



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

December 7, 2023

Via Electronic Mail

Ms. Carmen Rose
Energy, Minerals and Natural Resources Department
Mining and Minerals Division
Mining Act Reclamation Program
1220 South St. Francis Drive
Santa Fe, NM 87505

Dear Ms. Rose:

**Re: Response to Comments on the Cost Estimate, Tyrone Mine
Emma Expansion Project, Revision 21-1, Permit No. GR010RE**

Freeport-McMoRan Tyrone Inc. (Tyrone) submitted an application for an expansion to the Tyrone Mine for the Emma Project on October 22, 2021 and Closure/Closeout Plan (CCP) on November 12, 2021. On October 23, 2023, Tyrone received comments from multiple state agencies on the Cost Estimate for the Emma CCP. This letter provides responses to those comments.

Below are the agency comments in italics followed by Tyrone's responses.

MMD Comments

General

Several comments request that costs and quotes be updated to 2023 values.

Due to a variety of factors that affect priority and sequencing of mining at Tyrone, Emma is now scheduled in the mine plan several years from now. To avoid several updates to unit costs in the financial assurance cost estimate, Tyrone declines to update the cost estimate to 2023 numbers now and instead suggests that the agencies incorporate a permit condition that requires the costs to be updated and financial assurance proposal be submitted either at the next Tyrone CCP cost estimate update or 9 (nine) months prior to Emma haul road construction, whichever comes first.

1. *(Previously Comment 23 from the April 25, 2022 MMD comment letter). Section 8.0, Capital and Operation and Maintenance Cost Estimates, pages 38-41 of the CCP; Appendix B, Earthwork Cost Basis Document; and Excel Cost Estimate Spreadsheets 20210012_Emma_Stockpile_Earthwork_RCE.xlsm.*

- a. *Please update all labor, fuel, and equipment rates to 2023 values and adjust the cost estimate accordingly.*

Please see General response above.

- b. *The Equipment Watch user adjustment for the mechanics wage is the hourly rate for a Group I-Unskilled Laborer. MMD believes that the appropriate hourly rate used should be for a Group III-Skilled Laborer instead. Please justify the use of the Group I-Unskilled Laborer rate over the other laborer Groups' hourly rate using the New Mexico Administrative Code or change the hourly rate for the mechanics wage to the Group III-Skilled Laborer rate.*

State code 11.1.1.18.AA.8 defines mechanic under power equipment operator Group I. Therefore, Tyrone proposes to continue use of the Group I hourly rate for mechanics wage, as has been used in previous cost estimates.

- c. *The Cost Estimate uses the Group VI-Operator hourly rate for the EX3600-5 shovel. According to the New Mexico Administrative Code Section 11.1.2.18.AH, the Group-VIII-Labor rate should be used for shovels. Please change the labor rate used in the Cost Estimate for the EX3600-5 to the Group VIII rate.*

The Cost Estimate currently uses the Group VII Equipment Operator hourly rate for the EX3600-5 shovel and front-end loaders over 10 cubic yards. The shovel is operated for the same use as a front-end loader and therefore Tyrone used Group VII Equipment Operator rate as specified in state code 11.1.1.18.AG.2. Tyrone proposes to use the Group VII rate unless the shovel is operated differently than a front-end loader, then the Group VIII rate will be applied.

2. *Appendix D.5 Direct Quotes in Appendix B provides a direct quote for estimated costs per acre for revegetation efforts from Rocky Mountain Reclamation from 2018. Please provide an updated quote to reflect 2023 values and adjust the cost estimate accordingly.*

Please see General response above.

3. *Have replacement fencing and floating barriers costs been accounted for in long term O&M?*

Fencing is assumed to have a relatively long lifespan and are typically not considered in long term O&M costs. Tyrone proposes to assume a 50-year fencing lifespan and

include one full fencing replacement cost in the 100-year O&M period. Floating barrier replacement costs are not currently included in the cost estimate, Tyrone also proposes to assume a 50-year floating barrier lifespan and include one full replacement cost in the 100-year O&M period. These changes will be added in when the costs are updated per the general response above.

