

**PERMIT MODIFICATION 18-1 TO PERMIT NO. LU008RE
DEMING TAILING IMPOUNDMENT
EXISTING MINING OPERATION**

**MINING AND MINERALS DIVISION
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT**

Permit Modification 18-1 to Permit No. LU008RE is issued by the Director of the Mining and Minerals Division (“MMD”) of the New Mexico Energy, Minerals and Natural Resources Department to:

Cyprus Pinos Altos Corporation
333 North Central Avenue
Phoenix, AZ 85004

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

This permit modification changes the Applicant’s name from Cyprus Climax Metals Company on behalf of Chino Mines, Inc., to Cyprus Pinos Altos Corporation. The financial assurance instrument posted for Permit No. LU008RE is in the name of Freeport-McMoRan Copper and Gold, Inc., on behalf of Cyprus Pinos Altos Corporation. The amount of financial assurance, as required by §19.19.12 of the New Mexico Mining Act Rules, remains the same in the amount of \$132,588, and the instrument, Irrevocable Letter of Credit (“ILOC”) No. 97203/80085 was provided to MMD on January 12, 2011.

This Permit Modification also incorporates changes to the closeout plan and the requirements necessary to implement and complete the closeout plan, addressed in language found in Sections 4.0 and 9.0 of Permit No. LU008RE. Accordingly, the Permittee has requested changes to clarify the vegetation monitoring requirements and revegetation success criteria and has also designated the location for a newly established vegetation reference area. These changes were requested in a letter from the Permittee, dated August 15, 2018.

The following sections of Permit No. LU008RE are added or revised to read as follows:

Section 1 (18-1) 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 2a (18-1) PERMIT MODIFICATION PACKAGE

- A. The Permit Modification Package (“PMP”) is comprised of the following documents:
- 1) Correspondence dated January 10, 2011 from Freeport-McMoRan Copper and Gold, Inc. and December 10, 2010 from The Scotiabank (The Bank of Nova Scotia, New York Agency), regarding the ILOC for Cyprus Pinos Altos Corporation – Deming tailing; to MMD, providing ILOC No. 97203/80085 to replace No. 96661/80085.
 - 2) Correspondence dated November 4, 2013 from MMD and New Mexico Environment Department to The Scotiabank as a Notice of termination of ILOC No. 96661/80085.
 - 3) Application for Modification to Permit No. LU008RE, Section 2.0, dated August 17, 2018, and including proposed changes for the closeout plan for Section 2.6 to establish a wildlife post-mining land use, Section 2.8 describing the reclamation plan and revegetation success monitoring, and Figure 1 identifying the revised location of the proposed reference area.
 - 4) Correspondence dated August 28, 2018, from Freeport-McMoRan Copper and Gold, Inc., to MMD, including a check for \$1,000, covering permit modification fees.

Section 4 (18-1) FINDINGS OF FACT

- G. The approved Post-Mining Land Use (“PMLU”) for the entire permit area is wildlife habitat. 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.
- J.
- 2) 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.
 - 3) 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.
 - 4) 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.

The Closeout Plan dated August 14, 1996 and modified August 17, 2018, contains further specifics on reclamation requirements including modification of the Post Mining Land Use within Section 2.6 and the Revegetation Performance Standards within Section 2.8.1.

Section 9 (18-1) CONDITIONS

- B. The reference area shall be monitored as required by the Closeout Plan.
- H. As described in the 2018 amended sections of the Closeout Plan and 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.

All other provisions, modifications, and revisions for mining and reclamation contained in the Deming Tailing Impoundment Permit No. LU008RE and Closeout Plan, remain unchanged.

Section 10 (18-1) CONCLUSIONS OF LAW

- C. The 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, Cyprus Pinos Altos Corporation on behalf of Freeport-McMoRan Copper and Gold, Inc., is permitted, pursuant to the New Mexico Mining Act, to conduct mining and reclamation operations at the Cyprus Pinos Altos - Deming Tailing Site, 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.

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.

WJR Carr
Authorized Representative of the Permittee

VICE PRESIDENT
Title

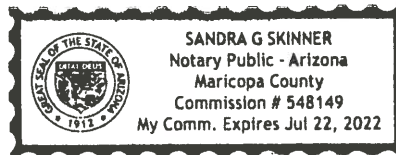
CYPRUS PINOS ALTOS CORPORATION
Company

Subscribed and sworn to before me this 19th day of December, 2018.

Sandra G. Skinner
Notary Public

My Commission Expires

July 22, 2022



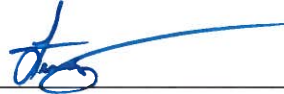
ORDER

NOW THEREFORE, IT IS HEREBY ORDERED that Permit Modification 18-1 of Permit No. LU008RE, changing the name of the Permittee from Cyprus Climax Metals Company on behalf of Chino Mines Company, to Cyprus Pinos Altos Corporation on behalf of Freeport-McMoRan Copper and Gold, Inc. and also 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: _____



Fernando Martinez, Director
Mining and Minerals Division
Energy, Minerals and Natural Resources Department

DATED: _____

12/28/2018

APPENDIX A

This Appendix briefly summarizes changes from the August 15, 2018 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 Tailing Impoundment as proposed in Figure 1 of the August 2018 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 numerical 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 Deming Tailings Impoundment. 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 previously approved reference areas (located south and north of the Tailing Impoundment) was performed in 2004, 2005, 2006, 2011, and 2013 to track the progression of the vegetation and determine if revegetation performance standards are achievable. Qualitative vegetation inspections of the reclamation also occurred in 2001, 2007, and 2008.

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 outslope corrective action performed in June 2007, quantitative vegetation monitoring for bond release for the entire impoundment will be conducted in 2018 and 2019. 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.