

Freeport-McMoRan Chino Mines Company
P.O. Box 10
Bayard, NM 88023

April 27, 2016

Certified Mail #70150640000636728692
Return Receipt Requested

Trais Kliphuis, Director
New Mexico Environment Department
Water Protection Division
P.O. Box 5469
Santa Fe, New Mexico 87502

Dear Ms. Kliphuis:

Re: Freeport-McMoRan Chino Mines Company AOC Quarterly Report, First Quarter 2016

This Administrative Order on Consent (AOC) Quarterly Report documents activities performed during the reporting period from January 1 through March 31, 2016. The report is submitted and organized as outlined in Article IX, Section E of the AOC between the New Mexico Environment Department (NMED) and Freeport-McMoRan Chino Mines Company (Chino). Chino also submits a copy of this report to the New Mexico Energy, Mineral and Natural Resources Department, Mining and Minerals Division (MMD), per its request.

AOC Activities

During the first quarter of 2016, the following major activities occurred:

- Chino performed the quarterly post-remediation monitoring of the Razorback Ridge Interim Remedial Action site under the STS IU.
- Chino performed quarterly post-reclamation and remedial monitoring of the Groundhog Mine Site and the Historic Small Stockpile sites under HWC IU.
- Chino performed quarterly post-remediation monitoring of the Hurley Railroad Site under the STS IU.
- The Community Work Group met on February 16th in Bayard, NM.
- The AOC Technical Group participated in meetings and/or conference calls on January 19th, February 16th, and March 22th to review the AOC progress.

Hanover/Whitewater Creeks Investigation Unit

Following NMED's 2009 approval of the Groundhog Mine Site Interim Remedial Action (IRA) completion report, Chino continues to performed quarterly post-reclamation water quality, erosion, and vegetation monitoring of the site. Chino submitted an addendum to the 2009 *Groundhog IRA Completion Report* for the remediation of the old pipeline corridor in 2011. Additionally, Chino continues to perform quarterly post-reclamation erosion and vegetation monitoring of the historical Osceolla, CB Bell, and Tenderfoot mine sites following approval by NMED of the IRA completion report since 2009. These survey results are included in the Groundhog Mine Site annual monitoring reports. Following Chino's submittal of the Star Rock Stockpile IRA Completion Report as part of the Historic Small Stockpiles in 2011, the site is also included in the quarterly monitoring program. Chino performed the annual vegetation survey and a quantitative vegetation survey of these IRA sites in September 2015. The quantitative survey evaluated the success of the revegetation of the sites after a minimum of five growing seasons as per the IRA work plans. Chino submitted the *Groundhog Mine Site Annual Monitoring Report* on October 30, 2015 to NMED. NMED approved the annual report in a letter dated March 11, 2016. Chino anticipates submitting the *Vegetation Monitoring Report* for the IRA sites during the second quarter of 2016.

MMD has approved extension requests by Chino under Permit GR009RE for the completion of reclamation activities at the Lucky Bill Groundhog Mine No. 5 site. In response to an additional extension request by Chino, MMD issued permit Modification 14-1 to Revision 01-1, Permit GR009RE in a letter dated September 18, 2014 that sets June 2018 as the date for completion of closeout plan activities. This extension period is necessary for Chino to sequence the MMD reclamation process with the AOC. Additionally, in 2014 Chino submitted the *Groundhog*

No. 5 Stockpile Work Plan for Additional Characterization and Controls for the HWC IU to address inadequate seepage capture at the toe of the stockpile. In June 2014, NMED approved the work plan, and Chino installed the new seepage collection system which has been performing well. Chino provided a draft interim report on the geochemical evaluation to NMED in February for informal review and anticipates finalizing the report in second quarter 2016 following receipt of comments.

The NMED provided the revised *Ecological Risk Assessment* (ERA) report to Chino and the public for review on October 31, 2015. Chino has no further comments on the ERA.

Hurley Soils Investigation Unit

Chino mailed annual health advisories to the remaining 6 Hurley homeowners that did not participate in the soil remediation program, and adjacent property owners, during March 2016.

