



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

April 13, 2018

**Certified Mail #9171999991703579978809**  
**Return Receipt Requested**

Mr. Fernando Martinez  
Division Director  
Mining Act Reclamation Program  
Mining and Minerals Division  
1220 South St. Francis Drive  
Santa Fe, NM 87505

Dear Mr. Ohori:

**Re: Freeport-McMoRan Tyrone Inc. Tyrone Mine Closure/Closeout Plan**  
**Update, Permit Nos. GR010RE and DP-1341: Response to Comments**

Freeport-McMoRan Tyrone Inc. (Tyrone) submitted an update to the Closure/Closeout Plan (CCP) to the Mining and Mineral Division (MMD) and the New Mexico Environment Department (NMED) on July 16, 2013. Tyrone responded to NMED and MMD CCP comments on June 11, 2015. Tyrone received a second set of comments from MMD in a letter dated December 29, 2017. Please find enclosed Tyrone's responses to those comments. Tyrone is reviewing the CCP and in addition to the changes Tyrone outlines in the response letter, some additional changes are under review to optimize the CCP. Those changes are expected to affect the earthwork and water treatment plans.

Tyrone appreciates the time and effort spent by MMD staff in reviewing and commenting on the CCP. Tyrone looks forward to discussing the responses to MMD comments and the upcoming changes. Tyrone would be happy to schedule a CCP meeting at the agencies convenience. In the meantime, please contact Ms. Mandy Lilla at (575) 912-5388 if you have any immediate questions or concerns.

Sincerely,

Thomas L. Shelley  
Reclamation Manager  
Environmental/Sustainable Development

TLS:ml  
Enclosure  
20180413-102

c. Keith Elhert - NMED  
Kurt Vollbrecht - NMED  
Holland Shepherd - MMD  
David Ohori - MMD



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February 27, 2018

New Mexico Mining and Minerals Division  
Wendell Chino Building, Third Floor  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

RE: Support of Tyrone Mine's Proposed Reclamation Plans

Sirs,

The Silver City Grant County Chamber of Commerce is pleased to support the efforts of the Freeport-McMoRan Tyrone Mine in regards to the company's Reclamation Plan, aka a Closeout Plan.

There are very few structures within Grant County that can be marketed for industrial use. The Reclamation Plan at Tyrone Mine identifies various structures that could possibly be utilized for economic development activities in future years. These structures would give the Chamber of Commerce a substantial portfolio of possible industrial sites during our efforts to relocate existing businesses and/or offer potential sites to new business opportunities searching for sites within New Mexico.

Of course, it is our hope that the Reclamation Plans for the Freeport-McMoRan Tyrone Mine do not have to be used for several years from now. Yet in the event of closure, we believe the Reclamation Plan that has been developed will be beneficial to our community, the State of New Mexico, and Freeport-McMoRan.

Please contact me at your convenience if additional information is needed.

Respectfully,

Scott C. Terry IOM, PCED  
President - CEO

1. *Section 1.3.2, Closeout Plan Constructs, page 3 - states, "The current approved conditional waiver area is depicted on Figure 3R of Revision 10-1 to Permit No. GR010RE (MMD, 2012). This update takes into account conditional waivers approved by MMD." Plate 1, and Appendix A, Reclamation Design Drawings - Drawings 2, 3, 12, 13, 14 and 34 in the Tyrone Updated CCP, delineates the waiver boundary for the Copper Mountain Pit area as being contiguous with the waiver area of the Main Pit area. The current conditional waiver area reported by Tyrone in the annual Stockpile and Open Pit Waiver Update dated August 31, 2017 does not show the Copper Mountain pit waiver area to be contiguous with the Main pit waiver area. MMD requests that Tyrone provide an assessment of how the additional waiver area depicted in Plate 1 qualifies for the waiver pursuant to § 19.10 5.507.B NMAC and Section E.1.5 of Revision 10-1 to Permit No. GR010RE.*

The pit waiver area illustrated on Figure 3R (2012) is different than the pit waiver area illustrated on Plate 1 of the CCP. They should be. Figure 3R is the approved pit waiver based on actual mine topography at the time of approval of the pit waiver. The CCP itself and Plate 1 is a projection of the mine topography and how the pit waiver area would change based on the mine plan. The projected pit waiver (Plate 1) is prepared using the same criteria that led to MMD's approval of Figure 3R in 2012, but applying that criteria to the projected topography.

Tyrone updates the Revised Conditional Waiver Area (RCWA), annually, to reflect the normal progression of mining, in accordance with Revision 10-1 to Permit Number GR010RE condition 9.E.1.5. The waiver area, submitted in a letter dated August 31, 2017, shows the current mine configuration and associated adjustments to the waiver area (two distinct pit waiver lines, one for the Main Pit and one for the Copper Mountain Pit). As mining progresses and additional material is added to the stockpiles, Tyrone believes the RCWA will need to be adjusted to reflect a single contiguous RCWA as shown in the above listed drawings and Plate 1.

The RCWA is consistent with the scope and scale of changes anticipated in the August 31, 2012 waiver modification. MMD granted the conditional waiver that recognized that reclaiming stockpile outcrops located near the rim of an open pit would result in construction safety, water management, long-term maintenance and/or access concerns. All the additional stockpile areas within the pit waiver line shown on Plate 1 are contiguous with an open pit wall.

In 2012, Tyrone evaluated the 5-year Financial Assurance (FA) requirement for the Tyrone Mine, for years 2013 to 2017. At that time, MMD and New Mexico Environment Department (NMED) agreed that end of year 2014 (EOY 2014) was the highest liability year for reclamation. The reclamation technical scope of work and RCWA, shown in the above listed drawings and Plate 1, were generated using the EOY 2014 mine configuration. The projected pit waiver area must be projected onto the anticipated topography in order to evaluate reclamation areas to calculate FA. Today Tyrone has essentially achieved the 2014 mine configuration and is progressing toward the 2016 mine configuration, which is a lower liability year.

2. *Section 1.5, Description of Updated Plan, page 7- states, "This updated CCP supports financial assurance cost estimate for closure/ closeout based on the EOY 2014 mine plan." Please confirm that the EOY 2014 remains the year with the greatest volume of regrading and cover placement and results in the highest financial assurance requirements applicable to the Tyrone Updated CCP. Otherwise, please project the year between 2014 and 2022 when the highest reclamation costs will occur.*

Since the agency approved the CCP in 2004, Tyrone has submitted two CCP updates with the 2013 update being made consistent with the Copper Mine Rules. The most expeditious plan today is to act on the current CCP proposal with the adjustments that Tyrone describes herein so that the FA can be updated. Once that is complete, Tyrone will have adequate FA for the next five years for the reasons given below.

