

Tyrone Operations  
P.O. Drawer 571  
Tyrone, NM 88065

July 21, 2010

**Certified Mail #70092820000389631468**  
**Return Receipt Requested**

Mr. David R. Ohori  
Mining and Minerals Division  
Energy, Minerals, & Natural Resources Dept. of New Mexico  
1220 So. St. Francis Drive  
Santa Fe, New Mexico 87505

Dear Mr. Ohori:

**Re:     **Application for Modification - Permit GR010RE**  
          **Timing of Vegetation Monitoring, Section 9.N.2****

Freeport-McMoRan Tyrone Inc. (Tyrone) requests modification of MMD Permit GR010RE Revision 01-1. This modification request concerns the nature and timing of vegetation monitoring on reclaimed lands. The modification requested herein is made in response to advances in the science and regulatory policy associated with vegetation monitoring in semi-arid regions. In addition, this modification is intended to clarify the language of the permit to better reflect industry-regulatory practices as they pertain to vegetation monitoring. The requested modification is practical in nature and will not require changes in financial assurance.

**Vegetation Monitoring**

Permit Conditions 9.N.2 requires:

*“The Permittee shall conduct vegetation monitoring of both volunteer revegetation and reseeded areas during the third year after seeding. Results of the vegetation sampling shall be provided to MMD. The Permittee shall inter-seed or re-seed those areas that have volunteer vegetation as well as other areas, if necessary. Monitoring shall be performed at the sixth year after planting and 2 consecutive years prior to bond release. Revegetation monitoring shall include, at a minimum, canopy cover, plant diversity, and woody stem density. The monitoring shall be conducted to meet statistical adequacy during the 2 consecutive years prior to bond release. The canopy cover survey and woody stem density survey shall be conducted using survey techniques approved by MMD. The Permittee shall submit a vegetation monitoring plan, for MMD approval, 90 days before vegetation monitoring is conducted.”*

Tyrone proposes to change the language in Conditions 9.N.2. to read:

*“The Permittee shall conduct vegetation **establishment** monitoring of both volunteer revegetation and reseeded areas during the third year after seeding **with the objective of determining the adequacy of reseeded efforts. The vegetation establishment monitoring will be semi-quantitative and the results of shall be provided to the MMD. The Permittee shall inter-seed or re-seed those areas where it is determined that vegetation has not been successfully established.**”*

*Revegetation monitoring shall be performed at the sixth year after planting and for **at least two of the last four years, starting no sooner than year eight of the bond release period.** Revegetation monitoring shall 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 2 of last 4 years prior to bond release. The canopy cover survey and woody stem density survey shall be conducted using survey techniques approved by MMD. The Permittee shall submit a vegetation monitoring plan, for MMD approval, 90 days before vegetation monitoring is conducted.**”*

### **Rationale and Justification for Changes**

The changes in the first part of the paragraph address clarification of the nature of the year-3 monitoring. The permit was written in the context of the practices associated with vegetation monitoring on large surface mines in New Mexico. Tyrone understands that vegetation monitoring conducted under the jurisdiction of the MMD prior to the mid-term evaluation at year 6, is semi-quantitative in nature and aimed primarily at determining if the seeding efforts were successful. Because the non-coal mining regulations were relatively new and reclamation had not been implemented to any great extent when the Tyrone Permit was issued, the permit was framed in the context of the practices implemented at that time on large surface coal mines in New Mexico. It is our understanding that the practice of performing semi-quantitative vegetation assessments in year-3 is still a standard industry-regulatory practice for large surface mines in New Mexico. This practice has its roots in the combined experiences of reclamation scientists and ecologists working in semi-arid regions over many years. We recognize that in more humid regions of the United States, quantitative measurements may be made earlier in the bond release period, but these practices are inappropriate given the normal variance in climate in the Southwestern United States. Tyrone believes that the collection of quantitative vegetation data at that third year after seeding is premature and that the use of such data could lead to inefficient decisions, It is also inconsistent with the normal practices required of mining operators in the state.

Tyrone has complied with its interpretation of the permit by providing assessments of the vegetation in the third year after seeding. Reports were submitted for the Burro Mountain Tailing and Dam 3X in the 2008 annual report and for Dam 3 in the 2009 annual report.

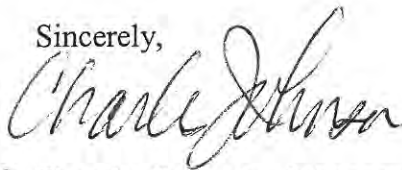
Quantitative mid-term (Year-6) vegetation monitoring is planned for Burro Mountain and Dam 3X next year (2011) and for Dam 3 in 2012.

The changes in the second part of the paragraph are intended to rectify the permit language with the best available science and state and federal policies with regard to vegetation monitoring on reclaimed lands. State and Federal requirements for the timing of revegetation monitoring have changed over the past few years to reflect the recognition of climate variability in semi-arid regions, i.e., areas that receive less than 26 inches of mean annual precipitation. The requirement for meeting the vegetation success standards in 2 consecutive years was believed to unduly penalize the operators for potential negative effects of climatic variations. This change was adopted into federal law in 2006 (Federal Register Vol. 71, No. 168, August 30, 2006) and made part of the New Mexico law in 2008 (NMAC 19.8.20.2065).

Tyrone recognizes that its operations are not regulated under the jurisdiction of either state or federal coal mining laws. However, because the original permit language related to vegetation monitoring was modeled after coal mining practices, we believe these changes are pertinent and reflect the best available science.

A check in the amount of \$1,000.00 accompanies this letter. Tyrone appreciates your consideration of these issues. Please contact Mr. Chuck Johnson at (575) 912-5359 if you require additional information.

Sincerely,

  
for Timothy E. Eastep, Manager  
Environment, Land & Water

TEE:cj  
Attachment  
20100714-100

c: Clint Marshall  
Lewis Munk



**FREEMPORT-McMoRAN**  
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STATE OF NEW MEXICO  
 ENERGY MINERALS & NAT RSRCS M&M  
 1220 S ST FRANCIS DR  
 SANTA FE NM 87505

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071410	07/14/10		FREEMPORT-MCMORAN TYRO	1,000.00	0.00	1,000.00
MMD PERMIT GR010RE MODIFICATION FEE						
Check Number		Date	Vendor Number	Name		Total Amount
0000688343		07/15/10	71193K	STATE OF NEW MEXICO		\$1,000.00

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