



*20 Years of Promoting Healthy Communities
by Protecting Our Environment*

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RE: Chino Mine Closure/Closeout Plan (2018) Permit No. GR009RE and DP-1340

Dear Mr. Martinez and Ms. Roose:

The Gila Resources Information Project (GRIP) submits the following public comments on the Chino Mine Closure/Closeout Plan (CCP) under Mining Act permit GR009RE and Discharge Permit 1340 (DP-1340). More detailed information related to these comments was submitted to GRIP by mine engineer and GRIP consultant Jim Kuipers and is attached as part of this submission.

Section 1.4 - History of Closure/Closeout Plan Submittal – The discussion in this section is not accurate. A revised CCP was submitted by Chino Mines on November 21, 2008 after approval of a request for a six-month extension by the mine operator. See the cover letter to submission at:

http://www.emnrd.state.nm.us/MMD/MARP/documents/1and2_Text_ChinoCCP2008_Rev08-4_GR009RE.pdf. Moreover, a review of the record shows that agencies did not take action on this first 5-year renewal in 2008. A second renewal should have happened in 2013 or so. Financial assurance also has not been kept up to date. Eleven years have passed and the first renewal of the Chino CCP and associated permits and financial assurance is now in progress. GRIP hopes that the history of significant delays in closure/closeout permitting of Freeport-McMoRan's Chino and

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Tyrone mines does not set a precedent going forward. We would like to discuss further with you the idea of decreasing the permit renewal time to three years so that approval of renewals can be achieved within the five year time period. We look forward to working with your respective agencies to ensure that subsequent permits and financial assurance can be reviewed and approved in accordance to timeframes contemplated in the Mining Act and Water Quality Act.

Section 3.1.9 Water Management System and Ponds - The information contained in this section should reference and be consistent with the Stormwater Operational and Emergency Response Plan or as we understand the "Sitewide Water Management Plan" for the Chino site. The Sitewide Water Management Plan should identify both operational and closure periods (there may be more than one closure period).

Section 3.3.2 Geology - This section identifies "faults" but does not include any other information related to seismicity of the area. Because it could potentially impact reclaimed features, additional discussions as to major/active faults should be provided as well as general seismic characteristics for the region.

Section 3.3.3 - Climate - In order to adequately evaluate the effectiveness of planned infrastructure capacity at closure, this section should provide updated data on the frequency of 100-year, 200-year, 500-year, and 1000-year 24-hour precipitation events. It has been reported in the *Silver City Daily Press* that the area experiences 500- to 1000-year storm events at least twice a year.¹ Please provide the appropriate data so that the reviewer can take this information into consideration when evaluating the CCP.

Section 3.3.5 Groundwater Hydrology - Is the map of AOPHC finalized yet? If so, this map should be included in the CCP.

Section 3.3.8 Material Characteristics - Borrow Materials - The section identifies that a 3-foot thick cover would be constructed from the Reclamation Cover Material (RCM), and identifies the volumes identified in each RCM: 20.6M yd³ in the North Mine Area (NMA), and both 20M yd³ and 4M yd³ in the South Mine Area (SMA). The section should include information on the required amount of RCM for reclamation of both areas based on the area to be reclaimed, and compare the required versus available volumes to demonstrate adequate RCM has been identified.

Section 4.2 - Groundhog No. 5 Stockpile Reclamation - This section describes how seepage is collected at the toe of the stockpile, but omits what happens to this seepage. Does the discharge exceed water quality standards? If so, how is it treated?

Section 5.3 - Water Management and Treatment Performance Objectives

- This section does not discuss the end use for treated water and how treated water will be discharged. The anticipated end use of treated water is needed

to determine applicable water quality standards. This decision will influence the cost estimate for water treatment. Chino Mines said at a recent Chino/Cobre Operations Community Meeting (March 21, 2019) that “people downstream are interested in the treated wastewater.” If this is true, the company must have some knowledge of the end use of the water. This should be included in the CCP.

- This section of the CCP contains the phrase “*continuing through year 100 following closure*” and “*collected and treated for a period of 100 years following closure.*” As these activities will be required until water quality standards are met, which could be for more than 100 years, the language should suggest “for as long as necessary to meet discharge standards.” For the purpose of financial assurance, 100 years is being used to represent long-term perpetuity costs, however it should not be inferred in the CCP that the expectation or prediction is for the water management tasks to only be necessary for a finite period.