Tyrone determined and agencies approved that EOY 2014 is the highest liability reclamation year for the period between 2013 to 2017. In 2015, Tyrone went from a 2-shovel operation to a 1-shovel operation and most of the mining has taken place in the Little Rock Open Pit since then. In general, there has been less change to the overall mine configuration than originally anticipated by this point in time.

The current mine plan, has Tyrone continuing as 1-shovel operation and most of the mining activity returning to the Tyrone Main Pit in the next 12 months. At that time, Tyrone plans to remove part of the 5A Stockpile (including areas reclaimed in the CCP), strategically place GCRCM, and place other material primarily on open-pit stockpiles, located within the RCWA. In addition, a comparison of the 2014 Revised Pit Waiver Area and the 2022 Projected Pit Wavier Area shows the pit waiver area increasing over the next 5 years, resulting in less outslope and surface reclamation area. Additionally, there are several areas where additional stockpile fills outside the RCWA will be filled in such a way that will result in a trade-off of slope reclamation for flat area reclamation, which is less costly. These factors will result in a reduction in closure/closeout scope as mining moves forward as compared to the 2014 CCP.

Therefore, Tyrone believes that year 2014 remains the most expensive plan. Tyrone has backfilled the San Salvador and South Rim open pits to the extents described in the CCP, has mined at a lower production rate than assumed in the CCP, is progressing toward the 2016 mine configuration, which was a lower liability year than 2014. The current mine plan shows the closure cost reducing over time with the exception of an additional in-pit leach stockpile flat surface (Valencia). That addition will be offset by the expansion of the RCWA as explained above.

In summary, Tyrone recommends that the most expeditious way to update FA is to focus on updating the CCP in accordance with 2014 configuration with the



additions/adjustments to the scope as described in various responses below. Tyrone is preparing some graphics to illustrate the facts stated above and recommends a meeting be arranged to present the rationale to the agencies.

3. *Section 2.3.7, Material Characteristics, page 28 - states, "Tyrone believes the results of reclamation and test plot studies will provide additional information on the adequacy of these materials for cover." In June 2015, Tyrone completed construction and seeding of revegetation and erosion test plots at the USNR reclamation area to test the material proposed by Tyrone for reclamation at the Little Rock Mine and the Tyrone Mine that is being excavated from the Little Rock Mine and placed at the 9A and 9AX waste rock piles at the Tyrone Mine. MMD anticipates the results of these test plot studies will determine the suitability of the material from the Little Rock Mine as a revegetation and erosion resistant cover material.*

Preliminary evaluations of the USNR test plots indicate that the test plots are on the right trajectory to meet the revegetation and erosion resistant cover material standards. Tyrone will continue conducting vegetation and erosion monitoring and present the results in the test plot reports.

MMD conditionally approved Gila Conglomerate Reclamation Cover Material (GRCRM) in 2004 prior to completion of the test plot study. Tyrone proposes that MMD consider at this time conditionally approving the Precambrian Granite Reclamation Cover Material (PGRCM) and associated intrusive rocks mined from the Little Rock Mine based on the USNR test plot preliminary results.

4. *Section 3.1.5, Tailing Launder, page 34 and Table 3-1, Status of Reclamation and Financial Assurance Reduction at the Tyrone Mine - Tyrone indicates that the reclamation of the tailing launder would be completed in 2014. Please provide an update on the status of the tailing launder reclamation including the re-establishment of the associated watershed drainages that the tailing launder crosses.*

As of March 2018, the Tailing Launder itself has been fully demolished and reclaimed. The launder grade and canyon fills have not been breached, nor has the trestle been demolished. The technical scope of work provided in the Amended Tailing Launder Reclamation Work Plan, submitted August 11, 2006, remains valid. Tyrone will update the technical scope of work and the FA cost estimate to demolish and reclaim the trestle and the remains of the No. 1 Series tailing decant return pump station once the technical scope of work is deemed approvable by NMED and MMD.

5. *Section 3.2.7, Impacted Soils and Tailings Pipeline In and Around the Tailing Thickeners, page 37 - states the reclamation activities in the vicinity of the tailing thickeners including the consolidation of tailing and other mining impacted materials, closing of the remaining tailing pipeline and launder, grading, installation of stormwater controls, cover and revegetation was projected to be completed by EOY 2014. Please provide an update on the status of the reclamation of this area.*

As of February 2018, the impacted soils and tailing pipeline in and around the tailing thickeners (Tailing Thickeners) have not been reclaimed. Tyrone will update the technical scope of work and FA cost estimate to include the Tailing Thickeners once the technical scope of work is deemed approvable by NMED and MMD.

6. *Section 4.1.2, Stockpiles, page 40 - states, "Additionally, as part of this CCP update, Tyrone has included a new leach stockpile that will be constructed within the Savanna Pit by EOY 2014. This facility, referred to herein as the 'Savanna Pit Stockpile', is projected to cover an area of approximately 172 acres and is identified as a conditionally waived facility on this CCP." Please update the status of the Savanna Pit Stockpile and provide an assessment of how this stockpile qualifies for a conditional waiver as required by Section E.1.5 of Revision 10-1 to Permit No. GR010RE.*

The Savanna Pit Stockpile and projected PLS collection system is located in the Savanna pit. The stockpile is within the MMD conditional waiver line and the NMED OPSDA. Stockpile construction, consistent with CCP Update drawings 2 and 25, began in 2013.

The stockpile backfills much of the open pit with the projected PLS containment pond located between the toe of the stockpile outslope and the Savanna open pit highwall. Tyrone has proposed to regrade and revegetate the top surface. The resulting stockpile configuration results in a single north-facing stockpile outslope. Tyrone believes the stockpile outslope qualifies for a waiver status, because it is environmentally unsound, and unsafe to reclaim this interior-facing slope. It would be unsafe to work within close proximity of the highwall during construction and maintenance. It is environmentally unsound to regrade the slopes and cover the solution collection sump as well as infrastructure and access to manage solutions.

Tyrone agrees that a formal and consistent name for the Savanna In-Pit Stockpile should be used throughout the CCP. Tyrone will update the technical scope of work, label the Savanna In-Pit Stockpile the 'Savanna Open-Pit Leach Stockpile', and remove all references to a 'future' or 'new' Savanna Open-Pit Stockpile from the CCP.

7. *Section 4.1.3, Open Pits, page 41 - states that the San Salvador Pit is projected to be partially backfilled at the EOY 2014 and the South Rim Pit is projected to be fully backfilled. Please provide the current backfill status of these open pits.*

Tyrone has backfilled the San Salvador Pit and South Rim Pit to the extents described in the CCP.

