gms@midplains.coop

From: "Myers, Kevin, EMNRD" <kevin.myers@state.nm.us>
Date: Wednesday, September 08, 2021 4:15 PM
To: "Gerald Smith" <gms@midplains.coop>
Attach: 2021 0907 GeoSW Deming Permit Mod 20-1---New Reference Area_vegSuccess.pdf
Subject: For your review and certification - Modification 20-1 of MMD Permit No. LU009RE - GeoSouthwest Mill & Tailing - Vegetation Success Standards and Reference Area

Good Afternoon Gerald,

See attached Proposed Modification 20-1 of the MMD Permit No. LU009RE – Geo Southwest Mill and Tailing. This modification sets the reference area to the southeast of the tailing site and Mimbres River and provides vegetation success standards.

Please review and either sign & notarize certification page (page 5) or contact MMD with any questions about the modification.
Once the Modification 20-1 is signed by you, then it goes to the MMD Director, Jerry Schoeppner for review and signature.
After the Director's signature, the modification is complete.

Let me know if you have any questions about the process.

Kevin C. Myers
Hydrologist
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
505-490-0726 office and cell phone
kevin.myers@state.nm.us
EMNRD website
https://www.emnrd.nm.gov/

PERMIT MODIFICATION 20-1 TO PERMIT NO. LU009RE
DEMING MILL AND TAILING IMPOUNDMENT
EXISTING MINING OPERATION

MINING AND MINERALS DIVISION
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

Permit Modification 20-1 to Permit No. LU009RE is issued by the Director of the Mining and Minerals Division ("MMD") of the New Mexico Energy, Minerals and Natural Resources Department to:

Geo Southwest, LP
PO Box 353
Silverton, TX 79257

(Permittee) for the Deming Mill and Tailings Impoundment located in Luna County, New Mexico.

This Permit Modification also changes to the closeout plan and the requirements necessary to implement and complete the closeout plan. The Permittee has requested changes to set the vegetation monitoring requirements and revegetation success criteria and has requested a designated the location for a newly established vegetation reference area. These changes were requested in a letter from the Permittee, dated September 18, 2020.

The following sections of Permit No. LU009RE are added or revised to read as follows:

Section 1 (20-1) STATUTES AND REGULATIONS

A. This Permit is issued pursuant to the New Mexico Mining Act, NMSA 1978, §69-36-1, et seq. as amended.

B. This permit is subject to all applicable regulations of the New Mexico Mining Act ("Act"), New Mexico Mining Act Rules (19.10.1 New Mexico Administrative Code ["NMAC"] through 19.10.14 NMAC) and any other regulations which are now or hereafter in force under the Act; and all such regulations are made a part of this Permit by this reference.

Section 1a (20-1) PERMIT MODIFICATION PACKAGE

A. The Permit Modification Package ("20-1 PMP") is comprised of the following documents:

1) Request for Modification to Permit No. LU009RE, dated September 18, 2020, describing the reclamation plan and revegetation success monitoring, and Figure 1 identifying the revised location of the proposed reference area.

2) Correspondence and application fee dated September 18, 2020, from Geo Southwest,

LP., to MMD.

3) By reference, Freeport McMoRan Copper and Gold Incorporated (FMI) – Pinos Altos Cyprus Deming Tailing Impoundment - Modification 18-1 of MMD permit No. LU008RE, approved December 28, 2018. Modification 18-1 changed location of reference area and set vegetation standards at this FMI property adjacent to Geo Southwest Mill and Tailings facility.

Section 3 (20-1) FINDINGS OF FACT

A. The Tailing facility did not meet prior reclamation requirements as documented in MMD letter dated July 27, 1999, and MMD requires permitting of the Tailings Facility. Prior to bankruptcy, ASARCO did not complete the process of revising permit No. LU009RE to include the Tailing Facility, which was reclaimed in 2008. The NMED Voluntary Remediation Program ("VRP") issued a conditional certificate of completion on February 6, 2009, for VRP site number No. 53043001 for windblown tailing site 2. On behalf of the ASARCO Multi-State Environmental Custodial Trust, ENVIRON completed a small-scale seeding event as a corrective action on May 19, 2012.

B. The Post-Mining Land Use ("PMLU") for the Tailing Facility portion of the permit area is wildlife habitat or grazing. The Closeout Plan demonstrates that the work to be done will reclaim disturbed areas within the permit area to a condition that allows for the re-establishment of a self-sustaining ecosystem on the permit area following closure, appropriate for the life zone of the surrounding areas. The March 31, 2021 Closeout Plan is currently being processed under permit Revision 14-1, and this indicates grazing PMLU for the tailing and borrow areas. On January 28, 1999, the approved ASARCO permit revision 96-1 of LU009RE set the PMLU as industrial for mill.

C. The Permittee has paid the permit modification fee of $1,000.00 as required by 19.10.2.201 NMAC with check dated September 18, 2020.