Lampbright Investigation Unit

The NMED provided the *Draft LIU Ecological Risk Assessment* to Chino for comment in 2013. NMED provided a revised Draft ERA to Chino in February 2014. Chino provided comments on the draft that April. NMED anticipates responding to these comments and providing the final report to Chino and the public for review during the second quarter of 2016.

Smelter Tailings Soil Investigation Unit

Chino submitted a 5 year monitoring report to NMED and received their approval of the *Vegetation Monitoring Report for the Golf Course Interim Remedial Action, STS IU* in 2014. Chino also submitted a supplemental completion report following a second phase of the Golf Course IRA which addressed an additional 30 acres of impacted soils in the vicinity of the Hurley railroad area in 2013. As documented in this supplemental report, Chino is conducting quarterly post-remediation erosion and vegetation monitoring. These survey results will be submitted to NMED in a cumulative vegetation survey report after five years of monitoring, expected in 2017.

Between 2013 and 2014, Chino excavated 94 acres of copper impacted soils from Razorback Ridge and from the hillside slope to the east of Razorback Ridge as part of the Lake One Closure Project. Reseeding of these acres was completed by May 2015. Chino submitted the *Razorback Ridge Area IRA STS IU Supplemental Completion Report* on October 7, 2015. As documented in this report, Chino is conducting quarterly post-remediation erosion and vegetation monitoring. NMED anticipated commenting on the report in the second quarter of 2016.

Historical tailings material located in the Apache Tejo drainage was incorporated into the STS IU by NMED in 2009. NMED requested that Chino submit an IRA work plan for Apache Tejo drainage system. Chino plans to submit a survey report and work plan after addressing site access issues.

The STS IU Pre-Feasibility Study Remedial Action Criteria (RAC) were established by NMED in letters dated September 16, 2010, and March 2, 2011. The following summarizes the activities that occurred in response to this letter:

- Finalized in third quarter 2011, the feasibility study (FS) work plan initiated the following activities and processes:
 - Chino completed survey and soil sampling requirements per the FS Appendix A and B field sampling plan in late 2011.
 - Following the evaluation of the data resulting from the 2011 sampling programs, Chino developed a *Phytotoxicity and Vegetation Community Study Work Plan* to conduct seed collection and soil sampling/collection field events.
 - Chino received conditional approval in March 2014 from NMED.
 - Chino conducted additional seed collection and vegetation survey field events during late summer of 2014. The generation of lab data under this study was completed in third quarter of 2015. Chino anticipates submitting the *Phytotoxicity and Vegetation Community Study* report by second quarter 2016.
 - Chino anticipates submitting the draft FS report in late 2016 or 2017, following incorporation of

phytotoxicity study results, as well as the pending five year monitoring reports for the amendment study and the white rain monitoring study.

- As part of the process to address RAC for surface water, Chino submitted two work plans in 2011: 1) *Application of the Hydrology Protocol to STS IU Drainages*; and 2) *Use Attainability for Stock Tanks*.
 - Chino performed field work for both of the plans in 2011 and submitted the sampling results in the *Expedited Use Attainability Analysis (UAA): Application of NMED Hydrology Protocol to STS IU Drainages* in 2012 to NMED Surface Water Quality Bureau (SWQB).
 - Chino revised the UAA based on comments received by SWQB from the public notice and resubmitted the HP report in May 2013.
 - The NMED SWQB submitted, pursuant to Subsection C, 20.6.4.15 NMAC, a request to the U. S. Environment Protection Agency (EPA) for technical approval of the UAA in a letter dated June 26, 2013.
 - EPA responded to SWQB in a letter dated June 26, 2014, providing comments on the HP Report. EPA requested additional information to be added to the HP Report. In coordination with SWQB Chino submitted a revised HP Report with responses to comments to SWQB via email on October 24, 2014.
 - SWQB petitioned the NM Water Quality Control Commission (WQCC) to accept the proposed UAA, in advance of the Triennial Review hearing that occurred in October 2015.
 - NMED commented on the *Use Attainability Analysis for Stock Tanks Work Plan* in a Notice of Disapproval letter dated June 30, 2011. Chino plans to respond to the comments when presenting the sampling results to the NMED in late 2016.
- Additionally, in support of the process to address RAC for surface water, Chino submitted for review to the NMED SWQB the *Development of Site-Specific Copper Criteria Work Plan for the STS IU* in 2011.
 - Chino performed the two phases of surface water sampling during 2011 under the approved copper criteria adjustment work plan.
 - Chino submitted a finalized interim report on the *Development of Site-Specific Aquatic Life Criteria for Copper in STSIU Drainages* study to SWQB in April 2013.
 - Chino submitted the Revised *Site-Specific Copper Toxicity Model Report* to the SWQB on October 1, 2013.
 - Chino filed a Petition to Amend the Surface Water Quality Standards (20.6.4 NMAC) and Request For Hearing with the WQCC on September 30, 2014.
 - Chino filed testimonies supporting the Site-Specific Copper criteria petition with the WQCC on December 12, 2014, in advance of the Triennial Review hearing that occurred in October 2015.