8. *Section 4.1.7, Industrial Facilities, page 43 - Section 9.1.1 of Revision 01-1 to Permit No. GR010RE requires, in part, that Tyrone provide MMD with a building inspection certificate signed by a professional engineer, that the industrial PMLU*

*buildings meet applicable building codes, are structurally sound, meet all zoning requirements and ordinances, are have operating utilities. The certification is required to be renewed every five (5) years. The last renewal certificate for Tyrone was received by MMD in 2013 and the next renewal certificate will be due in 2018. MMD intends to continue this requirement together with the other requirements of Section 9.I.I of Revision 01-1 regarding the industrial PMLU at the Tyrone Mine for Revision 09-1.*

No response required for this comment.

*Tyrone provided a letter, dated November 19, 2002, from the Silver City-Grant County Economic Development Corporation "(SIGRED)" supporting Tyrone's proposal for retaining selected buildings at the Tyrone Mine for an industrial PMLU. At this time, MMD requests confirmation from SIGRED or an equivalent organization of the current need for retaining the buildings at the Tyrone Mine for an industrial PMLU.*

The requested letter is attached.

9. *Section 4.2.2, Stockpiles, Stockpile Erosion and Drainage Control, page 44 - states, "For the stockpile top surfaces located outside the OPSDA, the surfaces will be graded and covered (with the exception of the 9A overburden stockpile which will not require imported cover) to direct non-impacted water to designated discharge areas." The 9A overburden stockpile is composed of overburden mined at the Little Rock Mine. Currently, this material is being tested as a vegetation and erosion resistant cover material at the Tyrone/Little Rock USNR test plots. The results of this study will determine, in part, the suitability of this material as a vegetative cover and will impact whether or not the 9A overburden stockpile will require additional cover material to meet the revegetation and erosion requirements of Permit No. GR010RE.*

Comment noted, however Tyrone notes that when Gila Conglomerate test plots showed similar progress to the USNR test plot (and even before), MMD approved Gila Conglomerate as conditionally approved cover material. Tyrone requests that MMD conditionally approve Precambrian granite as suitable cover material with the condition that a material handling plan be employed to use it successfully as cover.

10. *Section 4.2.2, Stockpiles, Stockpile Cover and Revegetation, pages 45-46 - states that the cover material requirement for the Mining Area at the Tyrone Mine is approximately 12.8 million cubic yards based on the current permit requirements, that more than 20 million cubic yards of Gila Conglomerate and leached cap cover materials have been identified at the Tyrone Mine, and that for the Tyrone Updated CCP the assumed borrow sources for stockpile cover material are the in-situ Gila Conglomerate in the Lube Shop (Savanna Stockpile) area and from the 5A overburden stockpile. The Preliminary Borrow Source Materials Investigation*

*("PBSMI"), dated October 31, 2005, and the Supplemental Borrow Materials Report ("SBMR"), dated January 31, 2006, provide chemical and physical properties of the Gila Conglomerate and leached cap borrow materials in selected locations at the Mining Area. Table 8, Borrow Source Volumetrics Mine/Stockpile Unit, and Plate 2, Potential Gila Conglomerate Borrow Sources Tyrone Mine/Stockpile Unit of the PBSMI provide the estimated volumes of Gila Conglomerate (and leached cap from the Copper Mountain open pit) available as cover material. Table 8 of the PBSMI indicates that approximately 5.2 million cubic yards of Gila Conglomerate cover material would be obtained at the southern portion of the 5A overburden stockpile. However, due to uncertainty in the exact location of potentially acid generating waste rock located in the 5A overburden stockpile a quality assurance/control plan and a material handling plan is required to assure that no acid generating material is excavated from this stockpile for use as cover material. In addition, the PBSMI does not provide a volumetric estimate of the Gila Conglomerate cover material at the Lube Shop area and only provides the chemical and physical analysis data from three samples of Gila Conglomerate obtained from the Main Pit wall in the vicinity of the Lube Shop area. MMD believes that additional information on the characteristics and quantity of Gila Conglomerate from the Lube Shop area is needed. Please provide additional information, if available, on the chemical and physical properties of the Gila Conglomerate found in the Lube Shop area and provide an estimate of the volume of the Gila Conglomerate available as cover material from this area.*

*In addition, Borrow Source A identified in the PBSMI has since been covered by the 9A and 9AX waste rock stockpiles, probably making it unavailable as a source of Gila Conglomerate cover material, and since the No. 1 stockpile has been reclaimed and it is offset from the rest of the Mining Area, Borrow Source E may no longer be a practical source of cover material. MMD is concerned that the sources and volumes of Gila Conglomerate cover material for reclamation at the Mining Area are less than the estimates provided in the PBSMI and may not be sufficient to meet the reclamation requirements at the Mining Area. Tyrone should provide an update to the PBSMI and SBMR to re-confirm that there is sufficient Gila Conglomerate cover material available for reclamation of the Mining Area. The approval by MMD of leached cap material (quartz monzonite and Precambrian granite) proposed by Tyrone for use as cover material is largely dependent on the results of the test plot studies for the Tyrone and Little Rock mines, respectively. These studies are currently incomplete or are in progress and at this time only Gila Conglomerate will be considered as cover material for the purposes of the Tyrone Updated CCP.*

There are substantial volumes of suitable GCRCM and associated soils in the vicinity of the mine to meet the reclamation requirements. This can be seen on Plate 2, found in the 'Borrow Source Materials Investigation Leach Ore and Waste Stockpiles Preliminary Report' submitted on October 31, 2005. This has been confirmed through the exploration programs and visual observations. In addition to the GCRCM



sources, Tyrone has stockpiled approximately 32,000,000 cubic yards of PGRCM.

Tyrone agrees that the cover volumes associated with Borrow Area E are no longer applicable because reclamation of the No. 1 Stockpile is complete. The portion of the Borrow A that is covered by the 9A/9AX needs to be better defined to assess the available volumes from the area. Tyrone will evaluate options for expanding the limits of Borrow area A to the north and west with the intention of locating additional borrow areas located closer to future reclamation areas resulting in a lower haulage distance and a reduction in FA.

The thickness of GCRCM near the lube shop has been well characterized through drilling of the adjacent 5A stockpile. However, Tyrone will conduct test pit and exposure sampling to further characterize the GCRCM in the Lube Shop and Savana Stockpile area. This will allow delineation of a borrow area and demonstration of the available volume of cover in this area. See response to comment number 12.

*11. Section 4.2.6, Borrow Areas, page 49- Borrow areas that are reclaimed in accordance with the requirements of Seeding Methods and Revegetation Standards (currently Appendix C of Revision 01-1, Permit No. GR010RE) are considered "Reclamation" as defined in § 19.10.1.7.R(1) NMAC and are subject to the current Post-Closure Monitoring and Maintenance requirements of Section 9.N of Revision 01-1 to Permit No. GR010RE. MMD requires that the reclaimed borrow areas meet the requirements of Post-Closure Monitoring and Maintenance for Revision 09-1.*

Erosion is a natural geomorphic process that shapes the landscape and varies in magnitude spatially and temporally. Because erosion is a natural process, it should not be unexpected. Erosion features have long been recognized in the existing borrow areas and initially, the erosion features were reported to the agencies.

