



Electronic Transmission

April 28, 2023

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

RE: Conditional Approval Interim Removal Action Residual Risk Assessment Report, Hanover/Whitewater Creek Investigation Unit, Chino Administrative Order on Consent

Dear Sherry Burt-Kested:

The Ground Water Quality Bureau (GWQB) of the New Mexico Environment Department (NMED) received the Interim Removal Action Residual Risk Assessment Report, Hanover/Whitewater Creek Investigation Unit, Chino Administrative Order on Consent dated August 9, 2022 from Freeport-McMoRan Chino Mines Company (Chino). Due to the length and complicated nature of the report, NMED and Chino worked informally prior to the submittal of that completed report. NMED had provided comments to Chino and Chino decided to submit the report for public record almost simultaneously with providing a response to comments. However, NMED determined that the corrections and response to comments were inadequate. Since NMED did not receive any comments from the public or other stakeholders during the public comment period, NMED decided that informal exchanges of opinion to improve the report should be initiated. NMED held a virtual meeting with Chino and both entity's respective consultants on December 15, 2022 to discuss NMED concerns from the submitted report.

To provide better context, we have provided two of NMED's comments that were not adequately addressed in the Report along with Chino's response to those comments.

- 1. Response to NMED General Comment #1:** Chino's response indicates that seven additional samples were collected in Physical Reach 4 (PR4) in May 2022. These samples were helpful in characterizing concentrations in PR4. However, in their response to Comment #1, Chino indicates that additional text was added to Section 4.2.1 to clarify why the use of Thiessen polygons is conservative for the assessment. The added text cites data from a single transect from Physical Reach 3 that shows a decrease in concentrations with distance from the active channel with the presumption that concentrations decrease in all locations similarly. The data from this single transect do not adequately support the statements in the document that indicate that the same trends in data are found in all areas of Hanover and Whitewater Creeks.

Many of the remediated areas within Hanover and Whitewater Creeks, that were not associated with a Tin Can Operation, are outside of the active channel in depositional areas. These remediated areas are outside from the active channel which would invalidate the assumption

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that concentration decreases with distance from the active channel. The data shown in Figure D-5f further support our concern with Chino's assertion that the polygons provide a conservative measure. In PR4, the highest concentrations that drive the elevated 95% UCL calculation are those that are the furthest from the active channel, contradicting Chino's response to our original comment that using Thiessen polygons provides a conservative assessment based on the single transect from PR3.

As noted in our original comment, in all areas except PR4, the 95% UCL calculates support the area-weighted average concentrations and are less than the ecological benchmarks. In PR4, the 95% UCL of copper in <2000 um soil samples still exceeds the pre-FS RAC for small birds after the additional samples were added to the dataset and contradicts the area-weighted-average calculation.

Blanket statements regarding the conservative nature of the Thiessen polygon approach should be removed from the document without additional support.

Chino Response: The conceptual site model for Physical Reaches (PRs) 1, 2 and 3 is different from that of Physical Reach 4. For PR1, 2 and 3, fluvial deposition due to flooding is the main transport mechanism. Physical Reach 4 has different sources including overlapping fluvial, historic wind-blown concentrate, and stormwater deposition from uplands above the floodplain. Samples R104 and R105 represent removal areas that are outside the HWCIU boundary since they are small waste piles. As a conservative approach, these samples were applied to the overbank area downgradient, but the samples themselves do not actually represent the overbank. During the removal action, the Construction Team identified several small piles and made a decision to remove them while they had equipment in the field. The contractor removed as much soil as possible, but the area was constrained due to bedrock, steep slopes, and access issues. The R104 and R105 samples are post-removal confirmatory data, and are not indicative of habitat in the overbank per se. These sites were brought forward under the IRA completion report for transparency of removal activities although located in the STSIU as a hillside upland above the creek. The eight samples collected in May 2022 throughout P4 returned relatively low copper concentrations and are more representative of the physical reach as a whole, particularly habitat for small ground feeding birds. Additional detail regarding the removal areas in PR4 will be added, and the R104 and R105 samples will be removed from the PR4 evaluation and discussed in the STSIU FS.

The comment notes that in all areas except PR4, the 95% UCL calculates support the area-weighted average concentrations and are less than the ecological benchmarks, but in PR4, the 95% UCL of copper in <2000 um soil samples still exceeds the pre-FS RAC for small birds after the additional samples were added to the dataset and contradicts the area-weighted-average calculation. To clarify, the March 2011 pre-FS RAC letter for the STSIU indicates that the area-weighted average concentration is the metric used to determine compliance with this pre-FS RAC. The 95% UCL was provided

for context only. The area weighted average, even with R104 and R105, meets the pre-FS RAC for PR4.

All that said, blanket statements regarding the conservative nature of the Thiessen polygon approach will be removed from the document.

2. **Response to NMED General Comment 3:** General Comment 3 indicated that the sentence: “Based on the results contained herein, no further action for bar and overbank sediment in P1, P2, P3, and P4 is necessary to meet the AOC objectives.” should be removed from the document because it is not supported by the data, particularly from PR4. The sentence was not removed from the document based on Chino’s response to General Comment 1 and 2. We continue to recommend that the statement be removed, particularly for PR4, unless Chino can provide additional evidence that the data from the area-weighted-average calculated using Thiessen polygons provides a more accurate characterization of concentrations than the 95% UCL calculations. This comment also is reflected in NMED’s Specific Comments 8 and 9 which continue to require further resolution.

Chino Response: As discussed above under Comment #1 and in terms of the March 2011 NMED letter for STSIU, the data from area-weighted average was used as the compliance metric to assess the Pre-FS RAC. That said, during the December 15, 2022 conference call, NMED also indicated that this type of risk assessment report is not the place to indicate no further action. Therefore, Chino proposes to modify the statement to say, “Based on the results contained herein, no further risk assessment for bar and overbank sediment in P1, P2, P3 and P4 is warranted based on the evaluation.”

Other details and specific comments have been shared and discussed. On March 6, 2023, Chino provided language and revisions that will be made to the revised report. NMED has reviewed the Report and subsequent responses to comments and hereby conditionally approves the Report, subject to Chino making the corrections and additions noted in this letter and discussed during this process. The revised report should be submitted within thirty days of the date of this letter.

If you have any questions, please contact me at (505) 372-8545.

Sincerely,

David W. Mercer, Chino AOC Project Manager
Mining Environmental Compliance Section
Ground Water Quality Bureau

DM

cc: Petra Sanchez, USEPA (via email)
Joe Fox, NMED (via email)
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