D. Pursuant to 19.10.5.505(B) NMAC, the proposed change does not require public notice nor the opportunity for public hearing.

E. Pursuant to 19.10.5.505(B)(1) NMAC, the proposed changes would not have a significant environmental impact.

F. Pursuant to 19.10.5.505(B)(1)(b) NMAC, the proposed changes would not result in a significant increase in the amount of financial assurance cognizable as a significant environmental impact.

G. Pursuant to 19.10.5.505(B)(2) NMAC, the application was accompanied by sufficient information for the Director to determine whether any of the factors listed in 19.10.5.505(B)(1) NMAC are present.

H. Pursuant to 19.10.5.505(B)(3) NMAC, the Director consulted with New Mexico Environment Department (NMED), New Mexico State Forestry Division (SFD) and New Mexico Game & Fish (NMGF).

I. Comments on Modification 20-1 were received from SFD (8/24/2021), NMED (8/26/2021) and NMGF (9/03/2021).

J. Pursuant to 19.10.5.505(C) NMAC, 20-1 PMP was in a format acceptable to the Director. The 20-1 PMP has been reviewed in accordance with 19.10.5.505 NMAC. The 20-1 PMP is complete, accurate, and complies with the requirements for permit modifications under 19.10.5.505 NMAC.

Section 8 (20-1) CONDITIONS

A. The reference area shall be monitored as required by the Closeout Plan.

B. As described in Appendix A, the Permittee provides MMD modified Closeout Plan language regarding the revegetation standards and monitoring methods. The Permittee includes a canopy cover and shrub density standard and shall describe in detail the methods to be used in evaluating cover and shrub density on the reclaimed and reference areas.

C. Revegetation Success

1) Revegetation success will be determined by monitoring the vegetation parameters of canopy cover and shrub density, and comparing these values with a reference area for a minimum of 12 years.

2) Technical guidance procedures published by the U.S. Department of Agriculture, or other methods approved by the MMD will be used to conduct sampling. Canopy cover will be established to within 70 percent of the reference area. Shrub density will be established to within 60 percent of the reference area.

3) Vegetation monitoring of the reference and reclaimed areas will be conducted once per year following the growing season. Two seasons of growth meeting the above cover canopy standard, beginning in year 11 after initial seeding, will be the earliest time criteria for defining revegetation success.

Section 10 (20-1) CONCLUSIONS OF LAW

A. The 20-1 PMP is complete, accurate, and complies with the requirements for Closeout Plans in the Act and 19.10.5.505, 19.10.5.506, and 19.10.5.507.A NMAC. The Permittee, Geo Southwest, LP is permitted, pursuant to the New Mexico Mining Act, to conduct mining and reclamation operations at the Deming Mill and Tailing Site (formerly owned by ASARCO), Luna County, New Mexico, upon the condition that the Permittee complies with the requirements of the Order, the Act, the Rules, the Permit Conditions, and requirements imposed by this Decision.

All other provisions, modifications, and revisions for mining and reclamation contained in the Deming Mill and Tailing Permit No. LU009RE and Closeout Plan, remain unchanged

CERTIFICATION

I certify that I have read, understand and will comply with the requirements of the Permit. I also agree to comply with the performance and reclamation standards and requirements of the permit, the Rules, and the Act, and allow the Director to enter the permit area without delay for the purpose of conducting inspections during mining and reclamation.

Gerald Smith
Authorized Representative of the Permittee

President of Metal Southwest, LLC the General Partner of Geo Southwest, Ltd dba in New Mexico Geo Southwest, LP
Title

Geo Southwest, LP
Company

Subscribed and sworn to before me this 9 day of September 2021

Beverly Minyard
Notary Public

My Commission Expires

9-14, 2024

BEVERLY MINYARD
Notary Public, State of Texas
Notary ID #586126-7
My Commission Expires 09-14-2024

ORDER

NOW THEREFORE, IT IS HEREBY ORDERED that Permit Modification 20-1 of Permit No. LU009RE, incorporating changes to the closeout plan and the requirements necessary to implement and complete the closeout plan; including designation of a new vegetation reference area and vegetation monitoring and success criteria, is approved. The Permit may not be transferred without approval by the Director. The Permit is subject to all conditions set out in the Director's Findings of Fact, General Obligations and Conditions, and Order.

By Order of the Director, Mining and Minerals Division, Energy, Minerals and Natural Resources Department, of the State of New Mexico.

Mining and Minerals Division

BY: _____

Jerry Schoeppner, Director
Mining and Minerals Division
Energy, Minerals and Natural Resources Department

DATED: 9/23/2021

APPENDIX A

This Appendix briefly summarizes changes from the 2020 modification of the Closeout Plan, which has greater detail regarding the Reference Area, Erosion Monitoring, Vegetation Monitoring and Vegetation Success. Erosion monitoring and Vegetation monitoring results are due at the same time as the Annual Report to MMD on April 30th of the following year after early fall monitoring of vegetation.