To date, the vegetation has been established on the borrow areas. The erosion type and rates seen on these borrows, is consistent with the material characteristics and slope configuration under the prevailing climate in this region, including other erosion features located within the Mangas Valley that have similar exposed soil facies and topography. From a geomorphic perspective, these features represent the normal progression of the development of an integrated drainage system on surfaces that were disrupted in conjunction with development of the borrow areas.

The reclaimed facilities (e.g., covered tailing) and borrow areas have been periodically inspected monthly for the first year after reclamation, and quarterly, thereafter, along with 1 inch or greater precipitation events. Agency representative(s) typically have participated in these erosion inspections.

In 2010, the requirement to report erosion features and develop corrective action plans for the borrow areas was rescinded by the MMD and NMED (letter from NMED and MMD

dated April 15, 2010). Erosion on the borrow areas continues to be monitored to assess whether it is impacting the covered tailing facilities or water control features.

However, Tyrone, to the extent practical (per 19.10.1.7.R(1) NMAC), has voluntarily proposed a reclamation plan for mine borrow areas and has historically agreed to reclaim quarry rock stockpiles, for example the 9A/9AX Stockpile, to obtain permits in a timely manner.

Tyrone met its committed scope of work to reclaim borrow areas and has provided information to demonstrate their status in a recent comprehensive monitoring report (in a letter dated April 2, 2018). The borrow areas are considered reclaimed to the extent practical consistent with 19.10.1.7.R(1) NMAC. Please also keep in mind that many borrow areas may be utilized again in the future since the tailings represent a minable resource in the future and additional use of the borrow areas is very likely. Tyrone's goal is to keep them sufficiently stable and in balance with the local landscape and sediment regime.

*12. Section 4.3.3, Management and Treatment Processes, page 51, bullet #3 - states that stockpile surfaces and outcrops located outside of the Open Pit Surface Drainage Area ("OPSDA") excluding the overburden stockpiles such as the 9A stockpile will be covered with 36 inches of suitable borrow material. The assumption that the 9A overburden stockpile will be reclaimed without additional cover material has not yet been confirmed. The suitability as a vegetative cover material of the leach cap overburden (Precambrian granite) excavated from the Little Rock Mine and placed on the 9A (and 9AX) stockpile will be, in part, determined by the results of the ongoing Tyrone/Little Rock USNR test plot study. See comments #3 and 10 above.*

*In addition, the term, "Conditional Waiver Area", refers to the area approved by MMD that is similar to, but distinct in a number of locations from the OPSDA that is related to NMED Discharge Permit DP-1341, in the Tyrone Updated CCP.*

Tyrone constructed PGRCM test plots, in 2014 and 2015, at the USNR reclamation site in accordance with the approved Material Characterization and Handling plan dated October 25, 2011. The RCM is composed of Precambrian Granite and associated intrusive rock. The USNR test plot study is currently evaluating the suitability of this material as reclamation cover. Preliminary evaluations and results of this study show very positive vegetation and erosion results. The results indicate that the test plots are on the right trajectory to have a final determination of the material being deemed suitable cover that will meet the revegetation and erosion resistant cover material standards.

Over several years, Tyrone has strategically placed PGRCM at several locations around the mine site, including the 9A and 9AX stockpiles in preparation for reclamation activities. Tyrone has completed several studies on PGRCM material, including but not limited to testing different PGRCM thicknesses, slope gradients, fertilizer, seed mixes, seed and mulching methods, and seedbed preparation. Tyrone is requesting conditional

approval of this RCM as a future borrow material source. Tyrone understands that final approval of this RCM may be withheld pending review of the USNR test plot program results by MMD and NMED.

13. *Section 5.2.1, Stockpiles Located Outside the OPSDA, page 58, bullet #1 - states that the 9A stockpile is excluded from the stockpiles that will have the top surfaces and slopes covered with imported cover material. See comment #12 above.*

Please see Tyrone's response to comment number 12.

14. *Section 5.2.2, Stockpiles Located Inside the OPSDA, Stockpile Facilities to be Closed, page 58-59 - states that the proposed conditional waiver area associated with the EOY 2014 mine topography is shown in Plate 1. See comment #1 above.*

Please see Tyrone's response to comment number 1 and Tyrone will update the CCP and remove the reference to Plate 1.

15. *Section 5.2.2, Stockpiles Located Inside the OPSDA, Stockpile Facilities to be Closed, page 58-59- states the "Future Savanna Pit Stockpile" is shown on Plate 3. Plate 3 shows a Savanna Stockpile located to the north of the Lube Shop and to the northeast of the Savanna Pit, outside the conditional open pit waiver area, however, does not show a Future Savanna Pit Stockpile. A Savanna In-Pit Stockpile is shown in drawings in Appendix A, Reclamation Design Drawings, of the Tyrone Updated CCP. Please confirm that the Savanna In-Pit Stockpile shown in these drawings is the same as the Future Savanna Pit Stockpile.*

Tyrone thanks MMD for pointing out this error and updated plates and figures will be submitted with the updated technical scope of work.

16. *Section 5.2.3, Open Pits (Non-Waiver Areas), page 60- states that the San Salvador Pit is projected to be partially backfilled and the South Rim Pit is projected to be completely backfilled by EOY 2014. Please update the backfill status of these open pits.*

Tyrone has backfilled the San Salvador Pit and South Rim Pit to the extents described in the CCP.

17. *Section 5.4, Borrow Areas, pages 66-67 - see Comments #3 and 10 above.*

Please see Tyrone's responses to comments number 3 and 10.

18. *Section 6.3, Revegetation Success Monitoring, page 70 - states that revegetation success, "will be monitored according to Section 9.N2 of Revision 01-1 of the MMD Permit and more current permit modifications (e.g., permit modification*

10-1 and 12-1)... ". **MMD** approved Modification 12-1 on April 24, 2015 that discontinued the requirement of the test plot studies for the Tyrone Mine for mobility of metals through the cover profile. Permit Modification 10-1 would, in part, change the timing of the quantitative vegetation monitoring events from year three (3) and two (2) of the last four (4) years of the twelve (12)-year time period for establishment of vegetation after the last year of augmented seeding to a qualitative vegetation monitoring event in year 3 and quantitative vegetation monitoring in 2 of the last 4 years, no earlier than year eight (8), of the 12-year vegetation establishment period. MMD has not completed processing of Modification 10-1 and intends to incorporate the changes requested in the Tyrone application for Modification 10-1 as part of Revision 09-1 for the Updated Tyrone CCP.

Thank you for your comment and Tyrone has no response at this time.

