Data Submitted (UTC 11): 10/8/2020 6:00:00 AM
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Title:
Comments: My comments, and references, are in the attached files. please contact me if you have any difficulty with these files.

Thanks;

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Background

David Chambers has 40 years of experience in mineral exploration and development - 15 years of technical and management experience in the mineral exploration industry, and for the past 25+ years he has served as an advisor on the environmental effects of mining projects both nationally and internationally. He has Professional Engineering Degree in physics from the Colorado School of Mines, a Master of Science Degree in geophysics from the University of California at Berkeley, and is a registered professional geophysicist in California (# GP 972). Dr. Chambers received his Ph.D. in environmental planning from Berkeley. His recent research focuses on tailings dam failures, and the intersection of science and technology with public policy and natural resource management.

This review was conducted at the request, and financial support, of Save the South Fork Salmon.

General Comments

From the review of the sections of the EIS which I examined, several significant gaps are noted that need addressed before the adequacy of the DEIS can be determined. The first is a lack of technical information and supporting data on the design and proposed construction approach of the tailings dam. This dam will be 460 feet in height, and could be significantly higher if it is expanded later in its life. Typically, the EIS supporting document would include a technical report from the consulting company that designed the dam. There is anecdotal information that suggests this information may be available, but all that is presented in the EIS is a cartoon drawing of the dam, and a hand waving description of how the staged construction will proceed. Critical to the construction sequence is how the engineered portion of the day will ensure its downstream-design architecture, and whether a future expansion of the dam will allow downstream-design to continue, or whether upstream-design expansions will be necessary.

The second gap, and perhaps the most important gap, is what water quality in the EFSFSR (East Fork of the South Fork of the Salmon River) will be. Current water quality modeling (Brown & Caldwell 2019e) indicates that water quality for arsenic and antimony will be about the same, and mercury levels will be significantly higher. This is in comparison to existing water quality, which has been impacted by previous mining, and significantly exceeds water quality standards.

Existing water quality should not be the baseline to which the post-closure project water is compared. Post-closure water quality should be compared to the water quality that would result if the present substandard reclamation of past mining is cleaned up. Just maintaining existing water quality is not adequate, and does not recognize the cleanup that would eventually be legally mandated.

Finally, like many EIS processes in today's era of streamlined regulatory review procedures, the EIS avoids any discussion of the financial assurance that will be required for the project. This is being left to the subsequent permitting review, which must meet state and federal requirements. Getting the amount and appropriate financial vehicle for the financial assurance right at the beginning of the project is very important to the public, because it is the public that will need to provide the funds for reclamation should the financial assurance be underestimated, and the mine go into bankruptcy. This has happened all too often in most Western US states. There is no technical reason this information cannot be provided in the EIS. The data necessary to do so is available, and this is typically a calculation that the project applicant has done for itself, since the financial implications are significant to the company too.

* The following issues are addressed at length in the section-specific comments below:
* A preliminary Development Rock Management Plan should be included in the DEIS
* Technical documentation on the construction sequencing for the tailings dam is missing
* A tailings impoundment liner with seepage collection capability should be adopted in order to avoid contaminating groundwater
* The treatment of post-closure flow from the lined waste dumps needs to be thoroughly discussed in the EIS, and provision made in the financial assurance to treat this flow
* The potential impacts of the pit dewatering discharges to both groundwater and surface waters, and how this will be regulated by IDEQ, need more discussion in the DEIS
* A transportation-related Emergency Spill Response Plan needs to be developed as a part of the EIS
* A plan for temporary closure should be developed for the DEIS
* Any planning for underground exploration should require a separate environmental impact analysis
* The DEIS should contain a financial assurance calculation for at least one of the alternatives
* The elimination of the Fiddle Creek DRSF should be evaluated as an option in the DEIS
* The cost of water treatment for an indefinite period of time need to be discussed in the DEIS
* A discussion is required of the treatment scheme, and the associated cost, if the biotreatment system is not effective
* A full discussion of the liner configuration for Alternative 4, along with a figure depicting the liner, is required in the DEIS
* The No Action Alternative should be based on what the area will look like after a mandated cleanup is implemented, not on exiting the degraded conditions
* The URS (2013) and Tierra Group (2018) reports, which were used for the DEIS but classified "Confidential", should be made available for review for the DEIS
* The Forest Service must explain why each report it has deemed "Confidential; Not available to the public" has been restricted
* Both the mine, and the company transporting cyanide to the mine, not only need to follow the procedures of the International Cyanide Management Institute, but also need to be formally certified by that body
* Information on the IPDES permit requirements is necessary to evaluate post-closure water quality

Section-Specific Comments

2.3.5.4 Development Rock Production and Storage

Waste rock management plans are typically required as part of the EIS process because how waste rock will be classified geochemically is an important factor in determining the risk it poses to water quality, both surface and

groundwater. Waste management is also important in determining the mitigation techniques that will be utilized for each waste rock classification. These issues are not tied a specific mine option, but are of universal concern and applicability to all options. The geochemistry of the waste does not change between options.

