State of New Mexico
Energy, Minerals and Natural Resources Department

Susana Martinez
Governor

David Martin
Cabinet Secretary

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Deputy Cabinet Secretary

Fernando Martinez, Director
Mining and Minerals Division

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CERTIFIED MAIL –RETURN RECEIPT REQUESTED

March 8, 2016

Mr. Erich Bower, General Manager
Freeport-McMoRan Tyrone Inc.
P.O. Box 571
Tyrone, New Mexico 88065

RE: Transmittal of Document: Permit Revision 14-1 to Permit No. GR007RE; Little Rock Mine

Dear Mr. Bower:

The New Mexico Mining and Minerals Division ("MMD") has approved Revision 14-1 to Permit No. GR007RE; for the expansion and updated closeout plan for the Little Rock Mine operated by Freeport-McMoRan Tyrone Inc. ("FMI"). A copy of the revision document is enclosed with this letter. MMD will retain the original of this document on file.

If you have any questions in this matter, please feel free to contact me at 505-476-3432 or at David.Ohori@state.nm.us.

Sincerely,

David R. Ohori, Permit Lead
Mining Act Reclamation Program ("MARP")
Mining and Minerals Division

Enclosure

cc: Fernando Martinez, Director, MMD
Kurt Vollbrecht, Program Manager, NMED, GWQB
Holland Shepherd, Program Manager, MARP
Lynn Lande, Chief Environmental Engineer, FMI
Joseph Navarro, USDI Bureau of Land Management
Allyson Siwik, Executive Director, Gila Resources Information Project
Mine File (GR007RE)

PERMIT REVISION 14-1 TO PERMIT NO. GR007RE
LITTLE ROCK MINE
EXISTING MINING OPERATION

MINING AND MINERALS DIVISION
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

This Permit Revision 14-1 ("Permit Revision") to Permit No. GR007RE is issued by the Director of the Mining and Minerals Division ("MMD") of the New Mexico Energy, Minerals and Natural Resources Department to:

Freeport-McMoRan Tyrone Inc. ("FMI")
Whose correct address is: P.O. Box 571
Tyrone, NM 88065

("Permittee") for the Little Rock Mine, located in Grant County, New Mexico.

This Permit Revision:

A. Approves (i) an expansion of the Little Rock Mine Permit Area from approximately 612 acres to 680 acres including an approximate 40 acre area formerly within the Tyrone Mine Permit Area, (ii) expansion of the Open Pit Design Limit from approximately 197 acres to 470 acres and changing its designation to the "Mine Area Design Limit", as shown in Figure 1-3 of the 14-1 PRP (hereafter defined), and (iii) the updated closeout plan and financial assurance for the Little Rock Mine. The approved cost estimate for the updated closeout plan is $1,967,200. The financial assurance for the Little Rock Mine updated closeout plan is in the form of two Surety Bonds in the amounts of $1,520,113, and $1,424,470 issued by the Liberty Mutual Insurance Company.

In order to accomplish the approval contemplated by this Revision 14-1, the following subparagraphs are added to Permit No. GR007RE:

Section 1 (14-1). STATUTES AND REGULATIONS

A. This Permit Revision is issued pursuant to the New Mexico Mining Act, NMSA 1978, §69-36-1, et seq. (1993, as amended through 2009) ("Act") and New Mexico Mining Act Rules, Title 19, Chapter 10 of the New Mexico Administrative Code ("NMAC" or "Rules" or "Regulations").

B. This Permit Revision is subject to the Act, the Rules, 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 (14-1). PERMIT APPLICATION PACKAGE

A. The permit application package for Revision 14-1 ("14-1 PRP") consists of a written request from the Permittee, dated July 10, 2014, (i) for an expansion of the permit boundary to 680 acres, and (ii) expansion of the open pit design limit to 470 acres and changing its designation to the "Mine Area Design Limit", and (iii) an updated closeout plan and reclamation cost estimate for the Little Rock Mine.

B. E-mail from FMI, dated July 29, 2014, with draft proposed public notice for the Little Rock Mine expansion and updated closeout plan.

C. Letter from FMI, dated August 26, 2014, notifying MMD of publication of public notice pursuant to 19.10.9.903.A through H NMAC for 14-1 PRP.

D. Letter from FMI, dated October 27, 2014, notifying MMD of publication of public notice pursuant to19.10.9.903.I NMAC that the 14-1 PRP application was deemed by MMD to be administratively complete pursuant to 19.10.5.506.D NMAC.

E. Hand delivered check for $5,000 on November 20, 2014 (partial) application fee for 14-1 PRP.

F. Letter from FMI, dated December 10, 2014, including a check for $1,000 to complete the application fee for the 14-1 PRP.

G. Letter from FMI, dated April 17, 2015, responding to MMD technical comments and other state agency comments, and tribal entity comments, including additional information in support of the 14-1 PRP.

H. Letter from FMI, dated July 21, 2015, responding to additional MMD technical comments.

I. Letter from FMI, dated September 15, 2015, responding to additional comments from the New Mexico Environment Department ("NMED").

J. Letter from FMI, dated October 15, 2015, responding to public comments received during the public hearing held on September 2, 2015 in Silver City, NM.

K. E-mail from FMI, dated November 3, 2015, regarding changes to the reclamation cost estimate for the updated closeout plan.

L. E-mail from FMI, dated November 12, 2015, including a scope of work for changes to the updated closeout plan reclamation cost estimate for additional fine grained

Precambrian granite cover material for the reclamation of the west in-pit stockpile.

M. E-mail from FMI, dated January 6, 2016, regarding the MMD comments on the scope of work for the additional fine grained Precambrian granite cover material for reclamation of the west in-pit stockpile.

N. E-mail from FMI, dated January 13, 2016, responding to MMD questions regarding compliance with specific conditions of Revision 10-1 to the Little Rock Mine permit.

O. E-mail from FMI, dated January 14, 2016, responding to MMD comments on the reclamation cost estimate for the updated closeout plan.

P. E-mail from FMI, dated January 14, 2016, responding to MMD comment on Figure 1-3, Little Rock Mine open pit configuration at end of mine life, of the updated closeout plan.

Q. E-mail from FMI, dated February 5, 2016, with proposed changes to the wildlife monitoring requirements of the closeout plan.

R. E-mail from FMI, dated February 16, 2016, confirming that FMI will request an adjustment of financial assurance in the near future.

S. Letter from FMI, dated February 23, 2016, providing additional information on the north in-pit stockpile.

Section 2 (14-1). PERMIT AREA AND DESIGN LIMITS

A. The Little Rock Mine permit area encompasses all or portions of Sections 16, 17 and 20, T19S, R15W in Grant County, New Mexico, New Mexico Prime Meridian ("NMPM"). The approved permit area is approximately 680 acres and is delineated in Figure 1-3 of the 14-1 PRP. The approved permit area is on surface lands owned by FMI, the U.S. Bureau of Land Management ("BLM"), and the U.S.D.A. Forest Service ("USFS"). The Permittee is authorized to conduct mining and reclamation operations only within the approved permit area, as set forth in the 14-1 PRP.

B. The permit area and design limits of the existing mine units prior to approval of Revision 14-1 are delineated in Figure 1-2, 2-1, and 7-2 of the 14-1 PRP. The existing facilities within the mine unit are:

1. Open Pit Area located within the Open Pit Design Limit approved in Permit Modification 13-2;
2. West In-Pit Stockpile

3. North Stockpile;
4. West Canyon Stockpile;
5. Reclaimed Copper Leach Stockpile and P-Plant Area including the Seepage Collection Pipeline;
6. Sumps and associated water tanks;
7. Spanning Arch Culvert
8. Existing Haul Road; and
9. Dewatering Pipeline to the Tyrone Mine 1X1 Lined Pond.

C. The permit area and design limits of the mine unit approved in Revision 14-1 is delineated in Figure 1-3, 2-1, and 7-2 as revised, dated March 17, 2015, of the 14-1 PRP. The mine facilities approved in Revision 14-1 are:

1. Mining Area Design Limit that includes the Open Pit, the West and North In-Pit Stockpiles (Operational In-Pit Stockpiles, see Figure 1-3), the Existing and modified Haul Road to the Tyrone Mine, the Western Haul Road, the Decant Ponds, the Power Substation, the Prill Tank Facilities, the Deadman Canyon Channel Diversion, and the North Stockpile, sumps and associated water tanks;
2. West Canyon Stockpile;
3. Reclaimed Copper Leach Stockpile and P-Plant Area including the Seepage Collection Pipeline; and
4. Dewatering Pipeline to the Tyrone Mine 1X1 Lined Pond.

