Mexico, Permit No. BE001RE; NMDGF Project No. 3112.

Dear Ms. Osimowicz,

The New Mexico Department of Game and Fish (Department) has reviewed the 5-Year Closeout Plan Revision (Plan) referenced above. Staff from the Department, MMD, U.S. Forest Service (USFS), New Mexico Environment Department, and the Operator conducted a site inspection on 20 December 2023. The Department provides the following comments and recommendations regarding the Plan.

GCC Rio Grande, Inc. (GCC) proposes to incorporate adequately stable, vertical mine highwalls into the post-mining reclamation “to provide ample raptor habitat”. The Department supports the incorporation of highwalls into the post-mining reclamation plan. However, in order for the highwalls to provide functional habitat for nesting raptors, ravens, and other avian species, the Department recommends including the creation of ledges and cavities in the highwall design. The Department also recommends further enhancing the habitat value of the highwalls by creating an undulating or irregular profile and by placing talus material along the toe of each highwall to provide habitat for small mammals and reptiles. In the more gently sloping and flat areas of reclaimed habitat, the Department further suggests incorporating brush and rock/boulder piles to enhance habitat diversity and provide shelter and protection from predators for local, smaller-bodied, terrestrial wildlife species.

The Department concurs with the reclamation seed mix proposed in Table 5-2 of the Plan. The Department also recommends that only certified weed-free seed be used to avoid inadvertently introducing non-native species to the reclamation site. Any alternate plant species, used to substitute for primary plant species that are unavailable at the time of reclamation, should also be native. When possible, the Department recommends using seeds that are sourced from the same region and habitat type as the reclamation site and suggests including seeds from a region that represents potential future climatic conditions at the site.

In Section 3.1, GCC is proposing post-mining land uses that include: industrial/commercial, wildlife habitat, and recreation. The primary post-mining land use will be wildlife habitat, with recreation identified as an associated, compatible use. The stated goal of the Plan is to provide

for the re-establishment of a self-sustaining ecosystem on the permit area following closure that is consistent with the surrounding area and post-mining land use. Section 3.2 states: "Once its operations cease and reclamation is successfully completed, GCC is not currently planning on retaining ownership of the permitted area. Future land ownership may include either a private party or a governmental agency. If current trends continue, the property could become desirable for residential use. However, if this occurs at some future date, it would occur after GCC sells the land and the next owner would be responsible for any development and costs associated with the land use revision".

The Department has ongoing concerns that a future change in land ownership of the mine and mill site from GCC to another private entity may result in a change in land use that would adversely impact a section of the Tijeras Canyon Safe Passage Project for wildlife. Of specific concern is an I-40 underpass with an associated animal detection system that is located near Public School Road. Wildlife fencing is used to direct wildlife into the underpass and safely across I-40 at the site of the animal detection system, thereby providing important habitat connectivity between the Manzano and Sandia Mountains. Future residential development on the western portion of the mine permit area could significantly impair or prevent wildlife from utilizing the underpass. The Department recommends that any future land sale or transfer pursued by GCC provides for the establishment and protection of an adequate wildlife corridor that maintains connectivity to the I-40 safe passage underpass. Because the western portion of the mine permit area is bordered by the Cibola National Forest, the Department believes that incorporating a wildlife corridor as an extension of the adjacent National Forest land would be the most effective way to preserve habitat connectivity to this underpass. The Department strongly recommends that GCC continue discussions with the USFS regarding a possible land exchange to ensure that critical wildlife habitat connectivity between the Manzano and Sandia Mountains is preserved and protected.

Thank you for the opportunity to review and comment on the proposed Plan. If you have any questions, please contact Ron Kellermueller, Mining and Energy Habitat Specialist, at (505) 270-6612 or ronald.kellermueller@dof.nm.gov.

Sincerely,

Matt Wunder, Ph.D.
Chief, Ecological and Environmental Planning Division

cc: USFWS NMES Field Office

From: [Padilla, Jenna - FS, NM](#)
To: [Osimowicz, Alaina, EMNRD](#)
Cc: [Rose, Carmen, EMNRD](#); [Ennis, David, EMNRD](#); [Jaffa-martinez, Joseph - FS, NM](#); [Wilhelm, Richard - FS, NM](#)
Subject: [EXTERNAL] RE: [External Email]Request for Comment MMD
Date: Wednesday, December 27, 2023 2:34:30 PM
Attachments: [image001.png](#)
[image002.png](#)
[image003.png](#)
[image004.png](#)

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Hi Alaina,

It was a pleasure meeting you last week. Thanks for coordinating the visit. We do not have comments at this time because the activities described in the revision are outside of NFS lands and within GCC private land boundary.

Best,



Jenna Padilla
Forest Geologist
Forest Service
Cibola National Forest and National Grasslands

p: 505-346-3840
****Telework Tues & Fri: Email Only****
jenna.padilla@usda.gov

2113 Osuna Road NE,
Albuquerque, NM 87113
www.fs.fed.us



Caring for the land and serving people

From: Osimowicz, Alaina, EMNRD <Alaina.Osimowicz@emnrd.nm.gov>
Sent: Tuesday, November 14, 2023 10:32 AM
To: Padilla, Jenna - FS, NM <jenna.padilla@usda.gov>
Cc: Rose, Carmen, EMNRD <Carmen.Rose@emnrd.nm.gov>; Ennis, David, EMNRD <david.ennis@emnrd.nm.gov>
Subject: [External Email]Request for Comment MMD

You don't often get email from alaina.osimowicz@emnrd.nm.gov. [Learn why this is important](#)

[External Email]

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Good Morning Jenna,

Please see the attached document for request for comment on the GCC Tijeras Mine and Mill Closeout Plan Revision 23-1. Stand by for a follow up email on a confirmed date for a field visit next month. Let me know if you have any questions.