For this DEIS it is stated, "A Development Rock Management Plan, which would provide active management for development rock produced and stored across the mine site during operations, would be prepared as part of the final mine plan."

The DEIS does not contain a discussion of the different types of waste/development rock based on their geochemistry. As a result, it is not clear what waste disposal/storage strategies will be needed or utilized.

Recommendation: A preliminary Development Rock Management Plan should be included in the DEIS.

2.3.5.7 Tailings Storage Facility

The tailings dam described in Alternative 1 is used to supply basic construction information on the dam for all of the alternatives with a Hangar Flats TSF location. There is no technical documentation provided on the dam construction. The cartoon dam depiction provided in Figure 2.3-5 TSF and Hangar Flats DRSF General Cross Section (attached), is not adequate to provide the basic information needed to review whether the dam construction proposed is adequate. The most detailed information on the tailings dam construction appears in the Prefeasibility Study (see Drawing 18.4: TSF Dam Cross-Section, attached), but neither is sufficient to answer basic questions about the dam construction that need to be addressed.

These questions include: (1) how will the dam be constructed in a downstream manner given the simultaneous development of the Hanger Flats DRSF, which will not be compacted to engineering standards; and, (2) will the proposed construction approach allow for expansion of the tailings facility in a downstream manner, or will dam expansion be limited to upstream-type development?

Recommendation: Technical documentation on the construction sequencing must be included in the EIS, and dam safety specifications and construction quality assurance requirements must be supported with technical documents. This information is missing at present.

TSF Underdrain System

It is noted that springs will likely be identified under the proposed tailings facility, and that an underdrain system is planned for the TSF. There are no technical drawings of this system, only vaguely worded and sometimes contradictory descriptions. It should be noted that unless a seepage collection system is provided, as suggested in Alternative 4, both the spring water collected in the underdrain, and the groundwater under the TSF will almost certainly become contaminated with antimony, arsenic, and manganese. To the contrary, the groundwater quality modeling for the project has assumed that groundwater under the TSF and all of the DRSF's will be protected from contamination by the underdrains (Brown & Caldwell 2019e). This is most probably a faulty assumption.

Recommendation: A liner with seepage collection capability, as discussed in Alternative 4, should be adopted in order to collect contaminated seepage from the TSF for treatment, and to avoid contaminating groundwater.

Recommendation: The underdrain system needs to be described in detail, with accompanying technical drawings. Since these drains are likely to become clogged in the long-term, how the drain system can be protected and restored needs to be addressed.

2.3.5.9 Surface Water and Groundwater Management - Groundwater Spring and Seep Control

Underdrains for the DRSFs are described thusly, "The underdrains would convey spring and seep flows beneath the facilities to a collection sump at the DRSF toe where the flows would be monitored for water quality prior to release into the stream system or capture for use in the processing circuit, depending on water quality."

After the brief description in this section, DRSF underdrains are not mentioned again in the DEIS until 4.8.2.1.2.1 Construction and Operations - Underdrain Flow, where the description of the drain construction and operation are given a similar brief discussion. Underdrain flows are predicted to be 900

- 1300 gpm for the Hanger Flats TSF and DRSF, and 200 - 600 gpm for Fiddle DRSF.

At closure, a partial cover on only the top of the Hanger Flats DRSF, and a full cover for the Fiddle DRSF, including the side slopes, are proposed (Brown & Caldwell 2019e). Brown & Caldwell has modeled the resulting water quality, but it is not clear from that report what the resulting underdrain flows will be.

It is well documented elsewhere in the DEIS that seepage from the DRSFs will contain high levels of antimony and arsenic, and probably cadmium and manganese. As noted in 2.3.5.9, the flow from the drains are to be collected in a "sump at the DRSF toe". There is some discussion of post-closure water treatment requirements for Alternative 2 in 2.4.6.6 Water Treatment, but this discussion is both brief and incomplete. Post-closure treatment volumes are cited, but there is no explanation how these volumes were developed. Both 760 gpm and 400 gpm are mentioned at treatment capacities, but it is not clear how these numbers were developed, or what the actual treatment volume is estimated to be.

Recommendation: The treatment of post-closure flow from the lined waste dumps needs a more thorough discussion in the EIS, as well as documentation provided in the technical support records, and provision made in the financial assurance to treat this flow.

What would the potential impacts be on the lined TSF if the drains were to become plugged at some point post-closure? Could the drains be restored if the drains proposed for the DRSFs and TSF plug?

Recommendation: Clogging of underdrains should be addressed in the EIS.

2.3.5.9 Surface Water and Groundwater Management - Rapid Infiltration Basins

Rapid infiltration basins (RIBs) will be used to dispose of water pumped from pit dewatering. It is noted in the DEIS, "According to IDEQ, permitting of RIBs may fall under a wastewater reuse permit; however, there could be potential groundwater -surface water connections. In such cases, these discharges may be permitted under an IPDES permit. IDAPA 58.01.11.150.03, Ground Water-Surface Water Interactions, requires that contaminates entering groundwater cannot impair the surface water beneficial uses."

