



26 January 2023

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Ohio Environmental Protection Agency
Southeast District Office
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FORMER SATRALLOY SITE – RESPONSE TO COMMENTS ON SEPTEMBER 2022 DRAFT RI REPORT

On behalf of Cyprus Amax Minerals Company (Cyprus), this letter responds to comments from the Ohio Environmental Protection Agency (OEPA) received via email on January 17, 2023 on the draft Remedial Investigation (RI) Report dated September 16, 2022. Comment numbering is the same as the OEPA comments.

[unnumbered comment] Executive Summary – In either the “Slag”, “Summary”, or “Conclusions” section, there should be language discussing the areas of slag that exceed the 1E-05 risk level. This ties in to Comment 13 which will require an expanded summary of these areas.

Response: A figure will be added to the RI showing the area with slag >10-5 risk. This figure will be referenced in the Executive Summary and Section 7.1 (HHRA summary).

1) Executive Summary – “Conclusions” section, third bullet – Based on Ohio EPA's previous review letter for the Manganese Memo, we suggest modifying this bullet to read as follows: “The Bedrock Aquifer has not been impacted by Site COPCs. There are limited, localized impacts from Cr(VI) to the Valley Fill Aquifer at two locations in the Plant Area, but no Site impacts to the Valley Fill Aquifer in off-Site locations. While a data evaluation suggests that coal mining was the primary source of manganese in Valley Fill groundwater, process-related materials (e.g. the various types of dust) cannot be ruled out as a secondary source.”

Response: The phrase “process-related materials cannot be completely ruled out as a secondary source” will be added.

2) Section 3.0 – Second paragraph, language should be revised to indicate that the borings within the Mill Buildings were completed in late 2022.

Response: The requested change will be made.

3) Section 3.4 – Fourth bullet, “Area” should be replaced with “Ground Floor”.

Response: The requested change will be made.

4) Section 3.6.1 – This section should be modified to account for an updated number of samples after completion of the recent Mill Building sampling.

Response: The requested change will be made.

5) Section 4.0 – First full paragraph, third sentence, “select” should be “sample”.

Response: The requested change will be made.

6) Section 4.0 – Third full paragraph, first sentence, should read “.....20 to 52 feet thick around the perimeter and 66 feet thick at MW-115.”

Response: The requested change will be made.

7) Section 5.5 – This section should be modified to account for an updated number of samples and results after completion of the recent Mill Building sampling.

Response: The requested change will be made.

8) Figures 3.6-1, 5.5-1A and 5.5-1B, and any relevant tables, should be modified to include the additional Mill Building samples.

Response: The requested change will be made.

9) Section 5.8.7 – Final paragraph – Suggest modifying to read: “The absence or low levels of other COPCs (other than manganese) in site groundwater demonstrates there is limited leaching from the slag and attenuation within a small distance from the slag. Manganese in groundwater at the site is likely related to former coal mining, but in the Valley Fill Aquifer process-related materials cannot be ruled out as a secondary source. Further information about the nature and occurrence of manganese in the Valley Fill Aquifer is provided in Appendix K.”

Response: See response to Comment 1.

10) Table 5.8-1A – The table column headers “Valley Fill Aquifer” and “Valley Fill Aquifer that fills the base of Cross Creek” are both used in this table, which is confusing. Is there an intended distinction?

Response: These headings will be made consistent

11) Section 5.11 – In the second paragraph, text will need to be changed to reference a final Tier 1 Delineation Report in Appendix H.

Response: This section will be modified to reflect current status.

12) Section 7.1.1 – The statement “The Lowland Slag South Exposure Unit was the only Exposure Unit where estimated cancer risk from Cr(VI) alone was greater than 1E-05.” is no longer accurate given the agreement between Ohio EPA and Cyprus Amax that the composite worker is the appropriate receptor for calculating risk. This section should be expanded to summarize the presence of risk greater than 1E-05 in the additional areas of site slag. Perhaps a footnote should be referenced in this section. The footnote can describe the agreement between the parties that the composite worker is the appropriate receptor, and that the HHRA was not modified to reflect this. This can alleviate any confusion between the content of the final HHRA report and the description of risk that is presented in this section of the RI Report.

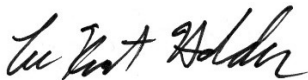
Response: For this site, there is negligible difference between the risk values calculated using a composite worker and the risk values calculated using a commercial/industrial worker in the HHRA. Furthermore, using a composite worker scenario does not change the extent of slag with a calculated risk >10⁻⁵, so there is no need to revise the text. We acknowledge that the OEPA prefers a composite worker scenario for risk calculations. However, we agreed that because the difference in calculated risk is negligible, and Cyprus proposes to consolidate all of the slag (not just the slag with calculated risk >10⁻⁵), that there is no need to change the HHRA or associated summary in the RI.

13) Section 8.2 – Third bullet. As in Comment 2 above, we suggest modifying this to read as follows: “The Bedrock Aquifer has not been impacted by Site COPCs. There are limited, localized impacts from Cr(VI) to the Valley Fill Aquifer at two locations in the Plant Area, but no Site impacts to the Valley Fill Aquifer in off-Site locations. While a data evaluation suggests that coal mining was the primary source of manganese in Valley Fill groundwater, process-related materials (e.g. the various types of dust) cannot be ruled out as a secondary source.”

Response: See response to Comment 1.

Sincerely,

WSP USA INC.



CC: Barbara Nielsen – Cyprus Amax Minerals Corporation