Section 3 (14-1). FINDINGS OF FACT

A. The Permittee has paid the Permit Revision fee of $6,000.00 as required by 19.10.2.201.K.5 NMAC.

B. The application for Permit Revision has been reviewed in accordance with 19.10.5.505 NMAC and has been determined to be a revision. The application for Permit Revision is complete, accurate, and complies with the requirements for Permit Revisions under 19.10.5.505 NMAC.

C. Public notice for the permit application was provided as required by 19.10.9 NMAC and 19.10.5.503.F.5 NMAC. Public notice for incorporating the updated closeout plan was provided as required by 19.10.5.506.J.1 NMAC. Public notice for the administratively complete determination by MMD was provided as required by 19.10.5.506.F NMAC.

D. A public hearing was timely requested by the Gila Resources Information Project ("GRIP") by letter to MMD, dated August 30, 2014. A public hearing was held in accordance with 19.10.9.905 NMAC on September 2, 2015 in Silver City, New Mexico. The public hearing record was open until the close of business on September 23, 2015.

The public hearing record has been maintained by MMD in accordance with 19.10.9.906 NMAC.

E. The Director has consulted with the applicable state and federal agencies as required by 19.5.505.B.3 NMAC.

F. MMD provided the 14-1 PRP to the following tribal entities and requested review and comment: the Hopi Tribe, the White Mountain Apache Tribe, the Mescalero Apache Tribe, the Pueblo of Isleta, the Fort Sill Apache Tribe, and the Navajo Nation. Comments from the Hopi Tribe, the Navajo Nation and the White Mountain Apache Tribe were received by MMD. In response to the comments from the Hopi Tribe, MMD has provided copies of the cultural resource surveys of the Little Rock Mine area to the Hopi Tribe. The Navajo Nation and the White Mountain Apache Tribe responses stated that they did not anticipate any impacts to their traditional cultural properties. The Hopi Tribe was sent a notice of intent to approve Revision 14-1, dated February 5, 2016.

G. The BLM conducted an Environmental Assessment of the Amendment to Mine Plan of Operations for the Little Rock Mine. A record of Decision and a Finding of No Significant Impact was issued by the BLM on December 30, 2015.

H. The Permittee has provided satisfactory financial assurance to complete the updated closeout plan for the Little Rock Mine as required by 19.10.5.506.J.2 NMAC in the amount of: $1,520,113, , and $1,424,470 in the form of a Surety Bonds, issued by the Liberty Mutual Insurance Company.

I. The cover or reclaimed surface material currently conditionally approved to be used to complete the updated closeout plan will consist of "Precambrian granite" excavated from the Little Rock Mine.

J. The approved Post-Mining Land Use ("PMLU") for the permit area is wildlife habitat. The updated closeout plan, subject to the conditions in this Permit Revision, 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 closeout, appropriate for the life zone of the surrounding area, pursuant to 19.10.5.507.A NMAC.

K. Pursuant to 19.10.5.506.J.5 NMAC, the Secretary of the New Mexico Environment Department ("NMED") provided a written conditional determination on January 15, 2016, stating that the 14-1 PRP has demonstrated that the activities to be permitted or authorized will be expected to achieve compliance with all applicable air, water quality, and other environmental standards if carried out as described in the updated closeout plan and discharge permit DP-1236.

Section 5 (14-1). COMPLIANCE REQUIREMENTS

A. The Permittee shall conduct mining and reclamation operations only as described in the approved 14-1 PRP, the Permit, and any revisions or modifications approved by the Director.

B. This Permit Revision is issued pursuant to NMSA 1978, Section 69-36-1 et. seq. and Title 19, Chapter 10 NMAC. Permittee may be required to comply with other federal, State, county or local laws or ordinances before or while undertaking the activity that is the subject of this Permit Revision. MMD does not, by issuing this Permit Revision or otherwise, make any comment on Permittee's compliance with such other laws. It is Permittee's sole responsibility to investigate and comply with the requirements of such other laws.

C. The approval of this Permit Revision does not relieve Permittee from the responsibility of complying with other state and federal requirements and standards.

D. The Permit Revision does not grant or create any water rights. Nor does MMD, by approving this Permit Revision or otherwise, make any comment on the water rights that the Permittee may or may not have available for use in the area covered by the Permit Revision. Permittee is solely responsible and obligated to comply with all State and federal laws related to water rights sufficient to support the activities contemplated by the Permit Revision.

E. Future submittals required by this Permit shall be presented in electronic form in addition to written form to the Director for approval.

Section 8 (14-1). GENERAL OBLIGATIONS AND CONDITIONS

The conditions outlined in this section are required for the Permittee to meet certain requirements of the Rules. The Permittee shall reclaim the Open Pit including the In-Pit Stockpiles, the North and West Canyon Waste Stockpile areas, haul roads, abandon exploration drill holes and monitor wells, and stabilize the existing and new disturbed areas to mitigate off-site impacts. The reclaimed Copper Leach Stockpile and Precipitation Plant shall be monitored for erosion and revegetation to meet the requirements of 19.10.5.507.A NMAC. The conditions for the expansion of the Little Rock Mine permit area, the expansion of the Open Pit Design Limit (renamed the Mine Area Design Limit), and the updated closeout plan and financial assurance are required to mitigate the disturbances within the Little Rock Mine and provide for stabilization of the Little Rock Mine that will minimize future impact to the environment and protect air and water resources in accordance with 19.10.7.R.(1) NMAC. The conditions are

required to operate the New Unit area in compliance with the standards and requirements for New Units as required by 19.10.5.508 NMAC. The conditions are also required to reclaim the New Unit area to a condition that allows for re-establishment of a self-sustaining ecosystem as required by 19.10.5.507.A NMAC. The specifications contained in this Section may be modified in final engineering design with MMD approval.

This Permit is subject to the following conditions:

A. The Area of Existing Disturbance including the reclaimed Copper Leach Stockpile and P-Plant Area, the portion of the Open Pit and the portion of the West In-Pit Stockpile that is located within the former Open Pit Design Limit, the North Stockpile, the West Canyon Stockpile, the Existing Haul Road, the existing powerlines, the existing electrical substations, the existing Dewatering Pipeline Alignment No. 1, and the approximate 40 acre area of the Tyrone Mine Permit Area incorporated into the Little Rock Mine as shown on Figure 7-2 of the 14-1 PRP, dated May 8, 2014, is subject to the reclamation standard of 19.10.5.507.A NMAC.

B. The Area of the New Unit Disturbance approved in this Permit Revision that will be located within the Little Rock Mine Permit Area and outside the former Open Pit Design Limit as shown on Figure 7-2 of the 14-1 PRP, dated May 8, 2014, is subject to the standards of 19.10.5.507.A NMAC and 19.10.5.508 NMAC, with the exception of the Area of Existing Disturbance identified in Condition A.

C. The Permittee may be subject to enforcement action according to 19.10.11 NMAC for failing to conduct reclamation and closeout operations as described in the Updated Closure/Closeout Plan; for violation of any of the terms or conditions of the Act, the Rules, the Permit, as revised or modified; or for failing to submit any of the following:

1. annual reports as required by 19.10.5.510 NMAC; and
2. annual fees as required by 19.10.2.202 NMAC.

D. The Permittee shall include, in the annual reports, information required by 19.10.5.510 NMAC. In addition, the following information shall be included:

1. the status of closeout activities for each unit;
2. any maintenance and repair work conducted for any closeout component;
3. the date the work was done;
4. vegetation monitoring data as described in Appendix A;
5. vegetation and wildlife monitoring data collected on revegetated areas;
6. meteorological data collected for the Little Rock Mine; and
7. monitoring results of pit wall stability as described in Condition 8.G.2.c.

E. The Permittee shall notify MMD 30 days prior to performing any permanent closeout/reclamation activities at the mine site.

F. **CONSTRUCTION QUALITY ASSURANCE PLAN**

1. The Permittee shall submit a construction quality assurance ("CQA") plan to MMD for approval not less than 180 days prior to proposed commencement of reclamation and shall implement the plan after MMD approval. Detailed engineering designs addressing slopes, surface erosion controls and stormwater management structures shall be submitted for MMD approval. The CQA plan shall include: a description of work to be conducted, soil testing results, laboratory analytical reports, and identification of borrow areas, other than the North Waste Rock Stockpile, if applicable. Design specifications may be modified during the final engineering design with MMD approval.

2. The CQA plan shall be supplemented to include a final report to be submitted to MMD not more than 180 days after reclamation construction completion. The report shall include a summary of work conducted, as-built drawings and final design specifications for slopes, covers and for stormwater management structures. The final report shall describe, at minimum, as-built drawings, a final topographic map with no greater than two-foot contour intervals for the top surfaces and no greater than five feet for slopes, and construction photographs.

