

Data Submitted (UTC 11): 10/28/2020 6:00:00 AM

First name: Alan

Last name: Haslam

Organization: Midas Gold Idaho, Inc.

Title: Vice President, Permitting

Comments: Please see attached comment letter from Midas Gold Idaho, Inc. This letter offers comments on the portions of the DEIS devoted to Air Quality in the Affected Environment (Section 3.3) and the potential Environmental Consequences (Section 4.3).

Midas Gold Idaho, Inc. (Midas Gold) appreciates the opportunity to provide comments on the Draft Environmental Impact Statement (DEIS). Clearly, the document represents a substantial effort by many individuals to compile and convey a very large volume of information and analysis regarding the Midas Gold proposed Stibnite Gold Project (SGP). The synthesis of hundreds of documents developed from a much greater multitude of data values, statistical analyses, and modeling projections into a single draft product is a noteworthy accomplishment, and Midas Gold is pleased to have been a stakeholder in its development.

In its comments, Midas Gold wishes to respectfully offer its perspective and insight to assist in clarifying and improving content for the Final Environmental Impact Statement (FEIS). This letter offers comments on the portions of the DEIS devoted to Air Quality in the Affected Environment (Section 3.3) and the potential Environmental Consequences (Section 4.3). Our comments are summarized below, and for your convenience, comments have been provided in a tabulated format (included as Attachment A) that references each appropriate subsection heading, page number, and paragraph.

#### 1.0 Emission Inventories

We suggest providing additional detail to delineate the three emission inventories (EI) discussed and analyzed in the DEIS (i.e., Alternative 1 EIS, Alternative 2 EIS, and Alternative 2 [NSR (New Source Review)]).

The following outline provides a summary of the three EI.

The Alternative 1 EIS EI included the following source categories:

1. Ore processing (ore handling, crushing, transfers, grinding, etc.)
2. Refining (autoclave, electrowinning cells, retort, melting furnace, carbon kiln, etc.)
3. Ancillary (prill, lime, cement, shotcrete storage and handling, central mixer, process and building heaters, emergency equipment, etc.)
4. Mining (drilling, blasting, material extraction, hauling, and unloading)
5. Wind erosion (roads, tailings, material piles)
6. Ongoing construction and surface exploration
7. Mine site and Burntlog Route access road maintenance (water trucks, dozing, and grading)
8. Vehicle travel on the Burntlog Route access road
9. Tailpipes from on-site mining and maintenance equipment

10. Tailpipes from on-site helicopter takeoffs and landings

11. Tailpipes from vehicles on the entire 38-mile length of the Burntlog Route access road

Vehicle traffic on the Burntlog Route access road included maintenance equipment (grader, snow blower and plow trucks, water truck, etc.), light-duty pickup trucks and buses used for employee, visitor, and

contractor transportation, and heavy-duty trucks used for cargo (including fuel, consumables, machine parts, ore processing supplies, antimony concentrate, etc.) and services (including food supplies, trash, recyclables, etc.) transportation.

The Alternative 2 EIS EI included the lime processing (handling, crushing, screening, grinding, storage, kiln, etc.) associated with the on-site lime production in addition to all the sources included in the Alternative 1 EIS EI.

The Alternative 2 NSR EI included the lime processing (similar to Alternative 2 EIS EI) and source categories #1 through #8 listed under Alternative 1 EIS EI. Instead of the entire 38-mile length, the 1.6-mile long section of the Burntlog Route access road inside the project boundary (from the south gate to the processing area) was used for the Burntlog Route-related emission calculations for #7 and #8 above. Tailpipe emissions and the Burntlog Route access road offsite emissions were not included in the Alternative 2 NSR EI because they are outside the scope of the NSR analyses.

All the emissions calculated for each EI were included in their respective modeling analyses, without exception.

## 2.0 Screening Visibility Analysis

Section 4.3.2.1.2.4 states that "VISCREEN is viewed as an inherently conservative model." The VISCREEN modeling presented in the DEIS contains several conservative inputs. Combining these inputs with an already inherently conservative model has resulted in overly conservative plume blight predictions. These results have led to a conclusion in the DEIS that plume visibility impacts are "likely" in the Frank Church- River of No Return Wilderness (FCRNRW). A revised VISCREEN analysis is provided in the attached memorandum titled, "SGP VISCREEN Analyses and Revised 2020 Modeling" (Attachment B). This revised 2020 modeling was performed using more representative assumptions, and reasonable conservatism shows that the potential for plume visibility impacts is minimal: only 0.02 percent of the daytime hours.