19. Section 6.4, Wildlife Monitoring, page 70 - states that Tyrone is complying with the wildlife monitoring work plan for the reclaimed areas that was approved by MMD in 2006. Since 2006, MMD approved a revised wildlife monitoring schedule for the Little Rock Mine (Section 8.R.2 of Revision 14-1, Permit No. GR007RE). The revised wildlife monitoring schedule for the Little Rock Mine, in part, includes beginning the deer pellet counts and bird diversity surveys in year six (6) after seeding instead of after year three (3) after seeding and in two (2) consecutive out of the last four (4) years prior to release of financial assurance instead of every year starting in year 3 after seeding. In addition, for the Little Rock Mine the bird diversity surveys are conducted twice per year (winter and spring) and the deer pellet counts once per year. As part of the Updated Tyrone CCP, MMD intends to change the requirements of Section 9.N.3 of Revision 01-1 to be consistent with the wildlife monitoring requirements of the Little Rock Mine permit.

Thank you for your comment and Tyrone has no response at this time.

20. Section 6.6, Adjustment of OPSDA, page 71 - states that Tyrone will submit updated maps showing the conditionally waived areas to MMD each year by August 30<sup>th</sup> MMD has been receiving the updated conditional waiver maps as required by Revision 10-1. In addition to the updated maps of the conditionally waived areas, Revision 10-1 requires and Tyrone has provided an assessment of how the updated stockpile slopes and open pit areas qualify for a conditional waiver pursuant to 19.10.5.507.B NMAC. In the future, this will continue to be a requirement of Permit GR010RE.

Thank you for your comment and Tyrone has no response at this time.

21. Section 6.7, Construction Quality Assurance Plan, page 71 - Reference is made to Condition 9.G.3(a) of Revision 10-1 of the MMD Permit. "Revision 10-1"

*should be "Revision 01-1" in the context of this section. In addition, Construction Quality Assurance Plan ("CQAP") has been replaced in this section with "Final Design". While detailed engineering designs addressing slopes, erosion controls and stormwater management structures are required by Section 9.G.3(a) of Revision 01-1, in previous reclamation projects at the Tyrone Mine (e.g., the Tyrone tailing impoundment reclamation) the final engineering design has been submitted by Tyrone after the MMD approval of the CQAP. Please explain the reason for replacing the CQAP with the Final Design.*

Tyrone will update page 71 to reflect "Revision 01-1" in place of "Revision 10-1".

The NMED promulgated the Copper Mine Rule in 2013, which included an updated definition section. The Rule replaced the plan name Construction Quality Assurance Plan (CQAP) with Final Design. Tyrone believes using the same name for the same plan for both agencies will be less confusing, thus requests the term "Final Design" replace the CQAP nomenclature at this time. Because of the expedited nature of the Tyrone closure/closeout processes and the maturing of those processes over time the terms used in the Tyrone Settlement Agreement for closure/closeout engineering and implementation are outdated. The sequence and terms used in the Copper Mine Rule cited above are the current contemplated terms and sequence of submittals. Tyrone requests that these be adopted in the Tyrone Mining Act Permits.

*22. Section 7.3, Industrial Post-Mining Land Use, pages 73-74 - states that, "Although the industrial PMLU will continue the existing type of use, the specific industry will change." Please explain what is meant by, "the specific industry will change" for the industrial PMLU.*

Under the unlikely event of a default scenario, the assets designated for the industrial PMLU will be marketed to a variety of industrial opportunities that match those assets. The wording is simply implying this reality.

*23. Section 7.3, Industrial Post-Mining Land Use, page 74 - bullet #3 states that a structural removal plan will be submitted to the NMED at least 60 days prior to any structure removal or demolition. Tyrone should also submit the structural removal plan to MMD at least 60 days prior to any structure removal or demolition.*

Tyrone will change bullet #3, in the technical scope of work, to 'Prior to the reclamation of a structure, a structural removal plan will be submitted to NMED and MMD at least 60 days prior to the final closure and reclamation of any structure; the plan will address any potential discharges of leachate and contaminated soils that could cause an exceedance of applicable groundwater standards.' Tyrone will continue to provide a building status update in the 5-year Industrial PMLU building inspection certification.



24. *Section 7.4, Site-Specific Revegetation Success Guidelines, pages 74-76 - indicate that the approved "guidelines" for revegetation success that apply to the Tyrone Mine are discussed in sections 7.4.1 through 7.4.3. Appendix C of Permit Revision OI-1, in part, provides Vegetation Success Standards for Canopy Cover, Shrub Density and Plant Diversity. The vegetation success standards for the reclamation at the Tyrone Mine were developed in consideration of the Mining Act Reclamation Program ("MARF") Closeout Plan Guidelines, April 1996. Therefore, the term "guidelines" should be changed to "standards" as they apply to the standards for vegetation success under the Tyrone Updated CCP.*

*The "Plant Diversity" section should be listed as section 7.4.3 in the Tyrone Updated CCP.*

Tyrone has changed "guidelines" to "standards" in Section 7.4. Tyrone apologizes for accidentally deleting the heading '7.4.3' and will update the technical scope of work to fix these errors.

*Under the "Plant Diversity" section and in Table 7-4 of the Tyrone Updated CCP Tyrone proposes to change the numerical standard of perennial cool season grasses from two (2) to one (1). Tyrone has indicated to MMD in past vegetation monitoring reports for the Tyrone Mine that the cool season grasses have been rarely observed at the reclaimed areas and at the reclamation reference area. MMD is aware of this issue and will consider the change proposed by Tyrone for the Plant Diversity Success Standard for the cool season grasses. Tyrone also states that the intermediate-season grass, plains lovegrass, should be considered the functional equivalent of a cool-season grass. MMD will also consider recognizing plains lovegrass as a cool season grass for the purposes of the Plant Diversity Success Standard for the Tyrone Updated CCP.*

*Tyrone discusses the concept of colonization of the vegetation at the reclaimed areas by volunteer plant species. At this time, there is no colonization revegetation standard for the reclamation at the Tyrone Mine. However, in the past MMD has accepted the inclusion of non-weedy plant species that have colonized the reclaimed areas in the revegetation surveys for the Tyrone Mine.*

Additional work at Chino and Tyrone has been completed since the CCP submittal in 2013. Tyrone proposes to change the numerical standard of perennial cool season grasses from 2 to 0 (eliminating the cool-season grass standard), based on the results of the test plots and vegetation monitoring studies at Chino and Tyrone. The elimination of the cool-season grasses is consistent with the surrounding ecosystem and will not negatively affect the post-mining land use. Tyrone will update the technical scope of work.