G. **OPEN PIT**

The following conditions apply to the Open Pit:

The conditions for the Open Pit 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. Additionally, the Permit area of the Open Pit located outside of the former Open Pit Design Limit as shown on Figure 7-2 of the 14-1 PRP, dated May 8, 2014, and as defined in Section 8.B is subject to the standards of 19.10.5.508 NMAC. The specifications contained in Section G may be modified in final engineering design, with MMD approval.

1. **Environmental Standards**

The Permittee shall maintain all environmental permits required for the permit area, including but not limited to the Mine Plan of Operations approved by the BLM and

Discharge Permit DP-1236 issued by NMED. Revocation or termination of such a permit or the forfeiture of financial assurance related to such a permit is adequate grounds for the Director to issue a cessation order pursuant to 19.10.5.509.C NMAC.

The Permittee shall submit copies of all studies required as a condition of DP-1236, other than routine monitoring reports, to MMD. If such studies provide new information that shows the need to modify the closeout plan to meet the requirements of 19.10 NMAC, then MMD may require the Permittee to modify the closeout plan through an application for modification or revision of this Permit.

2. **Public Health and Safety**

The Permittee shall ensure that the Open Pit areas do not pose a current or future hazard to public health or safety and will take measures to limit future access to the Open Pit areas only to authorized personnel by implementing the following conditions at closeout:

a) Where practicable, to restrict access by unauthorized personnel and provide for public safety, a berm and/or fence shall be placed or the existing approved fence and/or berm shall be maintained around the perimeter of the Open Pit where highwalls exist.

b) signage posted, on fencing at approved intervals and at all access points, warning of potential hazards present;

c) annual visual inspections to monitor stability of the Open Pit walls and to identify potential failure areas which may adversely impact the environment and public health or safety. If potential failure areas are identified through monitoring, the Permittee shall propose measures to mitigate the hazard caused by the potential failure areas within 30 days of identification for MMD approval; and

d) to allow Open Pit access for maintenance activities by authorized personnel, locked gates may be placed at appropriate locations in association with the berm/fence combination.

3. **Surface Shaping and Stormwater Management**

a) The Permittee shall backfill the west side to the current extent or greater and may backfill the north side of the Open Pit, designated as the Operational In-Pit Stockpiles, as required in Section 8.H and the 14-1 PRP.

b) Safely accessible flat surfaces of the Open Pit, not covered by a pit lake, shall be graded for stormwater control, ripped to a depth of 18 to 24 inches and revegetated according to the requirements of Appendix A.

c) Alternate closeout actions for the Open Pit, as determined by MMD, to allow for the establishment of a self-sustaining ecosystem, and/or-meet the requirements of reclamation defined under 19.10.1.7.R.(1) NMAC, may require that the Permittee modify or revise the Permit in accordance with 19.10.5.504.B and 19.10.5.505.B NMAC pending the results of the cover design evaluation addressed in the November 15, 2004, Test Plot Work Plan (Cover Design Evaluation), as amended.

d) Remaining safely accessible roads and benches, in the Open Pit, shall be graded for stormwater control, ripped to a depth of 18 to 24 inches and revegetated according to the requirements of Appendix A.

4. **Revegetation Plan**

Ripped surfaces in the Open Pit shall be revegetated in accordance with revegetation standards set forth in Appendix A.

5. **Post-Mining Land Use**

The PMLU for the Open Pit shall be *wildlife habitat*. Compliance with 19.10.5.507.A NMAC shall be achieved by the following:

a) Areas to be revegetated within the Open Pit shall meet approved MMD revegetation standards and shall be monitored in accordance with Appendix A;

b) wildlife use shall be documented after reclamation by conducting wildlife surveys including, but not necessarily limited to, deer pellet count surveys and bird diversity surveys;

c) the results of the wildlife surveys shall not be a condition of financial assurance release;

d) the Permittee shall take measures at closeout, to minimize adverse impacts to waterfowl and other wildlife, resulting from ponding or water impounded in the Open Pit areas. Such measures will involve a hazard evaluation and then implementation of the appropriate mitigation measures to be used at closeout;

e) the Permittee shall establish wildlife habitat features such as rock piles and/or brush piles to promote floral and faunal diversity; and

f) the Permittee shall construct or maintain existing fencing around the perimeter of the reclaimed areas that excludes livestock and is protective of wildlife. Fencing located

around the rim of the Open Pit shall remain in place for public safety and shall be maintained until the financial assurance for the reclaimed areas is released under 19.10.12 NMAC.

H. STOCKPILES

The conditions in this permit revision for the In-Pit, the North and the West Canyon Stockpiles 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. Additionally, the portions of the West and North In-Pit Stockpiles that are located outside the former Open Pit Design Limit as shown on Figure 7-2 of the 14-1 PRP, dated May 8, 2014, are subject to the standards of 19.10.5.508 NMAC. The specifications contained in Section H may be modified in final engineering design with MMD approval.

The following conditions apply to the **In-Pit Stockpiles**:

1. Surface Shaping and Stormwater Management

a) The Permittee shall backfill the west side to the current extent or greater and may backfill the north side of the Open Pit, designated as the Operational In-Pit Stockpiles in the 14-1PRP, in a manner that ensures positive drainage from areas to be revegetated and eliminates, to the extent practicable, ponding on final cover surfaces. Low gradient buffer strips shall be constructed between the backfilled area and the pit lake to provide safe access for wildlife.

b) Terrace benching on the In-Pit Stockpile shall be constructed at slope lengths of no greater than 200 feet. If terrace benches are constructed, each individual slope segment shall be no steeper than 3:1 (horizontal: vertical) and terrace benches shall be a maximum of 50 feet wide, inclined 1% to 5% towards the interior portion of the slope face immediately above it, and have a longitudinal gradient of no greater than 5%. The Permittee shall provide MMD with detailed plans for stormwater management and best management practices for erosion control, for MMD approval, at least 180 days before proposed implementation of construction activities and shall implement the plans after MMD approval. The Permittee may conduct pre-grading, rough grading or pre-final grading necessary to complete final design work, but must also implement interim best management practices to control offsite sediment transport in conformance with surface water regulations until the detailed design is approved by MMD, and the final design and final best management practices are constructed. The Permittee may be required by MMD to change pre-graded; rough-

graded or pre-final-graded slopes in order to meet MMD requirements for final slope design. The Permittee shall design, construct, and maintain best management practices for erosion control identified by the U.S. Natural Resource Conservation Service or alternative equivalent standards acceptable to MMD.

2. **Cover Placement Plan**

a) Surfaces of the In-Pit Stockpile, not covered by a pit lake, shall be ripped to a depth of 18 to 24 inches. After final grading, areas where the surface is excessively coarse with insufficient fines to create an adequate seedbed shall be covered with 4 inches of approved cover material in order to enhance the seedbed. The textural characteristics of the cover material shall be supportive of a self-sustaining ecosystem.

b) Approved cover material shall be obtained locally and excavated from the North Stockpile, Operational In-Pit Stockpiles, or taken from salvaged topsoil stockpile(s), if available. Alternate closeout actions, as determined by MMD, to allow for the establishment of a self-sustaining ecosystem, and/or-meet the requirements of reclamation defined under 19.10.1.7.R (1) NMAC, may require that the Permittee modify or revise the Permit in accordance with 19.10.5.504.B and 19.10.5.505.B NMAC pending the results of the Cover Design Evaluation.

3. **Revegetation Plan**

Covered and/or ripped surfaces of the In-Pit Stockpile shall be revegetated in accordance with revegetation standards set forth in Appendix A.

4. **Post-Mining Land Use**

The PMLU for the In-Pit Stockpile shall be *wildlife habitat.* Compliance with 19.10.5.507.A NMAC shall be achieved by the following:

a) vegetation in the reclaimed areas shall meet approved MMD revegetation standards and shall be monitored in accordance with Appendix A;

b) wildlife use shall be documented after reclamation by conducting wildlife surveys including, but not necessarily limited to, deer pellet count surveys and bird diversity surveys; and

c) the results of the wildlife surveys shall not be a condition of financial assurance release;

d) the Permittee shall establish wildlife habitat features such as rock piles and/or brush

piles to promote floral and faunal diversity; and

e) the Permittee shall construct or maintain existing approved fencing around the perimeter of the seeded areas that exclude livestock and is protective of wildlife. Perimeter fencing shall be maintained until the financial assurance for the reclaimed areas is released under 19.10.12 NMAC.

