Drury, Andrew (DEQ)

From: Dungey, Curt <Curt.Dungey@Foth.com>
Sent: Tuesday, July 24, 2018 2:53 PM
To: Drury, Andrew (DEQ)
Cc: Thomas Repaal; Baran, Kris K
Subject: Copperwood - Responses to Additional Comments and Questions
Attachments: Attachments.html

Andy:

Below are responses to your most recent set of comments and questions dated July 16, 2018. All responses are highlighted in red. As needed, revisions to the air emission calculations have been made. The revised emission calculations (Copperwood Emissions Inventory, Version 3) are included this message as a Share File. To facilitate your review of revisions within the spreadsheet, changes are highlighted in bright green to distinguish changes from previous changes made in Version 2 (these were highlighted in yellow). We are also including copies of the two Particle Size Distribution graphs that are requested in Item No. 3 below. They were originally provided as Appendix A-4 in the Permit to Install application.

Please let us know if you have questions or additional comments or if you have difficulties opening up the revised emission calculations or Particle Size Distribution graphs in the Share File. While there may be an automatic confidential notification at the end of this message, none of the information in this e-mail or attachments should be considered confidential.

Thanks

ShareFile Attachments — Expires August 23, 2018

BF9 - 1st Clean (AH).pdf	29.4 KB
BF9 - Rougher (AH).pdf	29.5 KB
Copperwood Air Emissions Inventory Ver 3.xlsx	713.2 KB

Download Attachments

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From: Drury, Andrew (DEQ) [mailto:DRURYA@michigan.gov]
Sent: Monday, July 16, 2018 9:00 AM
To: Thomas Repaal <Thomas.Repaal@highlandcopper.com>
Cc: Dungey, Curt <Curt.Dungey@Foth.com>; Donohue, Steve <Steve.Donohue@Foth.com>; Baran, Kris K <Kris.Baran@Foth.com>; Smith, Cindy (DEQ) <SMITHC17@michigan.gov>; Carlson, Nicholas (DEQ) <CarlsonN1@michigan.gov>; Lancaster, Edward (DEQ) <LANCASTERE1@michigan.gov>; Ahammod, Shamim (DEQ) <AhammodS@michigan.gov>; Maki, Joe (DEQ) <MAKIJ3@michigan.gov>
Subject: Additional Information Request #2 for Copperwood Resources, PTI 180-11A

Mr. Repaal,

The AQD has reviewed the additional information received on 7/3 and 7/13, as well as the GHG and toxic air contaminant emission calculations and the Michigan NSPS Limits calculations and we have a few additional comments and questions:

1. While the PM10 and PM2.5 emissions are now below the Significant Emission Rates (SER), the NOx emissions are now above the 40 tpy SER, so none of the PTI exemptions can be used. A limit on LPG usage or hours of operation of the heaters could get the NOx emissions below 40 tpy if needed. As noted in the previous response to comments, the only significant sources of air emissions from the list of exempt emission sources in Section 3.4 of the air permit application were for space heaters and laboratory crucible furnaces. Space heater emissions are now included in the emission calculations while it has been determined that laboratory crucible furnaces will not be used at the mine. Therefore, it is not believed the stated exemptions in Section 3.4 will be needed or relied upon. Nonetheless, it should be pointed out that specific language of the code at R 336.1278 (1) (b) states that the exemptions do not apply to "any activity that results in an increase in actual emissions greater than the significance levels defined in R 336.1119 (emphasis added)." While the facility's calculated maximum emissions are now greater than the 40 tpy Significant Emission Rate (SER) for NOx, the actual emissions for NOx are at 34.3 tpy, which is below the SER. Therefore, it is believed the facility should qualify for the exemptions based on strict language of the code.

2. In the Surface Ore Transfer calculations, are the emission factors in Process F001 "Surplus Ore Feed Transfer (using FE) …" (row 21) correct for a front end loader transfer, or should they be revised, as was done for Process F002? The emission factors for "Surplus Ore Feed Transfer (using FEL)" in Process F001 have been revised in Row 21 to reflect use of the formula in the reference "Calculation 1" on the spreadsheet, which is used to characterize movement of material with a front end loader. The changes are highlighted in bright green on the "Copperwood Emissions Inventory Version 3" which is included as a Share File in this response to comments.

3. For the TDF wind erosion calculations, can you proved the Particle Size Distribution graphs used to determine the particle size ratios referenced in the response to question 19? The Particle Size Distribution (PSD) graphs for rougher and first cleaner tailings were provided in

the Permit to Install application as Appendix A-4. For easy reference, they are also included with this response to comments.

4. In the underground blasting emission calculations, it appears the ton/yr normal production emission rates (row 74) were not updated to reflect the lower settling factor. While the "normal production" emission rates have not been used in the permit application review, please update these emission rates for completeness, if needed. The normal production emission rates in Row 74 have been updated to reflect use of the lower settling factor. The changes are highlighted in bright green on the revised emission calculations that are included as a Share File to this response to comments.

5. The top (row 7) of the "Summary PM, Toxics" sheet says "Maximum Facility Emissions for Criteria Pollutants". Please correct this if necessary. The title for the "Summary PM, Toxics" worksheet has been revised in response to this comment. The change is highlighted in bright green on the revised emission calculations.

6. The total emissions given at the bottom of the "Summary PM, Toxics" sheet do not appear to include the water truck, reagent truck, and explosives truck traffic and the ore stockpile wind erosion emissions. This does not cause problems, since these emission rates are not used anywhere else and appear to be for information only, but they should be corrected if needed. The total emissions at the bottom of the "Summary PM, Toxics" worksheet have been updated to include ore stockpile wind erosion emissions and emissions due to use of the water truck, reagent truck, and explosives truck on facility access roads. Changes are highlighted in bright green on the revised emission calculations.

Please provide the requested information as soon as possible, but not later than July 30, 2018. Once the emission calculations are complete, the revised dispersion modeling can be run.

Please let me know if you have any comments or questions.

Thank you,

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