25. *Section 8.1, Capital Cost Estimates, page 78 - The Capital Cost Summary Table notes that the Total Indirect Costs of 22.5% are applied to the Earthwork and Water Treatment Capital Direct Costs pursuant to MMD (1996) and Office of Surface Mining ("OSM") guidance. The MMD Guidance for Calculating Capital Indirect Costs for Mine*

*Reclamation and Closure Cost Estimates, November 2016 ("Indirect Cost Guidance"), has updated the MARP Closeout Plan Guidelines regarding the calculation of indirect costs for closeout plan cost estimates. MMD is concerned that the Tyrone Updated CCP underestimates the indirect costs for the Earthwork and Water Treatment Capital Cost Summary. MMD received comments from Tyrone on the Indirect Cost Guidance in a letter, dated May 31, 2017, and has since engaged Tyrone in discussions on the Indirect Cost Guidance and the closure/closeout plan cost estimate for the Continental Mine. To date, these discussions have not resolved this issue. To aid in resolution of this issue, MMD is currently planning to have the closure/closeout plan cost estimate for the Continental Mine reviewed by a third-party contractor pursuant to §19.10.12.1201.D NMAC. MMD is also planning to have the cost estimate for the Tyrone Updated CCP reviewed by a third-party contractor.*

FMI has presented and discussed indirect percentage rate information with MMD and NMED prior to and following submittal of the 2013 Tyrone CCP. The earthwork construction indirect percentage rate was developed with MMD input and in accordance with MMD Rule (19.10.12.1205 NMMA) and MMD, OSE and BLM Guidance. MMD published new Guidance in November 2016 (Guidance for Calculating Capital Indirect Costs for Mine Reclamation and Closure Cost Estimates) and subsequently requested public and industry input. The New Mexico Mining Association and FMI identified many inconsistencies in the guidance and submitted written comments that have yet to be addressed. Since that time, FMI has spent considerable time researching standard cost estimating practices.

Two main construction estimating handbooks are used to develop standard construction cost estimates and the corresponding indirect percentage rates, EquipmentWatch and RS Means. In fact, these handbooks have been used to generate all approved and under review financial assurance cost estimates. This method is used in standard industry practice and is an acceptable method to employ in the development of financial assurance construction cost estimates.

As previously stated, the 2013 indirect percentage rate proposal was based on existing regulatory guidance. The details of each item are addressed in the Tyrone CCP. Tyrone will be reassessing the indirect percentage rate proposal to use standard engineering practice after the technical scope of work is approved by the agency. Tyrone acknowledges that the director may require a 3<sup>rd</sup> party review of the financial assurance proposal. As stated in previous correspondence, Tyrone understands the rules to allow a review of Tyrone's financial assurance proposal and Tyrone maintains that this should be done by comparing Tyrone's proposal against the standard handbooks and methods cited above and after the CCP has been determined to be technically approvable.

26. *Section 8.3, Operation and Maintenance Cost Estimates, page 79-80 - The Earthwork Operations and Maintenance ("O & M") Cost Summary notes that the Total Indirect Costs of 17.5% are applied to the Earthwork O & M pursuant to MMD (1996) and Office of Surface Mining ("OSM") guidance. The MMD Indirect Cost Guidance has updated the MARP Closeout Plan Guidelines regarding the calculation of indirect costs*

for closeout plan cost estimates. MMD is concerned that the Tyrone Updated CCP underestimates the indirect costs for the Earthwork O & M Cost Summary. See Comment #25 above.

Please see Tyrone's response to comment number 36.

27. Section 8.3.2, Water Treatment, page 80 - The Water Treatment O & M Cost Summary notes that the Total Indirect Costs of 14% are applied to the Water Treatment O & M. The MMD Indirect Cost Guidance has updated the MARP Closeout Plan Guidelines regarding the calculation of indirect costs for closeout plan cost estimates. MMD is concerned that the Tyrone Updated CCP underestimates the indirect costs for the Water Treatment O & M Cost Summary. See Comment #25 above.

In addition, Section 8.3.2 states, "Further details on the water treatment system and the associated cost estimates are provided in Appendix D." Appendix D, Section 4.4, Total Cost Estimate for the Water Management states, "Indirect O&M costs of \$14,762,860 were calculated at 14 percent of the direct O&M cost, excluding electrical power and reagent cost. ., Please provide a table showing a breakdown of the water treatment O&M indirect cost percentages for Mobilization and Demobilization, Contingencies, Engineering Redesign Fee, Contractor Profit and Overhead, Project Management Fee, and State Procurement Cost in the same way as shown on Worksheet #21, Operations and Maintenance Summary, page 4 of 4, of Appendix A, Earthwork Cost Estimate, Cost Calculation Summaries, found within Appendix C, Earthwork Cost Estimate Summary Report, of the Tyrone Updated CCP. Please provide the rationale for each of the indirect cost percentages provided in the requested table.

Below is a summary of the different Indirect Costs, their corresponding Indirect Percentage Rate, and the rationale for each rate. Tyrone will update the Water Treatment cost estimate with current unit rates and by utilizing the RS Means process definition, once the technical scope of work is deemed approvable by NMED and MMD.

<b>Water Treatment O&amp;M Indirect % Rates</b>		
<b>Indirect Costs</b>	<b>Indirect % Rate</b>	<b>Comment</b>
Mobilization & Demobilization	0%	For operations and maintenance tasks associated with water treatment, there are no tasks requiring Mobilization and Demobilization.
Contingencies	2%	After construction is complete, the O&M Scope of Work is straight forward and complete with few unknowns, as a result the contingency is 2%.
Engineering Redesign	0%	Construction is complete and there is no additional engineering redesign required and what might occur is captured under contingency.

Contractor Profit & Overhead	10%	<p>Based on project size and contract duration. According to RS Mean, Profit &amp; Overhead decreases as the project size increases (\$100M project has overhead of 5%). Using RS Means values, the national average Profit &amp; Overhead for Water Treatment is projected to be approximately 9% with New Mexico's overhead being lower than the national average. Tyrone rounded up RS Means Profit &amp; Overhead to the proposed 10%.</p> <p>The contractor Project Management Fee for the contractor is covered under Overhead (RS Means, 2018). Based on the May 2017 State Occupational Employment and Wage Estimates for New Mexico and 2018 state employee's salaries, found on the New Mexico Government's website, the state would not hire a full-time project manager and the cost associated with state's project manager would be approximately 0.1% for Water Treatment. The proposed 2% is too high and should be reduced to reflect the State of New Mexico's actual costs.</p> <p>Tyrone understands that in a default scenario, the New Mexico agencies would be obtaining the necessary services through its fully staffed State Purchasing Division for contracting for contractor services to complete the work. MMD would not be charged for procurement services that they obtain through this existing, functioning division.</p>
Project Management Fee	2%	
State Procurement Costs	0%	
<b>Indirect % Rate Sum</b>	<b>14%</b>	

28. *Table 4-2, Summary of Key Design Criteria for Facilities to be Closed - Bullet 9 under Stockpile Regrading Outside OPSDA section states, "Top surfaces and outslopes to be covered with 36 inches of Gila Conglomerate (or other suitable material; the 9A overburden stockpile may be used as borrow material and is not projected to require imported cover). See Comment #12 above.*

Please see Tyrone's responses to comment number 12.