The following conditions apply to the **North Stockpile**:

1. **Surface Shaping and Stormwater Management**

a) The Permittee shall regrade the North Stockpile in a manner that ensures positive drainage and eliminates, to the extent practicable, ponding on the top surfaces and final regraded surfaces.

b) The Permittee shall provide MMD with detailed plans for stormwater management and best management practices for erosion control, for MMD approval, at least 180 days before proposed implementation and shall implement the plans after MMD approval. The Permittee shall design, construct, and maintain best management practices for erosion control identified by the U.S. Natural Resource Conservation Service or alternative equivalent standards acceptable to MMD.

c) The North Stockpile shall be graded for stormwater control, ripped to an overall minimum depth of 18 to 24 inches, and revegetated according to the requirements of Appendix A. All slopes shall have a Slope Angle no steeper than 3:1, unless alternative regrading, cover, and revegetation designs are demonstrated and approved by MMD through studies and field-testing, to allow for re-establishment of a self-sustaining ecosystem that meets the standards addressed in Appendix A. Portions of the North Stockpile that have not been disturbed by current mining or excavation of cover material and that meet the standards addressed in Appendix A and are erosionally stable are exempt from regrading and reseeding.

2. **Revegetation Plan**

The North Stockpile, shall be revegetated in accordance with revegetation standards set forth in Appendix A. Areas where volunteer revegetation has occurred, shall have vegetation establishment monitoring conducted within 1 year of after the approval of this Revision or completion of reclamation, whichever is sooner. The vegetation establishment monitoring will be semi-quantitative, and the results shall be provided to MMD.

3. **Post-Mining Land Use**

The PMLU for the North Stockpile shall be *wildlife habitat.* Compliance with 19.10.5.507.A NMAC shall be achieved by the following:

a) vegetation in the reclaimed areas shall meet approved MMD revegetation standards and shall be monitored in accordance with Appendix A;

b) wildlife use shall be documented after reclamation by conducting wildlife surveys including, but not necessarily limited to, deer pellet count surveys and bird diversity surveys; and

c) the results of the wildlife surveys shall not be a condition of, or given consideration with regard to financial assurance release;

d) the Permittee shall establish wildlife habitat features such as rock piles and/or brush piles to promote floral and faunal diversity; and

e) the Permittee shall construct or maintain existing approved fencing around the perimeter of the seeded areas that exclude livestock and is protective of wildlife. Perimeter fencing shall be maintained until the financial assurance for the reclaimed areas is released under 19.10.12 NMAC.

The following conditions apply to the **West Canyon Stockpile**:

1. **Surface Shaping and Stormwater Management**

a) The Permittee shall regrade the West Canyon Stockpile in a manner that ensures positive drainage and eliminates, to the extent practicable, ponding on the top surfaces and final regraded surfaces.

b) The Permittee shall provide MMD with detailed plans for stormwater management and best management practices for erosion control, for MMD approval, at least 180 days before proposed implementation and shall implement the plans after MMD approval. The Permittee shall design, construct, and maintain best management practices for erosion control identified by the U.S. Natural Resource Conservation Service or alternative equivalent standards acceptable to MMD.

c) The West Canyon Stockpile shall be graded for stormwater control, ripped to an overall minimum depth of 24 inches, and revegetated according to the requirements of Appendix A. All slopes shall have a Slope Angle no steeper than 3:1, unless alternative regrading, cover, and revegetation designs are demonstrated and approved

by MMD through studies and field-testing, to allow for re-establishment of a self-sustaining ecosystem that meets the standards addressed in Appendix A. Portions of the West Canyon Stockpile that meet the standards addressed in Appendix A, and are erosionally stable are exempt from regrading and reseeding.

2. **Revegetation Plan**

The West Canyon Stockpile shall be revegetated in accordance with revegetation standards set forth in Appendix A. Areas where volunteer revegetation has occurred shall have vegetation establishment monitoring conducted within 1 year after the approval of this Revision. The vegetation establishment monitoring will be semi-quantitative and the results shall be provided to MMD. Areas where vegetation has not been successfully established shall be reseeded or inter-seeded.

3. **Post-Mining Land Use**

The PMLU for the West Canyon Stockpile shall be *wildlife habitat*. Compliance with 19.10.5.507.A NMAC shall be achieved by the following:

a) vegetation in the reclaimed areas shall meet approved MMD revegetation standards and shall be monitored in accordance with Appendix A;

b) wildlife use shall be documented after reclamation by conducting wildlife surveys including, but not necessarily limited to, deer pellet count surveys and bird diversity surveys;

c) the results of the wildlife surveys shall not be a condition of financial assurance release;

d) the Permittee shall establish wildlife habitat features, such as rock piles and/or brush piles, to promote floral and faunal diversity; and

e) the Permittee shall construct or maintain existing approved fencing around the perimeter of the seeded areas that excludes livestock and is protective of wildlife. Perimeter fencing shall be maintained until the financial assurance for the reclaimed areas is released under 19.10.12 NMAC.

The following conditions apply to the **Copper Leach Stockpile and Precipitation Plant Area** that was reclaimed in 2010:

1. **Stormwater Management**

Stormwater flows in the diversion channel located to the north of the reclaimed Copper Leach Stockpile and the diversion channel located at the reclaimed Precipitation Plant may be directed to the Open Pit. During reclamation and after reclamation of the In-Pit Stockpile, the stormwater flow from the reclaimed Copper Leach Stockpile and Precipitation Plant shall be directed to a diversion channel constructed to direct stormwater along the perimeter of the reclaimed In-Pit Stockpile to the Open Pit Sump or the Open Pit Lake.

2. **Revegetation Plan**

The reclaimed Copper Leach Stockpile and Precipitation Plant shall have revegetated areas monitored in accordance with Appendix A. Areas where vegetation has not been successfully established shall be reseeded or inter-seeded.

3. **Post-Mining Land Use**

The PMLU for the Copper Leach Stockpile and Precipitation Plant shall be *wildlife habitat*. Compliance with 19.10.5.507.A NMAC shall be achieved by the following:

a) vegetation in the reclaimed areas shall meet approved MMD revegetation standards and shall be monitored in accordance with Appendix A;

b) wildlife use shall be documented after reclamation by conducting wildlife surveys including, but not necessarily limited to, deer pellet count surveys and bird diversity surveys;

c) the results of the wildlife surveys shall not be a condition of financial assurance release;

d) the Permittee shall establish wildlife habitat features, such as rock piles and/or brush piles, to promote floral and faunal diversity; and

e) the Permittee shall construct or maintain existing approved fencing around the perimeter of the seeded areas that excludes livestock and is protective of wildlife. Perimeter fencing shall be maintained until the financial assurance for the reclaimed areas is released under 19.10.12 NMAC.

I. EXPLORATION DRILL HOLES

Disturbance within the Little Rock Mine Permit Area due to exploration activities shall

be identified and reclaimed. The Permittee shall provide the locations of the existing exploration disturbance(s) to MMD within 180 days of the approval of this Revision and a plan for reclaiming the existing exploration disturbances, unless the Permittee has previously provided this information to MMD. The Permittee shall plug and abandon all exploration holes within the Permit Area in accordance with 19.10.3.302.L NMAC. If the Permittee conducts exploration within the Permit area that creates a new disturbance, the Permittee must identify the general areas or locations within the Permit area where exploration activities have taken place, and provide a general plan regarding measures that will be taken to minimize disturbance, enhance stability and control erosion. The Permittee shall also identify any areas of new disturbance due to exploration activities in each annual report submitted to MMD. In addition, the Permittee shall describe how these areas will be reclaimed and provide a schedule indicating when the reclamation work will take place. All new disturbed areas from exploration shall be revegetated in accordance with Appendix A.

J. PIPELINES

The following condition applies to the Dewatering Pipeline #1 and #2, when they are no longer needed to transport seepage and stormwater to the No. 1X1 lined-pond at the Tyrone Mine, or an alternative discharge point approved by NMED. This condition is 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 condition, also, is required to reclaim the Permit area to a condition that allows for reestablishment 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.

The Permittee shall remove and properly dispose of pipelines, or bury each pipeline or segments thereof, and close the associated sumps if not needed for water treatment, unless Permittee demonstrates to NMED that leaving the pipelines in place will not result in exceedance of the standards of §20.6.1 and §20.6.2 NMAC, of the Water Quality Control Commission regulations. Where pipelines are buried where soil contamination is identified, the cover material shall be no less than 36 inches thick. These areas shall be ripped and revegetated in accordance with Appendix A. Design specifications may be changed during final engineering design with MMD approval.

The Permittee shall inspect the pipeline for any evidence of spills and characterize the impacts during pipeline removal. Where the pipeline is removed, the pipeline corridor shall be revegetated in accordance with Appendix A.
Prior to closure of the pipelines and corridors, the Permittee shall submit reclamation plans for MMD approval not more than 180 days prior to proposed implementation and

shall implement the plans after MMD approval.