We suggest updating the VISCREEN analysis and resulting conclusions (Sections 4.3.1.3.3, 4.3.2.1.2.4, and 4.3.7) based on the attached revised analysis (Attachment B).

## 3.0 Idaho Department of Environmental Quality's (IDEQ) National Ambient Air Quality Standards (NAAQS) analyses

In Section 4.3.2.2.4, the DEIS concludes that, using the conservatively high production and emission rates provided in the Alternative 2 NSR inventory and regulatory standard methods, the project demonstrates compliance with the applicable NAAQS. However, the DEIS also mentions that "under different AERMOD settings a few points showed exceedances for PM10 NAAQS" and "Midas Gold and IDEQ are conducting an analysis of such 'hotspots' using a weight-of-evidence approach that is under review." Midas Gold performed AERMOD modeling using site-specific meteorological data processed with two default regulatory-approved methods: BULKRN and non-BULKRN. The United States Environmental Protection Agency (EPA) considers both BULKRN and non-BULKRN methods regulatory defaults and acceptable for air quality analyses. Moreover, as of July 31, 2020, the IDEQ has completed the DEIS-mentioned weightof- evidence analyses and concluded that the SGP impacts will not cause or significantly contribute to a violation of any applicable NAAQS. These analyses also demonstrated that the higher PM10 concentrations modeled with the BULKRN dataset occurred during

winter, when the average snow depth and precipitation in the project area are 21-68 inches and 6 inches, respectively. Thus, the fugitive road dust emissions during the high-impact hours could be overestimated. Therefore, the high modeled PM<sub>10</sub> impacts that exceed NAAQS are unlikely to occur. Based on the justification provided in the above discussion and for a complete analysis, Midas Gold proposes that the PM<sub>10</sub> 24 hours modeled results with the non-BULKRN dataset be presented in DEIS Table 4.3-22 to conform with the conclusion provided in Section 4.3.2.2.4. As presented in the DEIS, the PM<sub>10</sub> 24 hours results in Table 4.3-22 could be misinterpreted and lead to the misunderstanding that the project is not compliant with NAAQS.

We suggest updating Sections 4.3.2.2.4 and 4.3.7.3 to reflect IDEQ's confirmation of compliance with the NAAQS for all pollutants.

#### 4.0 Roads Analysis

We suggest updating information on the access road analysis in Sections 4.3.2.2.4, 4.3.2.4.2, and 4.3.7.3 to include the alternate NAAQS analysis performed with EPA default methods (non-BULKRN) that demonstrate compliance with the NAAQS. In addition, see the modeling details provided in Section C of this letter.

#### 5.0 Factual Corrections

We have identified some apparent inconsistencies, incorrect numbers, and other errors, including model inputs and results. We suggest applying the following corrections:

1. The DEIS incorrectly uses the term "hydrogen cyanide" instead of "cyanide." Please correct the term "HCN detoxification tanks" to "cyanide detoxification tanks" in Section 4.3.1.2.2 to acknowledge that the detoxification tanks destroy all cyanide compounds, not just HCN (hydrogen cyanide). This section also refers to the leaching solution as "HCN solution." Please correct "HCN solution" to "cyanide solution," as it is the cyanide anion (CN-) that is used to extract gold from ore. Please also correct the terms "residual HCN" and "HCN concentration" to "residual cyanide" and "cyanide concentration," respectively, in this section.
2. In Table 4.3-2, please correct the ozone background and NAAQS values to match the values provided in DEIS Table 3.3-2 (background = 60 ppb = 117.7 [μg]/m<sup>3</sup>, NAAQS = 70 ppb = 137.7 [μg]/m<sup>3</sup>).
3. On page 4.3-27, please correct the HCN emissions to 1.8 tpy to match DEIS Table 4.3-6.
4. In Table 4.3-8, Row 3, please correct the ozone maximum, baseline, and total concentrations to 2.75 [μg]/m<sup>3</sup>, 117.7 [μg]/m<sup>3</sup>, and 120.5 [μg]/m<sup>3</sup>, respectively, to match the ppb values provided in the previous row in this table.
5. On page 4.3-35, please correct the Hg deposition to 0.4 percent. See the following comment for details.
6. In Table 4.3-12, please correct the hydrographic sub-basin orientations with respect to the SGP site. The Row 2, 3, and 4 sub-basins are west, southeast, and northeast of the mine site, respectively. Please correct the AERMOD screen results in Row 2 to show the maximum estimated hydrographic sub-basin average deposition rate of 0.056 g/km<sup>2</sup>-yr and update the associated percent contribution accordingly to 0.4 percent in Row 2. The values (2.58 g/km<sup>2</sup>-yr and 18.6 percent) provided in this table relate to the hydrographic sub-watershed and, therefore, are incorrect for the hydrographic sub-basin "within the SGP area and the sub-basin west of the mine site." The Column 1 header is "Hydrographic Sub-basin," and therefore, it is not correct to compare the hydrographic sub-watershed results to the hydrographic sub-basin background.
7. In Table 4.3-13, Row 3, please correct the N deposition flux rate to 0.00011-0.0098 g/m<sup>2</sup>/yr.

