



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



August 12, 2014

Certified Mail #70131090000186133434
Return Receipt Requested

Mr. David Ohori
Mining and Minerals Division
Mining Act Reclamation Program
1220 South St. Francis Drive
Santa Fe, NM 87505

Dear Mr. Ohori:

Re: Tyrone 9AX Borrow Material Stockpile

Freeport-McMoRan Tyrone Inc. (Tyrone) submitted a modification (Modification 14-1) request for the construction of the 9AX Borrow Material Stockpile in a letter dated April 25, 2014. The following information is provided in response to MMD's letter dated August 5, 2014 (numbering in accordance with MMD's points).

1. *MMD Comment on Tyrone Response to MMD Comment 1:*

A meeting was held on July 16, 2014 between representatives of Tyrone and MMD to discuss the reclamation requirements for the 9AX stockpile, in particular, the cover material and thickness of cover material to be applied to the 9AX stockpile at reclamation. Subsequently, Tyrone has committed to provide a reclamation cost estimate on using a one foot thick layer of Gila Conglomerate cover material for the 9AX stockpile. On July 29, 2014, MMD received an e-mail from Lynn Lande, Tyrone Chief Environmental Engineer, with a revised reclamation cost estimate for the 9AX stockpile that includes placement of a one foot thick layer of Gila cover material over the 9AX stockpile during reclamation. MMD has reviewed the revised reclamation cost estimate, and provides comments on it, below. MMD's approval of a one foot thick layer of Gila Conglomerate as cover for the 9AX stockpile does not affect any other cover requirements currently in Permit No. GRO10RE. Any modification or revision of the current Cover Placement Plan, including whether MMD will require a modified Cover Placement Plan for the 9AX stockpile, will be made based upon test plot results regarding the amount of Gila Conglomerate, if any, that is required as a cover material over leach cap material to successfully revegetate.

Tyrone has no technical response.

2. *MMD Comment on Tyrone Response to MMD Comment 2:*

The Tyrone Response committing to include stormwater drainage features to handle a 100- year, 24-hour storm event in the reclamation plan for the 9AX stockpile is acceptable.

Tyrone has no technical response.

3. *MMD Comment on Tyrone Response to MMD Comment 3:*

MMD has reviewed the revised reclamation cost estimate received on July 29, 2014 and provides comments, below.

Tyrone's responses are shown below in Comment A.

4. *MMD Comment on Tyrone Response to MMD Comment 4:*

MMD requested that a representative from the New Mexico Environment Department Surface Water Quality Bureau ("SWQB") visit the McCain Spring and the location of the proposed 9AX stockpile. On July 28, 2014, a representative of the SWQB visited the McCain Spring and subsequently reported their observations and concerns in an e-mail to MMD, dated July 29, 2014 (attached). The SWQB has expressed similar concerns as MMD and the New Mexico Department of Game & Fish ("NMDG&F") regarding potential impacts from stormwater runoff, and slope failure to the McCain Spring from the 9AX stockpile and recommends increasing the setback or buffer between the proposed reclaimed toe of the 9AX stockpile and the McCain Spring from 100 feet.

MMD currently requires a minimum 100 foot setback for minimal impact exploration operation permits from ephemeral, intermittent or perennial watercourses. MMD considers the larger scale of the 9AX stockpile compared to minimal impact exploration operations warrants a greater level of protection for the McCain Spring.

Condition 9.E.1.d of Permit Revision 01-1 to Permit No. GROIORE for the Tyrone Mine allows Tyrone to reclaim individual slopes that would intersect a designated Surface Water of the State with interbench slopes steeper than 3H:1V, but no steeper than 2.5H:1V in order to avoid the intersection. In order to increase the buffer between the McCain Spring and the 9AX stockpile, MMD would consider a reclamation design for the 9AX stockpile reclaimed slope facing the McCain Spring designed in accordance with this condition. In the past, MMD has approved the regrading of the No. 1C stockpile at the Tyrone Mine under this condition. MMD also recommends that a berm be constructed and maintained at toe of the reclaimed 9AX stockpile slope, and other best management practices be implemented as needed, to prevent stormwater and other impacts to the McCain Spring from the 9AX stockpile.

A meeting was held on July 16, 2014 between representatives of Tyrone and MMD to discuss the reclamation requirements for the 9AX stockpile, in particular, the cover material and thickness of cover material to be applied to the 9AX stockpile at reclamation.

Tyrone agrees that mine facilities, such as stockpiles and tailing dams, are large structures and by their very nature, all drainages and washes cannot and have not been avoided during construction.

In a meeting held on July 31, 2014, between representatives of the MMD and Tyrone, there were two concerns about the proximity of the stockpile to McCain Spring during reclamation. The first was that during reclamation large boulders could roll into the spring area as the stockpile is regraded and the second was that sediment from a newly covered slope could wash into the spring during precipitation events.

The toe of the stockpile with the proposed design is approximately 150 feet from the spring. Tyrone agrees to place a berm prior to commencement of regrading between the stockpile and the spring to capture large rocks and sediment that could wash into the spring. If additional best management practices are needed, Tyrone will consult with the MMD prior to reclamation.

5. *MMD Comment on Tyrone Response to MMD Comment 5:*

As stated above, MMD has received a revised reclamation cost estimate for the 9AX stockpile from Tyrone. MMD has reviewed the cost estimate and provides comments, below. Once MMD has determined the application to be technically approvable, MMD will request Tyrone to submit a financial assurance proposal.

Tyrone has no technical response.

6. *MMD Comment on Tyrone Response to Office of the State Engineer ("OSE") Comment: The Tyrone response is acceptable. MMD notes that the revised reclamation cost estimate includes the costs to abandon one monitor well.*

Tyrone has no technical response.