K. HAUL ROADS

The following conditions apply to all haul roads identified in the Permit area. These conditions are required in order 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 and 19.10.5.508 NMAC, and to meet applicable environmental standards, as required by the NMED, pursuant to 19.10.5.506.J.5 NMAC.

1. Where located on non-acid-generating material, the surfaces of haul roads shall be ripped to a depth of 18 to 24 inches or covered with topdressing to a depth of 18 to 24 inches. Where located on acid-generating material, the surfaces of haul roads shall be covered with a minimum of 36 inches of approved cover material. Culverts shall be removed on all haul roads where practicable. The ripped, and/or covered surfaces shall be graded for stormwater control.

2. Pursuant to 19.10.5.508.B (9) NMAC. Roads shall be constructed and maintained during operation and reclamation to control erosion.

3. Haul roads shall be revegetated and monitored in accordance with Appendix A. Tree and shrub seedlings shall be planted in the area bordering the reclaimed haul road crossing of Deadman Canyon. The planned New Haul Roads located inside the Little Rock Mine Permit Boundary, outside the Approved Open Pit Design Limit, identified on Figure 2-1 and in Section 8.B, shall meet the standards of 19.10.5.508.E NMAC. The portion of the Haul Road located in the 40 acre area formerly within the Tyrone Mine permit area shall meet the standards of 19.10.5.507.A NMAC and is exempt from meeting the standards of 19.10.5.508 NMAC. The Permittee shall submit to MMD, for approval, detailed plans for seedling planting, at least 180 days before proposed implementation, and shall implement the plans after MMD approval.

4. Roads required for continued site maintenance and monitoring shall be proposed in the final closeout engineering design for approval by MMD.

L. MONITOR WELLS

Unless required to be maintained for the DP-1236 or other purposes, the Permittee shall abandon all groundwater monitoring wells, in accordance with the requirements of NMED *Monitoring Well Construction and Abandonment Guidelines*; and discharge permit DP-1236; or the NMOSE regulations in 19.27.7 NMAC.

M. ANCILLARY FACILITIES

The following conditions apply to Ancillary Facilities identified in the Permit area and on Figure 2-1, dated March 17, 2015, of the 14-1 PRP and all disturbed areas used for storage of explosives, fuel and reagents. These conditions are required in order to establish the PMLU on a Permit area approved by the Director, pursuant to 19.10.1.7.P (5) NMAC, and 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.

1. Electrical Distribution System

The Permittee shall remove all electrical systems and infrastructure that are not necessary for the site operation and maintenance, including but not limited to, the power substation and transmission lines. Power poles shall be removed, unless left in place as raptor habitat and approved by MMD. All areas shall be graded for stormwater control, ripped to a depth of 18 to 24 inches or covered with topdressing to a depth of 24 inches, minimum, and revegetated according to the requirements of Appendix A.

2. Explosives, Fuel, and Reagent Storage Areas

The Permittee shall remove and properly dispose of explosives, fuel, and reagent chemicals and materials. All storage areas shall be graded for stormwater control, ripped to a depth of 18 to 24 inches or covered with topdressing to a depth of 24 inches, minimum, and revegetated according to the requirements of Appendix A.

3. Water Supply and Decant Ponds

The Permittee shall remove all water tanks, if any exist, and decant ponds at the completion of mining if not approved to remain in operation on site as part of the reclamation final design. The water tank and decant pond areas shall be graded for stormwater control, ripped to a depth of 18 to 24 inches or covered with topdressing to a depth of 24 inches, minimum, and revegetated according to the requirements of Appendix A. The Permittee shall propose to MMD, for approval, an alternative depth if results of characterization of soil contamination, as required by NMED, show that soil contamination has occurred.

N. OTHER NON-SPECIFIED AREAS

The following condition applies to any other disturbances within the Permit area resulting from the existing mining operation, not identified specifically in the 14-1 PRP, or this Permit Revision. This condition is required in order to reclaim the Permit area to a

condition that allows for reestablishment of a self-sustaining ecosystem, as required by 19.10.5.507.A of the Rules.

All areas previously disturbed and not identified specifically as a mine unit or borrow area, and not otherwise addressed specifically in this Revision, shall be: 1) graded for stormwater control; 2) either (a) ripped to a depth of 18 inches and covered with 4 inches of approved cover material, or (b) ripped to a depth of 18 to 24 inches; and 3) revegetated and monitored in accordance with Appendix A.

O. ENVIRONMENTAL IMPACT STATEMENT

1. The Permittee shall submit, to MMD, any submittals approved by the BLM under the National Environmental Policy Act. Submittals required by BLM that may affect New Mexico Mining Act requirements, or are necessary for New Mexico Mining Act requirements, shall be submitted to MMD for approval.

2. If any of the BLM submittals indicate that additional or alternative closeout actions are necessary, or desirable, in MMD's judgment to ensure the establishment of a self-sustaining ecosystem and/or meet the requirements of reclamation defined under 19.10.1.7.R (1) NMAC, the Permittee shall modify or revise the Permit. MMD will review the submittal to determine if a modification or revision of this Permit is required by 19.10.5.504.B and 19.10.5.505.B NMAC.

P. ADDITIONAL STUDIES

1. Cover Design Evaluation

To date, the Little Rock Mine test plot studies have not yet demonstrated successful revegetation utilizing Precambrian granite cover based on the revegetation standards of Appendix A. Those studies are not yet complete.

The Permittee shall perform the Test Plot Study in accordance with an approved Test Plot Study Work Plan, dated November 15, 2004, with modifications approved by MMD and NMED on July 28, 2010, and additional modifications approved by MMD.

The condition for test plots is required so that the Permittee can demonstrate that proposed revegetation and reclamation measures or alternative revegetation and reclamation measures that will 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.

a) The Permittee shall submit annual reports to MMD, starting in the year after the test plots are seeded or reseeded, presenting the results of the test plot study, including

recommendations for improvements to the test plot study. In years one through three after seeding or reseeding of the test plots the annual report shall consist of a qualitative survey of vegetation canopy cover, vegetation diversity and of erosion observed at the test plots. At years 4 and 7 of test plot implementation, the Permittee shall submit a comprehensive, quantitative evaluation of the test plots. Each annual report shall provide a discussion of the success or failure of specific revegetation efforts, evaluate trends, and identify limitations to plant establishment. The study will be continued for a minimum of 7 years after test plot implementation, or longer if MMD determines that the study should be continued longer than 7 years after implementation, or until MMD makes a determination in consultation with NMED that the study will be discontinued.

b) Within 180 days of approval of this Revision the Permittee shall modify the Test Plot Study Work Plan to include the testing of organic and/or other amendments in the Test Plot Study approved or required by MMD to achieve the revegetation standards of Appendix A.

c) If the results of the test plot study indicate, as determined by MMD, that alternative or additional closeout actions are necessary to allow for the establishment of a self-sustaining ecosystem, and/or–meet the requirements of reclamation defined under 19.10.1.7.R.1 NMAC, MMD will require that the Permittee modify or revise the Permit in accordance with 19.10.5.504.B and 19.10.5.505.B NMAC.

2. **Affected Areas**

All affected areas, as defined by 19.10.1.7.A.3 NMAC, shall be reclaimed according to 19.10.5.507.A and 19.10.1.7.R.1 NMAC. The Permittee shall perform a study to identify areas affected by mining in accordance with a schedule approved by MMD.. If results of the study indicate that change(s) should be made, in MMD's judgment, to the Updated Closure/Closeout Plan, MMD will require the Permittee to submit a request to modify or revise the Permit. MMD will review the information to determine if a modification or revision of this Permit should be made under 19.10.5.504.B and 19.10.5.505.B NMAC.

3. **Studies for Other Agencies**

The Permittee shall submit to MMD copies of any work plans or studies for reclamation or closeout of the Permit area and affected areas required by NMED or other State or federal agencies. If any submittals to NMED, or such other agencies, indicate, as determined by MMD, that additional or alternative closeout actions are necessary to meet the requirements of the Rules or Act, the MMD will require the Permittee to submit a request to modify or revise the Permit. MMD will review the request to determine if a modification or revision of the Permit should be made under 19.10.5.504.B and

19.10.5.505.B NMAC.

Q. FINANCIAL ASSURANCE

The following conditions are required to ensure that adequate financial assurance is provided for the site, pursuant to 19.10.5.506.J.2, 19.10.12.1202.B, 19.10.12.1204.A, 19.10.12.1206.A, and 19.10.12.1210 NMAC.

1. The Permittee may apply for release of financial assurance in accordance with 19.10.12.1210 NMAC.

2. The approved cost estimate amount for the updated closeout plan is $1,967,200.

3. The Permittee currently maintains financial assurance for the Little Rock Mine in the amounts of $1,520,113 and $1,424,470, using Surety Bonds, respectively, issued by the Liberty Mutual Insurance Company to MMD and NMED as joint beneficiaries.