29. *Appendix A, Reclamation Design Drawings - Drawings 22, 23, and 24 - show the 5A overburden stockpile grading and drainage plan, cut/fill isopach map, and cross-sections. Please confirm that these drawings show the regrading of the 5A*

*stockpile after removal of Gila Conglomerate overburden material from the stockpile that will be used for the Mine Area reclamation.*

The CCP drawings show the reclamation plan for the current stockpile configuration. The 5A Stockpile remains a potential source of GCRCM, however, no removal is currently anticipated for this plan.

30. *Appendix A, Reclamation Design Drawings - Drawing 34, Haul Route Map - does not show a Centroid of Reclamation Area or a reclamation haul road to the 9A overburden stockpile. Appendix B, Facility Characteristic Forms, and Appendix C, Earthwork Cost Estimate Summary Report, do not include placement of Gila Conglomerate cover material on the 9A stockpile. The cost estimate should include hauling and placement of Gila Conglomerate cover material on the 9A stockpile.*

Please see Tyrone's response to comment number 3 and 12. The 9A/9AX Stockpile is constructed with RCM and Tyrone does not believe it requires the placement of a GCRCM cap over the surface to achieve a wildlife PMLU. Preliminary evaluations and results of this study, on the USNR test plots, show very positive vegetation and erosion results. The results indicate that the test plots are on the right trajectory to have a final determination of the material being deemed suitable cover that will meet the revegetation and erosion resistant cover material standards.

**Comments on Appendix C, Earthwork Cost Estimate Summary Report:**

31. *Facility Equipment Demolition - Tyrone needs to itemize all equipment in the Mine Maintenance Facilities Area, SX-EW Plant Area, Lubrication Shop Area, Acid Unloading Facility & Former Precipitation Area, and Mill & Concentrator Area and provide a cost for their removal and disposal. The value of the equipment should not factor in to the cost estimate of removal and disposal. The only language found in the Tyrone Updated CCP that addresses this issue states, "All equipment and above-grade structures will be demolished and removed from the area or buried."*

*Also, the unit cost to demolish structures based on the RS Means book should be updated. The cost in 2012 apparently was \$0.27 per cubic foot. The latest version of RS Means shows this unit value to be \$0.30 per cubic foot.*

This is a new interpretation of the rules that we have never seen before from MMD and has never been required in our financial assurance cost estimating in the last 20 years. FMI understood MMD to say, during the phone conference on June 28, 2017 that their basis for requiring this is 19.10.12.1205 A "...Credit for salvage value of building materials or abandoned equipment and supplies shall not be allowed." MMD must be assuming that simply because equipment exists in a building now that it will be assumed to be left "abandoned" at a hypothetical default time in the future. FMI disputes these assumptions and this new interpretation for the following reasons:



- FMI's understanding of the cited rule is that New Mexico, unlike some states, does not allow a permittee to take credit for the value of building materials or abandoned equipment and supplies in order to reduce the amount of the estimated closure cost. This interpretation is consistent with MMD's and our past practice not to itemize all equipment and provide a cost for removal and disposal. If the New Mexico regulations intended to itemize thousands of pieces of equipment, then the rule would have also allowed credit for re-sale and salvage value. We have always understood New Mexico rule to avoid such a complicated analysis.
- Building materials and equipment typically have a positive value, whether for resale or for salvage. This is consistent with our experience. To do otherwise would assume that these valuable materials would be disposed of, rather than recycled. Such an assumption not only goes against standard practices for estimating demolition costs, but suggest that MMD would favor disposal of valuable recyclable materials rather than encouraging their recycling. In many instances, we have removed equipment and sent it to other company mining facilities for use. For equipment that is not needed for use in other operations, we typically request and receive bids from mining equipment or salvage companies who typically either pay to remove equipment for sale or salvage or who do so at no cost.
- The equipment in the above listed areas, remain valuable assets that will not be owned by the State at default any more than a bulldozer would be an asset that MMD would have to "dispose of" at default. Even if default occurred due to bankruptcy, assets (such as equipment in the mills – anything the corporation owns or would have a right to own) would be managed according to bankruptcy law meaning that a trustee would be appointed to liquidate assets to pay debts.
- Tyrone is following the intent of the rule cited above – in spite of the high cost of Closeout, Tyrone has not calculated nor deducted any credit for salvage value for any buildings, materials or equipment assets at the site from its financial assurance estimate.

Tyrone agrees to update the FA proposal with current RS Means unit rates once the technical scope of work is deemed approvable by NMED and MMD.

*32. Material Factor for Dozer Pushing - All dozing in the cost estimate uses a Material Factor of 1.2. This factor is appropriate when grading topsoil over the final contoured surface. The Material Factor for regrading waste rock piles should be no greater than 1.*

The CAT Handbook shows a range of factors: 0.6 to 0.8 – for dozing in-situ materials that are difficult to cut, and 1.2 – for loose stockpiled material. Tyrone, Chino and Cobre have applied the factor that is most consistent with dozing stockpiles that are not "in-situ". They are composed of material that has been fully excavated and dumped loose. In some cases, stockpiles may have been in place for many years so those may be slightly more difficult to doze than a freshly placed stockpile. In order to move forward, Tyrone agrees to apply the MMD suggested number of 1.0, for the regrading of stockpile

material, in the cost estimate update. An updated the FA proposal will be submitted once the technical scope of work is deemed approvable by NMED and MMD. Tyrone believes this number may be too conservative based on our experience. We may produce additional information to support other factors in the future.

*33. Equipment Cost - The Equipment Watch rates are dated July 2012. Please update the rate of equipment usage with 2017 data. Any deviation from the Standard Value issued by Equipment Watch should be explained and documented.*

Tyrone has agreed to update the FA proposal with current equipment usage unit rates once the technical scope of work is deemed approvable by NMED and MMD.

EquipmentWatch generates Standard Value cost estimating spreadsheets for an average size project in southwest New Mexico. These projects are considered small when compared to the Tyrone reclamation project. According to the New Mexico DOT Website, the average earthwork contract, for New Mexico, awarded in 2017 was approximately \$527,000, ranging from approximately \$127,000 to \$1,119,000. Additionally, it has been identified that some of the items listed below are accounted for in both the direct and indirect sections of the FA cost estimate. Below is a description of the changes, Tyrone made, to the Standard Value provided by EquipmentWatch.