[BE001RE Tijeras Mine Modification 23-1 - Mining and Minerals \(nm.gov\)](#)

Thank you,
Alaina Osimowicz

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MICHELLE LUJAN GRISHAM
GOVERNOR

JAMES C. KENNEY
CABINET SECRETARY

MEMORANDUM

DATE: January 11, 2024

TO: Anne Maurer, Mining Environmental Compliance Section, Ground Water Quality Bureau, New Mexico Environment Department

FROM: Alan Klatt and Eliza Martinez, Watershed Protection Section, Surface Water Quality Bureau, New Mexico Environment Department

SUBJECT: **Request for Review and Comment, Regular Existing Mine Revision 23-1 Application, Tijeras Mine and Mill, Bernalillo County, New Mexico Mining Act Permit No. BE001RE**

On January 3, 2024 the Surface Water Quality Bureau (SWQB) received a request for comments regarding the above referenced application from GCC Rio Grande, Inc. which requests a revision to the 5-Year Mine Closeout Plan for the Tijeras Mine and Mill Permit No. BE001RE. SWQB has prepared the following comments pursuant to 19.10.5.506.E New Mexico Administrative Code:

SWQB Comment #1: SWQB supports the Closeout Plan's restoration goal to re-establish the channels and re-establish functions that were impacted from mining.

SWQB Comment #2: The Closeout Plan does not specify that floodplain restoration will be included as part of the conceptual restoration design. The conceptual restoration design should include the channel floodplain widths that are provided in Table 5.1 of the Closeout Plan.

SWQB Comment #3: The riprap sizing equation in Section 5.2 should account for future discharges. For example, the New Mexico Bureau of Geology and Mineral Resources reports in "Climate Change in New Mexico Over the Next 50 Years: Impacts on Water Resources" that the true precipitation from the 100-yr storm may actually be closer to that which is currently projected for a 500-yr storm¹. Designing structures for future storm events will reduce erosion that may result from failed structures and protect water quality.

¹ https://geoinfo.nmt.edu/ClimatePanel/report/WaterClimateReport_Web_FINAL.pdf



MEMORANDUM

DATE: January 11, 2024

TO: Anne Maurer, Mining Act Team Leader, Mining Environmental Compliance Section, NMED

FROM: Sufi Mustafa, Staff Manager, Air Dispersion Modeling and Emission Inventory Section, Air Quality Bureau.

Request for Review and Comment, Regular Existing Mine Revision 23-1 Application, Tijeras Mine and Mill, Bernalillo County, New Mexico Mining Act Permit No. BE001RE

The New Mexico Air Quality Bureau (AQB) has completed its review of the above-mentioned mining project. Pursuant to the New Mexico Mining Act Rules, the AQB provides the following comments.

Recommendation

This is a 5-year revision update of the Mine Closeout Plan. The Air Quality Bureau has no objection to this update request.

This written evaluation does not supersede the applicability of any forthcoming state or federal regulations.

If you have any questions, please contact me at 505 629 6186



Electronic Transmission

MEMORANDUM

Date: January 16, 2024

To: David Ennis, Program Manager, Mining Act Reclamation Program

Through: Anne Maurer, Mining Act Team Leader, Mining Environmental Compliance Section (MECS)

From: Amber Rheubottom, MECS
Alan Klatt, Surface Water Quality Bureau (SWQB)
Sufi Mustafa, Air Quality Bureau (AQB)

Subject: **New Mexico Environment Department (NMED) Comments, Tijeras Mine and Mill, GCC Rio Grande, Inc., Regular Existing Mine, Revision 23-1 Application, Bernalillo County, New Mexico, New Mexico Mining Act Permit No. BE001RE**

The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) on November 14, 2023, requesting that NMED review and provide comments on the above-referenced MMD permitting action. Pursuant to the Mining Act this is a regular existing mine. MMD requested comments on the application within 60 days of receipt of the request for comments. NMED has the following comments.

Background

GCC Rio Grande, Inc. (applicant) submitted an updated Closeout Plan to MMD on June 12, 2023. This Closeout Plan updates the original Closeout Plan that was approved by MMD on June 30, 1998.

Air Quality Bureau

The Air Quality Bureau comments are attached.

Surface Water Quality Bureau

The Surface Water Quality Bureau comments are attached.

Mining Environmental Compliance Section (MECS)

NMED submitted comments to MMD on the applicant's Modification 20-1 application on April 29, 2020. NMED requested a Notice of Intent to Discharge (NOI) to be submitted to address an evaluation of the off-specification coal. This comment still stands.

NMED Summary Comment

NMED will withhold issuance of the environmental determination until such time as 1) the NOI has been submitted and a discharge permit determination has been made by NMED and 2) the technically approvable letter has been issued by MMD to the applicant.

If you have any questions, please contact Anne Maurer at (505) 660-8878.

cc: Alaina Osimowicz, Permit Lead, EMNRD-MMD
Joseph Fox, Program Manager, NMED-MECS
Shelly Lemon, Bureau Chief, NMED-SWQB
Elizabeth Bisbey-Kuehn, Bureau Chief, NMED-AQB