4. The Permittee shall be responsible at all times to maintain financial assurance in a form, or forms, and in an amount that is acceptable to MMD, pursuant to the Rules.

5. The Permittee may replace the Surety Bond(s) with other forms of financial assurance acceptable to the Director, pursuant to 19.10.12.1209 NMAC. The Director may require adjustment of the financial assurance as provided in 19.10.12.1206 NMAC.

R. POST-CLOSEOUT MONITORING AND MAINTENANCE

1. Erosion

The following conditions apply to all of the reclaimed areas. The conditions for the monitoring and maintenance of 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, also, are required to reclaim the Permit area to a condition that allows for reestablishment of a self-sustaining ecosystem, as required by 19.10.5.507.A and to meet the requirements of 19.10.5.508.D 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 significant erosion and shall mitigate significant erosion features to prevent further degradation of the site. Drainage channels, diversion structures, 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 acceptable to MMD. Inspections of specific units shall continue until those specific units are released under the Rules. Inspections shall be conducted monthly for the first year following completion of reclamation construction activities for each unit, and quarterly, thereafter. The Permittee also shall inspect for evidence of erosion after storm events of one inch, or greater, in any 24 hour period. Inspections shall continue until the specific units are released under the Rules. Release by MMD shall not affect the right of other State or federal agencies to require continued inspections after release by MMD.

b) The Permittee shall report evidence of significant rill, gully, or sheet erosion on any reclaimed area 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, for approval by MMD, 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 practicable following regulatory approval.

c) Erosion control measures that are damaged, or ineffective, shall be repaired, or re-designed as necessary. The Permittee shall use a variety of erosion control measures, as needed, if erosion control problems develop. Long-term erosion control measures will include, but not be limited to, the installation of berms, designed channels, and sediment containment structures, as necessary, and shall be designed for a 100-year, 24-hour, storm event. Short-term erosion control measures may include, but not be limited to: silt fences, hay bales, water bars, and mulching.

2. **Wildlife Monitoring**

The Permittee shall document wildlife use of areas to be reclaimed for a post-mining wildlife habitat as follows:

a) deer pellet group counts shall be conducted in year 6 after reseeding, and in 2 consecutive years of the last 4 years prior to release of financial assurance; and
b) bird diversity surveys shall be conducted twice in year 6 after reseeding, and in 2 consecutive years of the last 4 years prior to release of financial assurance.

The deer pellet group counts and the bird diversity surveys shall be conducted in the same years that the quantitative vegetation surveys are conducted as required in Appendix A. Results of the surveys will be evaluated to determine wildlife-use trends during re-establishment of a self-sustaining ecosystem. The Permittee shall submit to MMD, for approval, an updated wildlife monitoring work plan, identifying sampling methodologies and a map with proposed sampling locations at least 45 days prior to

implementation of each wildlife monitoring survey. The Permittee shall perform the wildlife monitoring surveys in accordance with the MMD approved, updated wildlife monitoring work plan.

3. **Notification**

The Permittee shall notify MMD at least two weeks prior to any monitoring conducted pursuant to this Revision. Monitoring shall be scheduled and arranged so that MMD may accompany personnel of the Permittee, if MMD chooses to do so.

S. WATER QUALITY

The Permittee shall submit to MMD a copy of any submittals approved by NMED on ground and surface water modeling, and geochemical characterization and modeling, necessary for closure. The Permittee shall submit to MMD any studies required by, or otherwise submitted to, NMED. If any of these submittals indicate that additional, or alternative, closeout actions should be made, including implementation of measures to protect wildlife, in MMD's judgment, to meet the requirements of the Act or Rules, MMD will require the Permittee to modify or revise the Permit. MMD will review the request to determine if a modification or revision of this Permit should be made under 19.10.5.504.B and 19.10.5.505.B NMAC.

T. RECLAMATION SCHEDULE

The reclamation schedule is required pursuant to 19.10.5.506.B.1 NMAC. The reclamation schedule for the Little Rock Mine shall begin in accordance with the schedule identified below, unless earlier reclamation is required by other agencies.

Reclamation of the Little Rock Mine shall begin no later than 180 days after cessation of mining, unless the Permittee has applied for standby status for the Little Rock Mine.

During reclamation, measures shall be taken to provide for the stabilization of the disturbances that will minimize future impact to the environment and protect air and water resources.

Reclamation shall be completed in accordance with the Reclamation Schedule shown in Table 1:

Table 1: Reclamation Schedule for the Little Rock Mine

Unit	Anticipated or Actual Start Date for Reclamation to Begin[a]	Anticipated Duration (Years)[b] or Completion Date
In-Pit Stockpile	180 days following Cessation of Operation	2
Open Pit[c]	180 days following Cessation of Operation	2
Haul Roads and Access Roads[d]	180 days following Cessation of Operation	2
Pipelines[e]	180 days following Cessation of Operation	1
Ancillary Facilities and Structures	180 days following Cessation of Operation	1

Notes:
a Anticipated start dates are subject to modification.
b Estimated duration for facility reclamation does not include regulatory design review and approval processes.
c Applies to flat areas within the open pit that are located above the pit lake surface. Accessible pit flat areas are defined as pit haul road driving surfaces and flat areas 50-feet or greater from a highwall.
d Applies to haul roads and access roads not required for post-closure monitoring access.
e Applies to portions of pipeline alignment #1 and #2 that extend from the open pit sump to the crest of the pit. The remaining portions of pipeline located outside the perimeter of the open pit will remain during the post-closure period until no longer needed for seepage water transport. See Section 8.J.

The Permittee may submit for MMD approval, a request to modify or revise the Reclamation Schedule.

U. TEMPORARY CESSATION

If, due to a temporary cessation of Mining Operation exceeding 180 days, and the Permittee wishes to suspend reclamation pursuant to the Reclamation Schedule provided above, the Permittee shall submit an application for a Permit Revision for standby status pursuant to 19.10.5.505 and 19.10.7 NMAC.

V. COMPLIANCE WITH ENVIRONMENTAL PERMITS

Pursuant to 19.10.5.509.C NMAC, during the term of the Permit, as revised and/or

modified, issued pursuant to 19.10.NMAC, the Permittee must maintain environmental permits required for the Permit area. Revocation, or termination of such a permit, or the forfeiture of financial assurance that is related to the Permit area, and required by another governmental agency, is adequate grounds for the Director to issue a cessation order pursuant to 19.10.11 NMAC.

W. **CLOSEOUT PLAN UPDATE**

The Permittee shall submit an updated closeout plan, by June 30, 2018. If MMD determines that alternative or additional closeout actions are necessary, prior to submission of the updated closeout plan, to allow for the establishment of a self-sustaining ecosystem, and/or–meet the requirements of reclamation defined under 19.10.1.7.R.1 NMAC, MMD will require that the Permittee modify or revise the Permit in accordance with 19.10.5.504.B and 19.10.5.505.B NMAC. Modifications or revisions to a portion, or portions, of the Permit will be required prior to submission of the updated closeout plan if the submittals, or studies, addressed under DP-1236, warrant, in MMD's judgment, such action.

X. The Permittee shall comply with all other state and federal requirements and standards including without limitation the Cultural Properties Act, NMSA 1978, Section 18-6-1 to 27 and regulations promulgated pursuant thereto.

Y. The Permittee shall include the change to the Little Rock Mine Permit Boundary that incorporates approximately 40 acres of the Tyrone Mine Permit Area, thereby changing the Tyrone Mine Permit Boundary, as shown on Figure 2-1, dated March 17, 2015, with the proposed Updated Closeout Plan for the Tyrone Mine that MMD is processing under Revision 09-1 to Permit No. GR010RE.

Section 10 (14-1). CONCLUSIONS OF LAW

A. The Director has jurisdiction over the Permittee and the subject matter of this proceeding.

B. The 14-1 PRP is complete, accurate, and complies with the requirements of the Act and Sections 19.10.5.502 NMAC and 19.10.5.503 NMAC and with conditions described in this Permit Revision document.

C. The 14-1 PRP is complete, accurate, and complies with the requirements of Section 19.10.5.505 NMAC. The Permittee, FMI, is permitted pursuant to the New Mexico Mining Act to conduct mining and reclamation operations at the Little Rock Mine, Grant County, New Mexico, upon the condition that the Permittee complies with the requirements of this Order, the Act, the Rules, Permit No. GR007RE, and all

modifications thereof and revisions thereto.

All other provisions, modifications, and revisions for mining and reclamation contained in the Little Rock Mine Permit No. GR007RE, remain unchanged.