8. In Table 4.3-21, Row 4, please correct the total HAP emissions to 1.8 tpy.

9. On page 4.3-52, please correct the Alternative 2 impact scaling equation by replacing "-" with "+."

10. In Table 4.3-23, please correct the baseline concentrations in Rows 2 and 3 for CO, in Rows 6 and 7 for PM2.5, in Row 8 for PM10, and in Row 9 for SO2 to match their respective values provided in DEIS Table 4.3-22, and update the resulting total NAAQS impacts and below NAAQS determinations.

## 6.0 Clarifications

We have identified some areas where we recommend additional clarity and accuracy regarding processes, assumptions, data sets, methods, uncertainties, and analyses, and we suggest the following clarifications:

1. The DEIS incorrectly uses the term "best available control technology." Please replace the references to "best available control technology" with "applicable requirements." The DEIS correctly observes that the SGP is a minor source subject to IDEQ air permit to construct (PTC) requirements (pages 4.3- 9, 12, 18, 12). The requirements of "best available control technology" do not apply to minor sources in Idaho; however, the PTC will impose enforceable conditions consistent with applicable requirements.

2. The DEIS incorrectly states that the emissions information was incomplete. For example, Table 4.1-2, Row 10 states: "Complete information has not been developed regarding some features of action alternatives[hellip]" We suggest that this statement be supplemented to acknowledge that the three EI (Alternative 1 and 2 EIS and Alternative 2 NSR) evaluated in this analysis are sufficiently conservative to cover all alternatives.

3. All necessary emissions information has been developed. The EI provided included emissions for the highest-emission alternatives and 15 LOM years, including the construction years. DEIS Section 4.3 also acknowledges that the EI provided by Midas Gold cover the highest emission scenarios and that the emissions of other alternatives will be the same or lower. In addition, see the modeling details provided in Section A of this letter.

4. Please expand Table 4.3-1 to include additional source category columns (e.g., "Ore Processing and Ancillary," "Lime Processing," "Onsite Mining Fugitive Dust and Blasting," "Burntlog Route Tailpipes," etc.) as delineated in Section A of this letter. Please also add a column at the end to verify the fact that all the emissions included in each EI were modeled (for example, "All Emissions Included in EI were Modeled").

5. Table 4.3-1 shows that the mobile source tailpipe and Burntlog route fugitive dust emissions were "not included" for the Alternative 2 NSR emissions inventory. These emissions were not included in the Alternative 2 NSR inventory because, as stated in the last sentence on DEIS page 4.3-7, "state regulations do not require mobile sources to be covered by the PTC." Therefore, please change "not included" to "not required" to avoid any misunderstanding that the Alternative 2 NSR inventory was incomplete because these emissions were not included.

6. Clarity is needed in discussion related to transportation emissions, including antimony concentrate shipping for example, page 4.3-24. All SGP-related (personnel and cargo, including antimony concentrate, and services) traffic levels and emissions along the entire 38-mile length of the Burntlog Route (site to Landmark) were included in the EIS EI and modeling. Traffic emissions outside this area are beyond the EIS review scope and thus should not be discussed.

Thank you for considering our comments. Please contact me if you any questions.

SEE LETTER ATTACHMENT FOR TABLE PROVIDING EXTENSIVE EDITS/SUGGESTIONS: Attachment A:

Stibnite Gold Project DEIS Air Quality (Sections 3.3 and 4.3) Comments Compilation Table

Attachment B: SGP VISCREEN Analyses and Revised 2020 Modeling (Technical Memorandum; Air Sciences 2020)