4. *Please refer to MMD comment 6 in the MMD comment letter dated June 13, 2023: For the purpose of this Revision 21-1, MMD will require that Tyrone provide a plan and financial assurance (FA) to address placing a minimum of 6 inches of salvaged soil and 6 inches of Gila Conglomerate reclamation cover material over reclaimed areas. Please update the cost estimate to account for these changes from the original plan.*

Tyrone agrees to revise the cost estimate to reflect 6 inches of salvaged soil placement and 6 inches of Gila Conglomerate placement over Emma-related reclaimed areas for financial assurance purposes only. The timing of this change to the cost estimate will be as proposed in the general comment above.

Mining Environmental Compliance Section (MECS) Comments

1. *The Sampling tab in the 2021 cost estimate addresses operation and maintenance costs associated with water quality sampling. The table shown in the Sampling tab is as follows:*

Item	Quantity
Monitoring Wells	3
Pit Sump	1
Surface Water Locations	2
Samples/ Location	6
Sampling (\$/sample)	\$550
Semi-Annual Sampling Cost	\$3,300
Annual Sampling Cost	\$1,650
Total Yearly Sampling Cost	\$4,950

Based on a review of the Sampling and Analysis Plan (SAP) dated January 19, 2023, for DP-396, the table above needs to be updated to reflect what is approved in the SAP for the Emma Expansion and what will be reflected in the Draft DP-396.

At Emma, the approved DP-396 Facility Monitoring Plan (FMP) includes monitoring of 8 permanent wells, 3 temporary wells, 4 surface water samplers, and the water management sump during mining operations. Locations of the 3 temporary wells will eventually be mined out. Of the 8 permanent wells, 3 of them are expected to continue to be monitored at closure, including well 396-2021-01 (located between Emma and Apache Mound), and downgradient wells 396-2023-01 and MB-44. The downgradient wells are located northeast of the proposed location of the Emma Pit (MB-44) and

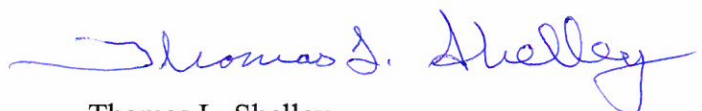
EMW stockpile (396-2023-01). Tyrone will continue to monitor the water level and water quality of the Emma Water Management Sump at closure as well as 2 of the 4 surface water samplers. One surface water sampler will be selected east of the open pit (Emma East 1 or Emma East 2) and another east of the EMW stockpile (EMW Sampler 1 or EMW Sampler 2). The selections will be based on data collected at the 4 surface water samplers during operations and likely include those that capture the most stormwater samples.

2. *Based on a review of the cost estimate, it is not clear if the cost(s) for pumping fluids out of the Emma Pit Water Management Sump and conveyance to the Tyrone Mine closure water treatment plant have been addressed. NMED understands that up to 57,600 gallons per day will be pumped out of the Emma Pit Water Management Sump in perpetuity. Please indicate if these costs have been accounted for in the cost estimate.*

Pumping costs are included in the cost estimate. For the purposes of developing the annual operations and maintenance costs (OPEX), the average inflow to the pit, estimated at 20.1 gpm over the 100-year period, was used for calculating chemical usage, residuals produced, power requirements, labor, and other elements of operations and maintenance (O&M) costs. Replacement O&M and routine maintenance for sprayers, pumps and pipeline are also added in the cost estimate over the 100-year period using 1.8% for replacement O&M and 1.5% for routine maintenance just like the Tyrone CCP.

Please contact Ms. Raechel Roberts at (575) 956-3290 if you have questions.

Sincerely,



Thomas L. Shelley
Environmental Services Manager

TLS:rmr
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ec. DJ Ennis – MMD
Anne Maurer – NMED
Brad Reid – NMED