Chino completed the five year phase of bi-annual sampling and monitoring of the pilot amendment study area in October 2013. The current activities associated with the study include:

- Chino conducted the five year quantitative vegetation survey in October 2013.
- The annual monitoring data were included with the five year data analysis report titled *Year 5 Monitoring Report for STS IU Amendment Study Plots*.
- Chino provided the draft report to NMED for informal review in third quarter of 2015 and anticipates finalizing the report in second quarter 2016 following receipt of comments.

As part of the amendment study process, Chino has been monitoring the effects to soil pH following its *White Rain Technical Memorandum* report that documented changes in the pH of the soils plots caused by a natural event that occurred in January 2008. Chino completed the five year phase of annual sampling of soil sites in November 2014. The current activities associated with the study are as follows:

- The annual monitoring data generated from the soil samples were included in the draft *Year 5 Report on pH Monitoring to Evaluate the Effect of the White Rain on the STS IU*.
- Chino provided the draft report to NMED in the third quarter of 2015 for informal review and anticipates finalizing the report in second quarter 2016 following receipt of comments.

Community Relations

The Community Work Group (CWG) met on February 16, 2016. During that meeting, Chino's consultant Golder presented the "*Groundhog Mine and Small Historic Stockpile Sites Vegetation Monitoring Report*" for the HWC IU to the group. The CWG elected to meet again on April 19, 2016. The three local Chino AOC document repositories continue to be maintained and updated with current documentation. The online electronic document repository (<http://www.fcx.com/chino/>) is also up to date.

Next Quarter's Scheduled Activities

The following work and activities are projected for the second quarter of 2016:

- Submit the *Year 5 Monitoring Report for STS IU Amendment Study Plots*, which combines the October 2013 vegetation survey completing the five year review requirement and the annual soil sampling results.
- Submit the *Year 5 pH Monitoring Report for the STS IU*, which combines the annual soil sampling results and the final report; an analysis and summary of the 5 years of monitoring data.
- Submit the revised *Draft Ecological Risk Assessment* for the Lampbright IU for Chino and public review.
- Submit the Vegetation Monitoring Report for the Groundhog Mine and Small Historic Stockpiles IRAs, HWC IU.
- Submit the Interim Report for the Geochemical Evaluation of the Groundhog No. 5 Stockpile, HWC IU.
- CWG meeting April 19, 2016.
- The AOC Technical Group will meet monthly.

Personnel Changes

There were no personnel changes during the quarter

Problems and Solutions

There were no problems that adversely affected the AOC this quarter.

Please contact Ned Hall at (520) 393-2292 with any questions or comments concerning this report.

Sincerely,



Sherry Burt-Kested, Manager
Environmental Services

SBK:pp
20160427-001

- c: Joseph Fox, NMED (via email)
Chris Eustice, MMD (via email)
Holland Shepherd, MMD (via email)
Petra Sanchez, US EPA (via email)
Kris Pintado, NMED (via email)
William Cobb, Freeport-McMoRan Inc. (via email)
Ned Hall, Freeport-McMoRan Inc. (via email)