

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

January 29, 2016

Certified Mail #7014287000202344442
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, Fourth Quarter 2015

This Administrative Order on Consent (AOC) Quarterly Report documents activities performed during the reporting period from October 1 through December 31, 2015. 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 fourth quarter of 2015, the following major activities occurred:

- The final Ecological Risk Assessment for the Hanover/Whitewater Creeks Investigation Unit (HWC IU) was provided to Chino and the public.
- Chino submitted the Annual Monitoring Report for the Groundhog Mine Site Interim Remedial Action for HCW IU.
- Chino submitted the Razorback Ridge Area Supplemental Completion Report for the Smelter Tailings Soils Investigation Units (STS IU).
- Chino performed the first 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 October 20th in Bayard, NM.
- The AOC Technical Group participated in meetings and/or conference calls on October 20th, November 17th, and December 17th to review the AOC progress.

Hanover/Whitewater Creeks Investigation Unit

Following approval by NMED of the completion report for the Interim Remedial Action (IRA) at the Groundhog Mine Site, Chino has performed quarterly post-reclamation water quality, erosion, and vegetation monitoring of the site since 2009. 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 earlier in 2011, the site is now 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. Chino anticipates submitting the *Vegetation Monitoring Report* for the IRA sites during the first quarter of 2016.

MMD has approved extension requests by Chino under Permit GR009RE for the Lucky Bill Groundhog Mine No. 5 site for completion of reclamation activities. In response to an additional extension request by Chino, the MMD provided an approval permit of Modification 14-1 to Revision 01-1, Permit GR009RE in a letter dated September 18, 2014 to move the date for completion of closeout plan activities to June 2018. This extension period is necessary for Chino to sequence the MMD reclamation process with the AOC. Due to multiple years of less than average precipitation and an inadequate seepage collection system design at the site, Chino proposed an improved plan to monitor seepage in early 2014. Following a February 2014 site visit by the Technical Group and MMD, Chino submitted the *Groundhog No. 5 Stockpile Work Plan for Additional Characterization and Controls for the HWC IU*. In June 2014, NMED approved the work plan and Chino installed the new seepage collection system. Chino has since collected water samples from the collection system following a series of high precipitation events. Chino anticipates submitting a report on the results during the first quarter of 2016.

The NMED completed and provided the revised *Draft Ecological Risk Assessment (ERA)* report to Chino and the public for review in 2012. NMED provided a revised ERA report to the administrative record on April 20, 2015. Revisions to the report are in response to comments received from Chino and other stakeholders. Chino submitted comments on the revised report on June 18, 2015. No other public or stakeholder comments were received by NMED. NMED provided responses to Chino's comments in a letter dated October 6, 2015 and presented the final ERA on October 31, 2015. Chino has no further comments on the ERA.

Hurley Soils Investigation Unit

There were no activities this quarter to report for the Hurley Soils Investigation Unit.

Lampbright Investigation Unit

The NMED provided the *Draft LIU Ecological Risk Assessment* to Chino for informal review and comment in early 2013. NMED provided a revised Draft ERA to Chino in February 2014. Chino provided comments on the draft via email on April 11, 2014. NMED anticipates responding to these comments and providing the final report to Chino and the public for review during the first 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* during the spring of 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.

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, 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. Chino participated on a teleconference and webinar with EPA and NMED on January 16, 2015 to address EPA comments and questions on the HP report.
 - 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.
- In an email communication dated October 31, 2013, SWQB agreed with the revisions to the model report and that site specific criteria could be supported by this work.
- Chino presented the *Site-Specific Copper Toxicity Model Report* to the CWG on September 16, 2014.
- 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 first 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 first quarter 2016 following receipt of comments.

Community Relations

The Community Work Group (CWG) met on October 20, 2015. During that meeting, NMED's consultant Formation presented "Ecological Risk Assessment Update" for HWC IU to the group. The CWG had elected to meet again on January 19, 2016, but later agreed to move the meeting to February 16th. The three local Chino AOC document repositories continue to be maintained and updated with current documentation. The online electronic document repository is also up to date.

Next Quarter's Scheduled Activities

The following work and activities are projected for the first 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.
- The CWG will meet February 16, 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
20160129-002

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)