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Comments: The following comments about Stibnite Gold Water Treatment presented in the DEIS.

#### I. Section Purpose and Need for Action

Components of the proposed project include the following: three open mine pits; ore processing facilities; development rock storage facilities; a tailings storage facility; a water treatment facility; access and haul roads; electrical transmission lines; and various other support facilities. Quality of water exiting certain mine site facilities including water discharging from the Hangar Flats pit lake is expected to require continuing treatment.

#### Comments to be addressed

1. Based upon the information on Midas Gold's website, the company does not operate any water treatment facilities at any existing mines site. The proposed location for this project requires water treatment to meet water quality standards during construction, operations, and closure and reclamation. Midas Gold's experience with water treatment facilities is insufficient and unacceptable to have this project approved without significant changes to the proposed action.

2. The proposed action must implement Alternative 2 because water treatment is needed to meet water quality standards during construction, operations, and closure and reclamation. Operations Water Treatment--A Centralized Water Treatment Plant (WTP) using iron co-precipitation would be established at the Ore Processing Area to treat contact water, mine drainage, pit dewatering water and process water at a maximum throughput of 4,000 gallons per minute (gpm). Temporary membrane treatment systems to be utilized during early operations as needed.

a. This proposed action in Alternative 2 needs to be modified to describe collection and transport equipment and facilities for contact water from each source to the WTP. Collecting contact water from mine pits, DRSFs, and toe seepage is complex and challenging because both unsaturated and saturated flow conditions must be addressed in the collection system. Contact water from DRSFs and toe seepage are likely to be not collected and result in environmental contamination if these systems are not adequately designed and constructed. It is requested that the US Forest Service conduct an open house to allow the public to review the proposed water treatment process selection and design including the collection and treatment systems prior to the start of construction. This request is appropriate because of Midas Gold's insufficient experience with water collection and treatment systems at mine sites. In addition, this request is appropriate because "evaluation of water treatment is ongoing and would continue to be refined to include the waters that could be expected to require treatment; the number of water treatment systems needed and throughput of each system; the type of systems needed; expected treatment levels; and how waste sludges would be disposed."

b. The DEIS does not provide sufficient information on water treatment to determine how potential impacts will be addressed and mitigated as noted in paragraph a, above. In addition, the WTP needs to be fully operational when construction is completed prior to the start of mining activities to meet water quality standards. Any temporary systems are not acceptable because contact water will likely occur at the start of operations or least shortly thereafter. This water is likely to adversely impact surface and groundwater quality at the project site.

c. Membrane treatment systems require low plugging index water quality so that the membranes are not plugged and the system fails. The EIS must describe how the membranes will not be plugged using appropriate pretreatment equipment. Otherwise, membrane treatment is not a viable approach.

d. Waste management from the collection system and WTP is not addressed in the DEIS. Wastes from the collection system and WTP must be managed in compliance with requirements and regulations. Waste management is complex and needs to be sufficiently described in detail to demonstrate mitigation of adverse environmental impacts and regulatory compliance.

## II. Closure and Reclamation for Alternative 2

During Closure and Reclamation, the Centralized WTP continues to operate in perpetuity with the addition of a thickener for residual wastes. Treats water from tailings runoff and consolidation and Hangar Flats Pit Lake overflow. Passive water treatment in Fiddle Creek drainage treats Fiddle DRSF seepage discharging to EFSFSR IPDES-permitted outfall. Treatment system under evaluation but could be passive biochemical reactor with wetland polishing. Periodic West End pit lake discharges after lake filling treated through temporary treatment system and discharged through a permitted outfall to West End Creek. The DEIS states "proposed Toe seepage would be expected to continue from the Fiddle DRSF in perpetuity. This water would be collected in the operational contact water pond at the toe of the Fiddle DRSF, and then discharged to a passive treatment system before being discharged via an IPDES outfall to the EFSFSR."

### Comments to be addressed

1. Passive treatment is most suitable for small to moderate flow discharges of known water chemistry. Before selecting an appropriate passive treatment technology, the discharge conditions and chemistry must be fully characterized. Passive treatment should be eliminated and the seepage from the Fiddle DFSF be treated in the Centralized WTP because discharge conditions and chemistry are not available from the Stibnite Gold site. For appropriate and adequate design of a passive treatment system, the flow and chemical characterization must be completed to assess of environmental impacts from passive treatment.

2. Passive treatment systems have a poor survival rate in mountainous climates. Passive treatment systems have not been proven to be reliable at Idaho Mine Sites. Mountainous climate causes extremes in flow rate during snowmelt and influent chemistry that produce high throughput excursions and discharge exceedances. For those reasons, the usage of passive treatment should be deferred until pilot studies are completed. Within Idaho there have been limited pilot studies for manganese removal only. The proposed passive treatment system has not demonstrated at an Idaho mine and will require extensive pilot testing to demonstrate its viability while seepage from the Fiddle DFSF adversely impacts the environment.

## III. Section 2.3.5.20

During any temporary shutdown, the operator would continue to implement operational and environmental maintenance and monitoring activities to meet permit stipulations and requirements for environmental protection. If ore processing is not occurring, excess water collected from the various facilities would need to be discharged to the TSF for storage. In the case of a longer-term closure, water treatment could be necessary to allow discharge to the area streams and prevent filling of the TSF. A plan would need to be developed, reviewed and approved by the appropriate regulatory authorities, and implemented at the time of any longer-term temporary closure.

### Comments to be addressed

1. If ore processing is not occurring, excess water collected from the various facilities would need to be discharged to the TSF for storage. The TSF construction is planned to occur where each dam stage would be placed prior to the year that particular TSF stage goes into service. This approach significantly increases the likelihood that TSF failure could occur because the volume to store excess water may not be available in the TSF due to this construction approach. Excess water from large storm events or high snowmelt is a common reason why TSF's fail. The proposed action in the DEIS needs to be modified to reduce the risk of TSF failure from

excess water when during ore processing is not occurring by constructing appropriate water storage capacity on-site.

#### IV. Missing Documents

The Water Quality Management Plan (Brown and Caldwell 2020) provides additional details on water treatment for closure and reclamation and the post closure period. This plan is referenced in numerous places in the DEIS and a copy was not appended to the DEIS for reviewers. This omission should be corrected.

Respectfully submitted,

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