CERTIFICATION

I certify that I have read, understand and will comply with the requirements of this Permit, this Permit Revision, the Act, the Rules, including without limitation that I will allow the Director to enter the Permit Area as required by the Permit and/or the Rules and/or as otherwise required by law.

Authorized Representative of the Permittee

General Manager
Title

Freeport-McMoRan Tyrone Inc.
Company

Subscribed and sworn to before me this 17th day of March, 2016

Sandra L. Martini
Notary Public

My Commission Expires

August 24, 2016

OFFICIAL SEAL
SANDRA L. MARTIN
NOTARY PUBLIC - STATE OF NEW MEXICO
MY COMMISSION EXPIRES: August 24, 2016

ORDER

NOW THEREFORE, IT IS HEREBY ORDERED that the Director approves Permit Revision 14-1 to the Little Rock Mine - Freeport-McMoRan Tyrone Inc.. Permit No. GR007RE, located in Grant County, New Mexico. The approval is for increasing the Mine Permit Area; increasing the Open Pit Design Limit, renaming it the Mine Area Design Limit; and approval of the Updated Closeout Plan and financial assurance for the Little Rock Mine.

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

By: _____

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

Date: 3/7/2016

Appendix A

Seeding Methods and Revegetation Standards

Seeding Methods

The seedbed will be prepared by ripping the topdressing to a depth of at least 12 to 24 inches. Compacted road surfaces will be ripped to a depth of at least 24 inches. The ripped furrows will be oriented across slope and the surface will be left in a roughened condition to reduce overland flow and promote the infiltration of water. Seed placement will be accomplished by either drill seeding or by broadcast seeding, followed by covering the broadcast seed using a chain or tire drag, or by a combination of these seeding methods. Straw or native grass mulch will be applied at a rate of at least two tons/acre and stabilized by crimping. Long-stem mulch is preferred over shorter materials. The mulch will be weed free and contain a minimum of viable seeds associated with the mulch source (e.g., barley or wheat seeds).

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 for all reclamation of Existing Unit disturbed areas as delineated on Figure 7-2 of the 14-1 PRP, dated May 8, 2014. The numerical standard for canopy cover shall be 90% of the reference area for all reclamation of New Unit disturbed areas as delineated on Figure 7-2 of the 14-1 PRP, dated May 8, 2014. The designated revegetation reference area is located northeast of the Mangas Wash on the northeast side of the Tyrone Mine permit boundary, as shown in Figure 1 of the November 30, 1999 *Interim Technical Standards for Revegetation Success Tyrone and Little Rock Mines* report. It is the reference area for the Tyrone Mine and Little Rock Mine revegetation evaluation. Permittee shall submit a review of the suitability of this area for use as a revegetation reference area for the Little Rock Mine, to MMD, for approval prior to the Revegetation Success Monitoring.

Shrub Density The standard for shrub density will be 60% of the shrub density in the reference area for all reclamation of Existing Unit disturbed areas as delineated on Figure 7-2 of the 14-1 PRP, dated May 8, 2014. The standard for shrub density will be 90% of the shrub density in the reference area for all reclamation of New Unit disturbed areas as delineated on Figure 7-2 of the 14-1 PRP, dated May 8, 2014.

Plant Diversity The plant diversity standard (shown in Table 1. below) shall be utilized for the Tyrone Mine.

Table 1 . Plant Diversity Standard

Class	Seasonally	Number	Minimum occurrence (% cover)
Perennial grass[a]	Warm	3	1
Perennial grass[a]	Cool	2	0.5
Perennial shrub[a]	NA	2	1
Perennial forbs[a]	NA	2	0.1

[a] Native species

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

Revegetation Success Monitoring

Vegetation establishment monitoring of reseeded areas will be conducted during the third year after seeding, with the objective of determining the adequacy of reseeding efforts. Areas where volunteer revegetation has occurred, such as the West Canyon Stockpile and North Stockpile, shall have vegetation establishment monitoring conducted within 1 year after the approval of Permit Revision 14-1. The vegetation establishment monitoring will be semi-quantitative and the results shall be provided to MMD. Semi-quantitative monitoring will also be applied for minor disturbance areas, such as exploration sites and pipeline corridors that are peripheral to the main reclamation units. Areas where vegetation has not been successfully established will be reseeded or inter-seeded. Alternate closeout actions, as determined by MMD, to allow for the establishment of a self-sustaining ecosystem, and/or-meet the requirements of reclamation defined under 19.10.1.7.R.1 NMAC, may require that the Permittee submit a request to modify or revise the Permit in accordance with 19.10.5.504.B and 19.10.5.505.B NMAC.

Revegetation monitoring will be performed at the sixth year after planting, and for at least two consecutive years of the last four years, starting after the eighth year of the twelve- year-monitoring period. Revegetation monitoring will include, at a minimum, canopy cover, plant diversity, and woody stem density. The revegetation monitoring shall be conducted to meet statistical adequacy for the monitoring conducted during the two of last four years prior to financial assurance release. The canopy cover survey and woody stem density survey shall be conducted using survey techniques approved by MMD. The Permittee shall follow the vegetation monitoring plan approved by MMD for the Tyrone Mine. The vegetation monitoring plan shall be quantitative, using the same techniques for the reclamation area and the reference area for each monitoring event and from year to year during the monitoring period. Any changes proposed to the approved vegetation monitoring plan shall be submitted to MMD for approval at

least 90 days prior to a monitoring event. Proposed changes to the vegetation monitoring plan shall state the reasons for the proposed changes, how the proposed changes compare to the approved plan, and how the proposed changes will affect the statistical analysis for meeting the vegetation success criteria for financial assurance release.

Seed Mix

The primary reclamation seed mix proposed for the Little Rock Mine includes cool and warm season grasses, perennial shrubs, and forbs (Table 2). Permittee anticipates that changes in the seed mix may be required in association with availability issues and advancements in reclamation science. Consequently, a list of alternate species that might be used at the Little Rock Mine included in Table 3. The seed mix is designed for application prior to the summer rains and the seeding should be completed in early- to mid-July. The ratio of cool season to warm season, grasses should be adjusted if the seeding is conducted after the summer rains. Mixtures planned for application in a specific seeding season will be reviewed with MMD and the BLM prior to seed purchase. The species list will be included in the vegetation monitoring work plan and may be amended with MMD approval.

Table 2 . Primary Seed List and Seeding Rates for Little Rock Mine Reclamation

Species[a]	Life-form	Duration	Seasonality	Rate[ab]
Blue grama (*Bouteloua gracilis*)	Grass	Perennial	Warm	0.25
Side-oats grama (*Bouteloua curtipendula*)	Grass	Perennial	Warm	1.25
Green sprangletop (*Leptochloa dubia*)	Grass	Perennial	Warm	0.15
Galleta (*Plueraphis jamesii*)	Grass	Perennial	Warm	0.40
Sand Dropseed (*Sporobulus cryptandrus*)	Grass	Perennial	Intermediate	0.05
Bottlebrush Squirreltail (*Sitanion hystrix*)	Grass	Perennial	Cool	1.25
Indian Ricegrass (*Oryzopsis hymenoides*)	Grass	Perennial	Cool	1.75
Streambank wheatgrass (*Elymus lanceolatus*)	Grass	Perennial	Cool	1.50
Apache plume (*Fallugia pardoxa*)	Shrub	Perennial	NA	0.10
Mountain mahogany (*Cercocarpus montanus*)	Shrub	Perennial	NA	0.10
Winterfat (*Eurotia lanata*)	Shrub	Perennial	NA	1.50
4-Wing saltbush (*Atriplex canescens*)	Shrub	Perennial	NA	0.25
White prairie clover (*Dalea candida*)	Forb	Annual	NA	0.20
Prairie coneflower (*Ratibida columnifera*)	Forb	Perennial	NA	0.20
Blue flax (*Linum lewisii*)	Forb	Perennial	NA	0.15
Total PLS (lbs/ac)				**9.10**

[a]Seed mix and rates are subject to change based on future investigations and availability.

[b]Rate is in pounds of pure live seed (PLS) per acre; substitutions may change seeding rates.

NA = not applicable.