Section 6.1.1 Stockpiles - According to the CCP, “the evaluation of the stability of the Chino stockpiles confirms that the stockpiles exhibit suitable factors of safety (i.e., > 1.3 for static conditions and > 1.1 for pseudo-static conditions) both for the “as originally placed” strength condition and for the weathered leach ore strength condition.” The CCP should reference the source of the applicable factors of safety. The CCP should identify if any of these features post-reclamation in the event of failure would have the potential for human safety and or infrastructure damage, and if any do explain why a static factor of safety of >1.5 was not applied. In making this remark we would note that it appears all slopes will exceed a factor of safety of 1.5 by a significant margin (re Table 6-2).

Section 6.1.1.2 Planned Closure/Closeout Activities - As we have noted and commented on previously, the CCP identifies the following design criteria with respect to conveyances of stormwater “The water conveyances and channels will be designed to convey the peak flow generated by the 100 year, 24 hour storm event.” The current NOAA statistics for storm events are not highly accurate and events greater than predicted for 100-year events have occurred on a much more regular basis than can readily be explained. We recommend that Chino Mines conduct an engineering trade-off and risk analysis that compares 100-yr, 200-yr, 500-yr, and potentially the probable maximum flood (PMF), and first consider the results internally, and then provide the study to the agencies and GRIP as justification for either the existing criteria or for new criteria. In light of climate change variables, we believe Chino Mines might realize internally that the incremental cost of constructing to a 500-yr design event offsets the potential risk to valuable assets and from a business standpoint, at least in some circumstances such as where conveyances are critical for the protection of covers or other reclamation features, application of a more conservative storm event should be performed. We also believe this is an example of where the Copper Rule and other regulations that include design criteria need to be revised to reflect current industry best management practices.

Section 6.2.1 - Axiflo Lake, Southern Portion of Tailings Ponds 6E and 6W, and Tailing Pond 7 - The CCP states that “the NMOSE is required to review the reclamation plans to determine that the designs will not negatively affect the safety of the ponds in the post-closure period” (p. 50 of Chino CCP). Has the Office of the State Engineer (OSE) commented on the CCP and made this determination? We could not find OSE comments on the Chino CCP on the MMD website.

Section 6.3.2 Water Management and Treatment Plan

- The section should make clear that the CCP uses a concept of 100 years for planning and financial assurance purposes, and that actual requirements are predicted to continue for an indefinite period beyond 100 years. As we have previously recommended, both Chino Mines and the Agencies should consider that BLM has recently used 500-year long-term estimates for financial assurance purposes to represent indefinite costs and to establish what is essentially a perpetual trust fund.
- Last paragraph on page 57 needs to be clarified. It seems to be saying that the capacity of the disposal facility is adequate for sludge produced for 95 years of operation of lime/HDS treatment plant, but the management simulation covers 100 years. Where is the sludge going to be disposed of once capacity is reached at year 95?

Section 7.2 Ground Water and Surface Water Control Facilities – A contingency plan for closure was produced in 2003. It doesn’t appear that this has been updated for the most recent revision of the CCP (2018). For example, the water treatment facility is a major change from the 2003 and 2008 Chino CCPs. Wouldn’t an updated contingency plan be needed to describe the response should a failure in the treatment system occur?

Section 7.5 Public Health and Safety - This section of the CCP addresses public safety with respect to potential stability issues with the pit walls, stockpiles and TSF.

- One of our primary concerns in this regard is how the handoff for assurance of stability and other measures affecting public safety will be made between the NM OSE, which is responsible for this aspect during TSF operations, and MMD, which is responsible for this aspect once the TSF is no longer a water-retaining structure post-reclamation.
- Additional information needs to be provided in this regard describing the monitoring and mitigation measures including those required by the NM OSE for the TSF and the post-reclamation monitoring plans for all facilities.

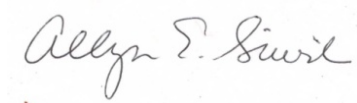
Wildlife Deterrence – We were unable to find specific discussion of how wildlife would be deterred from entering potentially dangerous and harmful areas of the

mine site at closure. How will birds be protected from contaminated pit lake water?
Please add discussion to the CCP.

Review of Test Plots and Completed Reclamation Projects – We would like to understand better how information from test plots and reclamation to date have influenced current reclamation plans in the Chino CCP related to revegetation and success in achieving a self-sustaining ecosystem. Has this learning been incorporated into the revised CCP?

Thank you for your consideration of our comments.

Sincerely,



Allyson Siwik
Executive Director

Cc: Jim Kuipers, Kuipers Associates
Holland Shepherd, EMNRD/MMD
Kurt Vollbrecht, NMED/MECS

ⁱ <http://www.scdailypress.com/site/2018/09/08/monsoon-aftermath-clear->