7. *MMD Comment on Tyrone Response to NMDG&F Comment:*

See MMD Comment to Tyrone Response to MMD Comment 4 above.

Tyrone's responses are shown above in Comment 4.

8. *MMD Comment on Tyrone Response to State Historic Preservation Office Comment: The Tyrone response is acceptable.*

Tyrone has no technical response.

9. *MMD Comment on Tyrone Response to NMED and NM Air Quality Bureau ("NMAQB"): MMD has no additional comments on the Tyrone Response.*

Tyrone has no technical response.

Additional MMD Comments:

A. *Revised Reclamation Cost Estimate*

As mentioned above, MMD has reviewed a revised reclamation cost estimate that was received on July 29, 2014. Table 4, 9AX Borrow Material Stockpile- Productivity and Hours Required for Loader and Truck Use, and Table 5, 9AX Borrow Material Stockpile- Summary of Earthmoving Costs, shows that the cover material will be obtained in the "Borrow Area". MMD requested the

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location of the Borrow Area at a meeting with Tyrone held on July 31, 2014. Tyrone's response was that the source of the Gila Conglomerate cover material will be from a deposit of Gila Conglomerate located near the No.1A tailing impoundment that was a source of cover material during the reclamation of the No. 1 series tailing impoundments. Condition 9.E.2.c of Revision 01-1 requires that all borrow areas of cover material shall be graded for stormwater control, ripped or topdressed to a minimum depth of 24 inches, and revegetated in accordance with the permit.

Please adjust the revised reclamation cost estimate to include the third party costs for grading, ripping and revegetation of the proposed borrow area. In addition, please provide the location of the proposed borrow area on a plan view drawing.

The area of disturbance for the borrow area is approximately 7 acres. The cost to revegetate and rip the borrow area is shown on Table 6. The current cost estimate includes the use of a dozer at the borrow area to push cover to the loader. During the dozer's last push, the dozer will regrade the borrow site to a 3H: 1V slope.

During the July 31, 2014 meeting for the 2013 Tyrone CCP with MMD and NMED, you and James Smith, MMD Engineer, stated that the proposed 22.5% indirect percentage was correctly applied for the Tyrone financial assurance estimate. Tables 1 and 9 included as attachments of the financial assurance cost estimate were updated to show the change.

The following information is provided in response to Surface Water Quality Bureau's email dated July 29, 2014.

Tyrone will not discharge wastewater under this application and follow all applicable rules and regulations that apply to this application. See response to Comment 4 that addresses the reclamation design to the vicinity of the spring.

If you require additional information or have any questions regarding this information, please contact Ms. Lynn Lande at (575) 912-5235.

Sincerely,



Lynn Lande, Chief Environmental Engineer
Reclamation Services

LAL:ml
Attachments
20140812-100

Table 9: 9AX Borrow Material Stockpile - NPV Calculation

August 11, 2014

	Escalation Rate	Yr 1-12 Discount Rate
Earth	3.64%	5.00%

Component	Current Cost	NPV
Earthwork	\$1,027,990	\$957,829
Total	\$1,027,990	\$957,829

Year	Earthwork Current Cost	Earthwork NPV
1	85,666	85,666
2	85,666	84,556
3	85,666	83,461
4	85,666	82,380
5	85,666	81,313
6	85,666	80,260
7	85,666	79,220
8	85,666	78,194
9	85,666	77,181
10	85,666	76,182
11	85,666	75,195
12	85,666	74,221
Total	1,027,990	957,829

\$85,666 equals \$1,027,990 ÷ 12

\$1,027,990 9AX Stockpile FA

Table 1: 9AX Borrow Material Stockpile - Reclamation Cost Estimate Summary

August 11, 2014

Reclamation Summary - 3:1 Inter Bench		9AX Borrow Material Stockpile	
Direct Costs		Current	
Earthmoving		\$	613,982
Vegetation	100%	\$	80,367
Other		\$	20,739
Subtotal, Direct Costs		\$	715,088
Indirect Costs			
Mobilization and Demobilization	1.0%	\$	7,151
Contingencies	2.0%	\$	14,302
Engineering Redesign Fee	2.5%	\$	17,877
Contractor Profit and overhead	15.0%	\$	107,263
Project Management Fee	2.0%	\$	14,302
State Procurement Cost	0.0%	\$	-
Indirect Percentage Sum =	22.5%		
Subtotal, Indirect Costs		\$	160,895
Earthwork Total		\$	875,983
O&M Costs		\$	152,007
Total Costs		\$	1,027,990

Data Sources:

- MMD. 1996. Closeout Plan Guidelines for Existing Mines, Mining Act Reclamation Bureau Mining and Minerals Division New Mexico Energy, Minerals and Natural Resources Department. April 30, 1996.
- OSM. 2000. U.S. Department of the Interior, Office of Surface Mining Reclamation and Enforcement Handbook for Calculation of Reclamation Bond Amounts. April 5, 2000.

Notes:

- 1) Indirect costs are based on the guidance available from MMD (1996) and OSM (2000).
- 2) Indirect Percentage updated to reflect July 31, 2014 MMD meeting comments (See attached letter response A).

Table 6: 9AX Borrow Material Stockpile - Vegetation Cost

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Description:

Includes scarifying, discing, rangeland drill seeding, mulching, crimping, and daily per diem

Stockpile Areas

Unit or Disturbance	(acres)	Unit Cost (\$/acre)	Subtotal Cost (\$)	Area Reference
9AX	64	\$ 1,137	\$ 72,410	Rocky Mountain Reclamation, Laramie WY (10/31/13)
Borrow	7	\$ 1,137	\$ 7,957	Rocky Mountain Reclamation, Laramie WY (10/31/13)
9AX			\$ 80,367	
Direct Cost Total			\$ 80,367	