Table 3. Alternate Species Seed List for the Little Rock Mine Reclamation

Species	Life- Form	Duration	Seasonality
Indian ricegrass (*Achnatherum hymenoides)*	Grass	Perennial	Cool
Desert needlegrass (*Achnatherum speciosum)*	Grass	Perennial	Cool
Big bluestem (*Andropogon gerardii)*	Grass	Perennial	Warm
Sand bluestem (*Andropogon hallii)*	Grass	Perennial	Warm
Silver bluestem (*Andropogon saccharoides)*	Grass	Perennial	Warm
Purple three-awn (*Aristida purpurea)*	Grass	Perennial	Warm
Cane beardgrass (*Bothriochloa barbinodis)*	Grass	Perennial	Warm
Yellow bluestem (*Bothriochloa ischaemum)*	Grass	Perennial	Warm
Fringed Brome (*Bromus ciliatus)*	Grass	Perennial	Cool
Buffalograss (*Buchloe dactyloides)*	Grass	Perennial	Warm
Arizona cottontop (*Digitaria californica)*	Grass	Perennial	Warm
Canada wildrye (*Elymus canadensis)*	Grass	Perennial	Cool
Blue wildrye (*Elymus glaucus)*	Grass	Perennial	Cool
Thickspike wheatgrass (*Elymus lanceolatus ssp. lanceolatus)*	Grass	Perennial	Cool
Streambank wheatgrass (*Elymus lanceolatus ssp .psammophilus)*	Grass	Perennial	Cool
Slender wheatgrass (*Elymus trachycaulus)*	Grass	Perennial	Cool
Tanglehead (*Heterotheca contortus)*	Grass	Perennial	Warm
Curly mesquite (*Hilaria belangeri)*	Grass	Perennial	Warm
Tobosa *(Pleuraphis mutica)*	Grass	Perennial	Warm
Junegrass (*Koeleria macrantha)*	Grass	Perennial	Cool
Mountain muhly (*Muhlenbergia montana)*	Grass	Perennial	Warm
Bush muhly (*Muhlenbergia porteri)*	Grass	Perennial	Warm
Deergrass (*Muhlenbergia rigens)*	Grass	Perennial	Warm
Ring muhly (*Muhlenbergia torreyi)*	Grass	Perennial	Warm
Spike muhly (*Muhlenbergia wrightii)*	Grass	Perennial	Warm
Vine mesquite (*Panicum obtusum)*	Grass	Perennial	Warm
Switchgrass (*Panicum virgatum)*	Grass	Perennial	Warm
Western wheatgrass (*Pascopyrum smithii)*	Grass	Perennial	Cool
Galleta grass (*Pleuraphis jamesii)*	Grass	Perennial	Warm
Muttongrass (*Poa fendleriana)*	Grass	Perennial	Cool
Sandberg's Bluegrass (*Poa secunda)*	Grass	Perennial	Cool
Bluebunch wheatgrass (*Pseudoroegneria spicata)*	Grass	Perennial	Cool
Little bluestem (*Schizachyrium scoparium)*	Grass	Perennial	Warm
Plains bristlegrass (*Setaria vulpiseta)*	Grass	Perennial	Warm
Indiangrass (*Sorgastrum nutans)*	Grass	Perennial	Warm
Alkali sacaton (*Sporobolus airoides)*	Grass	Perennial	Warm

Sand dropseed (*Sporobolus cryptandrus)*	Grass	Perennial	Intermediate
Giant dropseed (*Sporobolus giganteus)*	Grass	Perennial	Warm
Sacaton *(Sporobolus wrightii)*	Grass	Perennial	Warm
Needle and thread *(Hesperostipa comata)*	Grass	Perennial	Cool
New Mexico needlegrass (*Hesperostipa neomexicana)*	Grass	Perennial	Cool
Sleepygrass (*Stipa robusta)*	Grass	Perennial	Cool
Western yarrow (*Achillea millefolium)*	Forb	Perennial	NA
Desert marigold (*Baileya multiradiata)*	Forb	Annual	NA
Chocolate flower (*Berlandiera lyrata)*	Forb	Perennial	NA
Desert mariposa lily (*Calochortus ambiguus)*	Forb	Perennial	NA
Lavenderleaf primrose (*Calylophus hartwegii)*	Forb	Perennial	NA
Indian paintbrush (*Castilleja integra)*	Forb	Perennial	NA
Downy paintbrush (*Castilleja sessiliflora)*	Forb	Perennial	NA
Lanceleaf tickseed (*Coreopsis lanceolata)*	Forb	Perennial	NA
Plains tickseed (*Coreopsis tinctoria)*	Forb	Perennial	NA
White prairie clover (*Dalea candida)*	Forb	Perennial	NA
Jame's dalea (*Dalea jamesii)*	Forb	Perennial	NA
Blanket flower (*Gaillardia aristata)*	Forb	Perennial	NA
Firewheel (*Gaillardia pulchella)*	Forb	Perennial	NA
Bird's eyes (*Gilia tricolor)*	Forb	Perennial	NA
Desert verbena (*Glandularia gooddingii)*	Forb	Perennial	NA
Showy goldeneye (*Heliomeris multiflora)*	Forb	Perennial	NA
Scarlet gilia (*Ipomopsis aggregata)*	Forb	Perennial	NA
Gordon bladderpod (*Lesquerella gordonii)*	Forb	Perennial	NA
Arizona lupine (*Lupinus arizonicus)*	Forb	Perennial	NA
Perennial lupine (*Lupinus perennis)*	Forb	Perennial	NA
Bigelow's tansyaster (*Machaeranthera bigelovii var. bigelovii)*	Forb	Perennial	NA
Tanseyleaf tansyaster (*Machaeranthera tanacetifolia)*	Forb	Perennial	NA
Wild Four 'O Clock (*Mirabilis multiflora)*	Forb	Perennial	NA
Lemon beebalm (*Monarda citriodora)*	Forb	Perennial	NA
Wild bergamot (*Monarda fistulosa)*	Forb	Perennial	NA
Hooker evening primrose (*Oenothera elata)*	Forb	Perennial	NA
Missouri evening primrose (*Oenothera macrocarpa)*	Forb	Perennial	NA
Sand penstemon (*Penstemon ambiguus)*	Forb	Perennial	NA
Scarlet bulger (*Penstemon barbatus)*	Forb	Perennial	NA
Firecracker penstemon (*Penstemon eatonii)*	Forb	Perennial	NA
Fendler's penstemon (*Penstemon fendleri)*	Forb	Perennial	NA
Palmer penstemon (*Penstemon palmeri)*	Forb	Perennial	NA
Desert penstemon (*Penstemon pseudospectabilis)*	Forb	Perennial	NA
Superb penstemon (*Penstemon superbus)*	Forb	Perennial	NA

Wandbloom penstemon (*Penstemon virgatus)*	Forb	Perennial	NA
Bluebells (*Phacelia campanularia)*	Forb	Perennial	NA
Desert bluebells (*Phacelia crenulata)*	Forb	Perennial	NA
Mexican hat (*Ratibida columnifera)*	Forb	Perennial	NA
Blackeyed Susan (*Rudbeckia hirta)*	Forb	Perennial	NA
Silver groundsel *(Senecio longilobus)*	Forb	Perennial	NA
Desert senna (*Senna covesii)*	Forb	Perennial	NA
Canada goldenrod (*Solidago canadensis)*	Forb	Perennial	NA
Desert globemallow (*Sphaeralcea ambigua)*	Forb	Perennial	NA
Scarlet globemallow (*Sphaeralcea coccinea)*	Forb	Perennial	NA
Gooseberry globemallow (*Sphaeralcea grossulariifolia)*	Forb	Perennial	NA
Greenthread (*Thelesperma filifolium)*	Forb	Perennial	NA
Parry's agave (*Agave parryi)*	Shrub	Perennial	NA
False indigo-bush (*Amorpha fruticosa)*	Shrub	Perennial	NA
White sagebrush (*Artemisia ludoviciana)*	Shrub	Perennial	NA
Fourwing saltbush (*Atriplex canescens)*	Shrub	Perennial	NA
Canyon bricklebush (*Brickellia californica)*	Shrub	Perennial	NA
Fairy duster (*Calliandra eriphylla)*	Shrub	Perennial	NA
Desert willow (*Chilopsis linearis)*	Shrub	Perennial	NA
Feather dalea (*Dalea formosa)*	Shrub	Perennial	NA
Sotol (*Dasylirion wheeleri)*	Shrub	Perennial	NA
Rubber rabbitbrush (*Chrysothamnus nauseosus)*	Shrub	Perennial	NA
Wolfberry (*Lycium pallidum)*	Shrub	Perennial	NA
Creeping Oregon grape (*Mahonia repens)*	Shrub	Perennial	NA
Beargrass (*Nolina microcarpa)*	Shrub	Perennial	NA
Skunkbush sumac (*Rhus trilobata)*	Shrub	Perennial	NA
Canyon gooseberry (*Ribes leptanthum)*	Shrub	Perennial	NA
NM locust (*Robinia neomexicana)*	Shrub	Perennial	NA
Broadleaf yucca (*Yucca baccata)*	Shrub	Perennial	NA
Soap tree yucca (*Yucca elata)*	Shrub	Perennial	NA
Spanish bayonet (*Yucca glauca)*	Shrub	Perennial	NA

NA = not applicable.