EquipmentWatch h Line Item	Description of Changes to EquipmentWatch Standard Values
Diesel Fuel Rate	Tyrone receives an all-inclusive quote (direct and indirect costs) for the delivery of fuel to Tyrone Mine (per MMD's requirements). The indirect cost is removed from the all-inclusive fuel quote and accounted for in the indirects.
<sup>2</sup> Mechanics Wages	<sup>1</sup> Per New Mexico statute 11.1.2.8.A, the Mechanics labor rate is developed based on the most current New Mexico Department of Labor (DOL) Type H (Heavy Engineering) labor rates.
Overhead & Depreciation	<sup>1</sup> Overhead and Depreciation (adjusted in the 'User Defined Adjustments' through the 'Discount') are included in Profit and Overhead (RS Means) but also previously included in the EquipmentWatch Total Hourly Cost. RS Means handbook supplies an industry standard for profit and overhead rates for large construction projects. Tyrone plans to rely on the RS Means Indirect Percentage Rate for this item.

Annual Use Hours	The Annual Use Hours are adjusted in EquipmentWatch to eliminate the EquipmentWatch 50 minute work hour and is accounted for in Worksheets 5, 6, 7, 9, and 10 found in Appendix C.
Sales Tax	The Gross receipt sales tax is not applied to NM State contractor projects. Therefore, that item is removed from the EquipmentWatch spreadsheet criteria list.

<sup>1</sup>Uses RS Means process definition for 'Overhead'

<sup>2</sup>[https://www.dws.state.nm.us/Portals/0/DM/LaborRelations/Public\\_Works\\_Minimum\\_Wage\\_Act\\_Policy\\_Manual\\_Active.pdf](https://www.dws.state.nm.us/Portals/0/DM/LaborRelations/Public_Works_Minimum_Wage_Act_Policy_Manual_Active.pdf)

*34. Diesel Fuel - The price of diesel fuel used in the 2012 cost estimate is \$3.13 per gallon (delivered). The current price may be lower.*

Tyrone agrees to update the FA proposal with the current delivered diesel fuel cost once the technical scope of work is deemed approvable by NMED and MMD.

*35. Digital Mapping Files -The MMD analysis of the cost estimate and Tyrone Updated CCP would benefit from having the AutoCAD files upon which the PDF maps are based. This also applies to the GIS maps. Please submit to MARP the AutoCAD and GIS files for which the PDF maps submitted in the CCP are produced from. FMI tentatively agreed to provide such electronic files in meeting with MMD in March 2017.*

Tyrone would like to share any construction files that will supplement the review of the CCP. Not all drawing files are needed for the review. Tyrone requests a list of drawing numbers that MMD believes are required for their review. Tyrone would also like to discuss with the process for managing information that it deems as potentially business confidential.

*36. Indirect Costs - Tyrone proposes 22.5% in Indirect Costs, in addition to the Direct Costs. Indirect Costs are intended to capture expected costs not identified as part of the Direct Costs. Some examples of items not identified in the Direct Costs include construction supervisors of equipment operators and laborers, contractor office infrastructure and utilities, stand by fees, health insurance of contractor employees, surveying, permitting, performance and payment bonding, liability insurance, and oversight and operations by state government staff.*

	<u>Tyrone Proposed</u>	<u>Based on MMD Indirect Guidance (2016)</u>
<i>Mob./Demob</i>	1.0%	2.0%
<i>Contingency</i>	2.0%	10.0%
<i>Engineering Redesign</i>	2.5%	2.5%
<i>Profit and Overhead</i>	15.0%	15.0%
<i>Project Management</i>	2.0%	5.0%
<i>State Procurement</i>	0.0%	1.5%
<i>Contract</i>		
<i>Administration</i>	0.0%	1.0%
<i>Total</i>	22.5%	37.0%

*In addition, Tyrone proposes a 5% reduction in the Profit & Overhead portion of the Indirect Costs for the Operations and Maintenance ("O&M") section of the cost estimate. The reason given is, "to account for the long-term contract and repetitive annual work." The State of New Mexico is not allowed to enter into long-term contracts and would most likely pay the same Profit & Overhead for O&M as they would for Earthmoving. State contracts typically have a maximum three-year term.*

FMI has presented and discussed indirect percentage rate information with MMD and NMED prior to and following submittal of the 2013 Tyrone CCP. The earthwork construction and Earthwork Operations and Maintenance (O & M) indirect percentage rates were develop with MMD input and in accordance with MMD Rule (19.10.12.1205 NMMA) and MMD, OSM and BLM guidance. MMD published new guidance in 2016 and subsequently requested public and industry input. The New Mexico Mining Association and FMI identified many inconsistencies in the guidance and submitted written comments that have yet to be addressed. FMI has spent considerable time researching standard cost estimating practices.

The indirect percentage rate to apply to particular project varies by several factors, including project size and the level of effort applied to design. The Tyrone reclamation project is a very large-scale project. Because Tyrone has calculated earthwork volumes from actual mine topography, the earthwork volumes will not vary significantly at final design. The earthwork volumes dominate the capital cost estimate and therefore, the overall level of design is well advanced.

Tyrone applies standard practice in the development of the FA cost estimate. The two primary construction estimating handbooks used to calculate the construction cost estimate and the corresponding indirect percentage rates are EquipmentWatch and RS Means. In fact, these handbooks have been used to generate all approved and under review FA cost estimates. Tyrone emphasizes that these handbooks are the standard industry practice, are approved to be used on federally funded projects, and are an accepted method to employ

in the development of financial assurance construction cost estimates.

As previously stated, the 2013 indirect percentage rate proposal was based on existing regulatory guidance and was presented transparently to NMED and MMD in several presentations over the past 6 years. The details of each item are addressed in the Tyrone CCP. Tyrone will be reassessing the indirect percentage rate proposal to incorporate standard engineering practice, after the technical scope of work is deemed approvable by NMED and MMD. However, Tyrone briefly addresses some of the MMD comments listed above and looks forward to further discussions to address all of MMD's questions.

Tyrone applied the 2014 Guide for Doing Business with the State of New Mexico to research some the MMD questions. The following link accesses that guidance: [https://gonm.biz/uploads/documents/publications/Doing\\_Business\\_In\\_NM\\_rev\\_12-12-2014\\_V.pdf](https://gonm.biz/uploads/documents/publications/Doing_Business_In_NM_rev_12-12-2014_V.pdf). This guidance was used because:

'it is the State Procurement Code that governs the action to ensure the tax dollars are spent responsibly, in a manner that ensures fair and open competition'

'The State Purchasing Division is required by law to competitively bid and award contracts to the lowest responsible bidder in the Invitation to Bid (ITB) Process'.

it specifies that contracts of over \$25,000 may be entered into for any period of time not to exceed eight (8) years.

Based on this guidance, it appears that MMD is required to use the longest contract period that results in the lowest contract cost. An eight-year contract period listed in the guidance is considerably longer than the three-year average referenced in the comment above. Therefore, to optimize productivity and reduce cost a project schedule for eight years or possibly longer is allowed in the referenced guidance.