



## Electronic Transmission

### MEMORANDUM

Date: October 21, 2022

To: Holland Shepherd, Program Manager, Mining Act Reclamation Program

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

From: Brad Reid, MECS  
John Moeny, Surface Water Quality Bureau (SWQB)  
Sufi Mustafa, Air Quality Bureau (aqb)

Subject: **New Mexico Environment Department (NMED) Comments, Freeport-McMoRan Tyrone Operations, Tyrone Mine and Little Rock Mine, Regular Existing Mines, Reclamation Cover Material Approval, Modifications 22-1, Grant County, New Mexico, New Mexico Mining Act Permit No. GR007RE**

---

The New Mexico Environment Department (NMED) received correspondence from the Mining and Minerals Division (MMD) on August 31, 2022 and September 1, 2022, requesting that NMED review and provide comments on the above-referenced MMD permitting actions. Pursuant to the Mining Act, these are regular existing mines. Given the requests for both the Tyrone and Little Rock Mines are for approval of the same source of proposed Reclamation Cover Material (RCM), NMED is combining the comments for both Mining Act permitting actions in one response. MMD requested comments on the application within 30 days of receipt of the request for comments. NMED requested an extension to submit comments by October 21, 2022. NMED has the following comments.

#### **Background**

Freeport-McMoRan Tyrone Mine Operations (Permittee) is requesting approval of the Little Rock Mine Precambrian granite waste rock as RCM for use in reclamation at both the Tyrone and Little Rock Mines. In addition, the Permittee is requesting termination of the UNSR test plot program.

#### **Air Quality Bureau**

Mr. Holland Shepherd  
Tyrone and Little Rock Mines, Modifications 22-1  
October 21, 2022, 2022

The Air Quality Bureau comments are attached.

### **Surface Water Quality Bureau**

The Surface Water Quality Bureau has no comments.

### **Mining Environmental Compliance Section**

MECS has the following comments:

1. *Results, Reclamation Cover Material Suitability* – This section discusses Water Holding Capacity and references the March 8, 2017 Annual Test Plot Report 1 which describes how Water Holding Capacity was determined for material used at the USNR Test Plots. The report states, “(t)he water holding capacity was determined by subtracting the water held at the traditionally defined field capacity from water held at wilting point (USDA 2014). Field capacity was estimated as the water held at 100 cm (10 kPa) of suction and wilting point was estimated as the water held at 15,000 cm (1500 kPa) of suction (USDA, 2014). Because the cover materials are consistently sandy loams and generally contain between 40 and 60% rock fragments, they were considered coarse textured and field capacity was determined at 100 cm suction. The water content at field capacity and wilting point were determined numerically (rather than graphically) from the soil water characteristic curve functions developed for each sample.”

Please note that NMED will not consider final approval of the proposed reclamation cover material until a demonstration or justification that 100 cm is representative of field capacity for site-specific material is provided.

2. As stated in C109 of DP-1341, final RCM approval is subject to a demonstration that Copper Mine Rule requirements will be met, and concurrence from MMD that requirements of the Mining Act will be met. Pursuant to Paragraph (4) of Subsection F of 20.6.7.33 NMAC, a CQA/CQC plan for the final cover design shall be submitted for NMED approval.
3. The MECS has no comment on termination of the USNR test plot program.

### **NMED Summary Comment**

NMED will withhold approval of the proposed RCM until the comments above are adequately addressed and MMD provides concurrence that the Mining Act requirements also are met.

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

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