A. Reference Area

The MMD approved reference area is approximately 3.5 acres located east of the Freeport-McMoRan Copper and Gold, Inc. - Cyprus Pinos Altos Deming Tailing Impoundment as proposed in Figure 1 Modification request.

B. Erosion Monitoring

The following conditions apply to the reclaimed areas. The conditions for the reclaimed areas are required to mitigate the disturbances within the permit area and provide for stabilization of the permit area that will minimize future impact to the environment and protect air and water resources in accordance with §19.10.1.7.R(1) NMAC. The conditions are also required to reclaim the permit area to a condition that allows for re-establishment of a self-sustaining ecosystem as required by §19.10.5.507.A NMAC and to meet applicable environmental standards as required by §69-36-11.B(4) of the Act and §19.10.5.506.J(5) NMAC.

a) The Permittee shall visibly inspect reclaimed lands for signs of excessive erosion and shall mitigate significant erosion features to prevent further degradation of the site. Diversions , retention ponds, and auxiliary erosion control measures will be inspected in accordance with nationally recognized standards of the U.S. Natural Resource Conservation Service or alternative equivalent best management practices. Inspections shall continue until the specific units are released under the Act and Rules. Inspections shall be conducted monthly for the first year following completion of reclamation construction activities for each unit, and quarterly thereafter. Reclaimed areas including reclaimed borrow areas shall additionally be inspected for evidence of erosion after storm events of one inch or greater in any one-day period. Inspections shall continue until the specific units are released under the Act and Rules, unless continued inspections are required by other agencies.

b) The Permittee shall report evidence of significant rill, gully, or sheet erosion on any reclaimed area including reclaimed borrow areas within 24 hours of discovery. The Permittee shall then provide the MMD and NMED a written report that describes the nature and extent of erosion and a corrective action plan, according to the following schedule. The Permittee shall provide the report within 30 days of discovery. The corrective action plan shall describe the efforts necessary to stabilize the affected area. The plan shall be implemented as soon as practical following regulatory approval.

c) Erosion control measures that are damaged or ineffective shall be repaired or re- designed as

necessary. The Permittee shall commit to using a variety of erosion control measures, as needed, if erosion control problems develop. Long-term erosion control measures for a 100-year, 24-hour storm event will be proposed in the final design. Short-term erosion control measures will also be proposed in the construction plan and may include, but not be limited to: Best Management Practices ("BMP's") such as silt fences, hay bales, water bars, mulching and use of vegetation, rock and soil.

C. Vegetation Success Standards and Success Monitoring

Canopy Cover A proportional canopy cover standard will be determined based on quantitative vegetation data and on the interpretation of the community structure and ecological conditions in the reference area. The numerical standard derived from the proportional standard may vary over time to account for temporal differences in canopy cover associated with climatic variations. Thus, the numeri-cal standard may increase or decrease based on reference area measurements, but the proportional standard will remain fixed. The numerical standard for canopy cover shall be 70% of the reference area at a 90 percent statistical confidence level.

Shrub Density The standard for shrub density will be 60% of the shrub density in the reference area at a 90 percent statistical confidence level.

Plant Diversity The plant diversity standard (shown below) shall be utilized for the Geo Southwest Deming Mill and Tailings. A complete listing of species in reclaimed areas will compliment the species composition data from the quadrats.

Class	Seasonally	Number	Minimum occurrence (% cover)
Perennial grass	Warm	3	1
Perennial shrub	NA	2	0.5
non weedy, native forbs	NA	2	0.1

NA= Not applicable.

The above standards for canopy cover, shrub density, and plant diversity shall be applicable to the naturally revegetated areas as well.

Revegetation Success Monitoring

Quantitative vegetation monitoring of the reclaimed and reference area in 2019 and 2020.

Reclamation success for bond release will be determined based on the comparison of quantitative vegetation monitoring of the reclaimed and reference areas during the 12-year period to re-establish vegetation after last year of augmented seeding. Due to the windblown corrective action performed in 2008, quantitative vegetation monitoring for bond release for the entire impoundment will be conducted in 2019 and 2020. At a minimum, the vegetation will be monitored for two of the last four years prior to bond release.

Sample Adequacy The minimum number of samples required to meet sample adequacy will be calculated based on a statistical confidence level of 80 percent or an alpha of 0.2. Sample adequacy will be calculated depending on the distribution of the data (normal verses non-normal). For normally distributed data, sample adequacy will be calculated using Snedocor and Cochran (1967). Hofmann and Ries (1990) will be used to determine sample adequacy for data that are not normally distributed. The Permittee recognizes that statistical adequacy may not be achieved at either the reclaimed and reference areas because of their limited size and the dispersed-clumped character of semi-arid plant communities. An appropriate one-sided hypothesis test will be used to compare reclamation to the reference area standard and determine whether the difference in population means is greater than zero. Either a parametric or non-parametric hypothesis testing method will be selected based on the normality of the data and will be performed at the 80 percent level of confidence.