Not only would the RIBs be in alluvium, but groundwater systems are also typically shallow in areas like this, and interaction with surface water takes place quickly. The DEIS does not directly discuss what the predicted affects for RIB discharge on surface water quality will be. This issue is only briefly addressed in the most recent technical support document on project water quality (Brown & Caldwell 2019e).

What will the potential impacts of the groundwater discharge be? Will the IDEQ permit protect existing surface water quality, or allow some degradation?

Recommendation: The potential impacts of the pit dewatering discharges to both groundwater and surface waters, and how this will be regulated by IDEQ, are important issues and need more discussion in the EIS.

2.3.5.19 Operations Traffic

According to Table 2.3-6 Proposed Materials, Supplies, and Reagents, approximately 8 truckloads of lime per day, 3 tanker trucks of diesel fuel and sodium metabisulfite every 2 days, one truck of ammonium nitrate every day, three truckloads of cyanide and copper sulfate a week, plus a significant number of additional truckloads of lesser materials will be arriving at the mine. With this amount of truck traffic, over the life of the mine several transportation-related spills are inevitable.

Recommendation: A transportation-related emergency spill response plan needs to be developed as a part of the mine's Spill Prevention, Control, and Countermeasure (SPCC) Plan, and should be discussed in the EIS.

2.3.5.20 Temporary Closure of Operations

The mine does not plan any periods of temporary closure. Mines seldom, if ever, do. However, temporary mine closures are common, typically due to low metals prices. It is also noted in this section, "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."

Developing a plan when the mine is already in temporary closure would not be planning, it would reacting. Considering temporary closure is particularly important at Stibnite because water treatment during operations is not planned in all of the alternatives, but could be required if the mine is not operating, even with an alternative where there is no planned discharge during operation because the water is consumed in the processing. Too much water, rather than too little water, is often a problem at mines, so a worst-case water balance must be considered for a temporary closure. Mr. Murphy, and his law of unintended consequences, must be acknowledged, or the public and the environment may be at risk.

The DEIS needs to address the period of time that would be allowed before "temporary" closure would be converted into "permanent" closure.

In addition, the additional financial requirements for a temporary closure, in addition to the financial requirements for permanent closure, need to be defined.

Recommendation: A plan for temporary closure should be developed now. The plan needs to be in place before a temporary closure is experienced. It can be amended, as required, later. This needs to be addressed in the DEIS.

2.3.6.2 Underground Exploration

In this section it is noted, "Underground exploration activities would be conducted from a 1-mile, downward-sloping tunnel (a decline). The decline would be used to reach the subsurface mineralized zone known as the Scout Prospect."

Underground exploration could potentially impact water quality and quantity, and involve the surface disposal of rock with as-yet defined geochemical properties. Unless information on the predicted water quality and quantity impacts, the geochemistry of the waste that require surface disposal, and the closure plans for the underground workings are presented in the EIS, the EIS cannot be used as an analysis for this activity. None of this information is being made available in the DEIS.

Recommendation: Any planning for underground exploration should require a separate environmental impact analysis.

2.3.7.16 Closure and Reclamation Financial Assurance

Instead of calculating the amount of financial assurance that will be required, it is noted in this section; "The amount of financial assurance would be determined by the Forest Service [hellip]"

When mines are developed on their lands, a financial assurance is required by federal land managers and many state regulatory agencies. The financial assurance is to cover the cost of reclaiming the disturbed surfaces of the mine, and to pay for all post-closure requirements. In this case, it would primarily be for the cost of water treatment in perpetuity. It is also important to note that the financial assurance does not cover the cost of a potential mine accident. The financial assurance only covers planned closure.

The financial assurance requirement is important for several reasons. First, there have been numerous instances in virtually every state of mining companies going bankrupt and not having the financial resources to complete their closure obligations- for example, the Illinois Creek mine in Alaska, and the Zortman-Landusky mine in Montana. In these instances, the government regulatory agencies did not require enough financial assurance to cover the actual costs of mine closure. In British Columbia, it is estimated that the Province holds over $1 billion less than the full value for financial assurance required to reclaim BC mines (BC Auditor General 2016). If the mining company cannot cleanup and close the mine, then the public becomes either liable for the cost of cleanup, or they bear the environmental consequences of the damaged minesite.

There is significant political pressure to keep the costs of these financial assurances as low as possible in order to enhance the economic viability of the mine, and in the past this has led to significant underestimations of the amount of financial assurance required to close a mine after a bankruptcy. In the US, Alaska, Montana, Nevada, South Dakota, and other states have been victims of this problem. In each instance taxpayer dollars were required to augment inadequate financial sureties.

Second, the amount of money required to close the mine and to perform post-closure water treatment can be enormous. The present financial assurance for closure of the Red Dog mine in Alaska is $563 million, most of which is related to water treatment in perpetuity. At closure, the Red Dog mine is projecting to treat approximately 1.8 billion gallon/year, which drives the majority of the financial assurance requirement. This would add hundreds of millions of dollars to the closure cost, which must be covered by the financial assurance.

How the agency responsible for calculating the financial assurance to insure that public will not be saddled with these costs is an important issue that is being avoided in the EIS. Public disclosure and an opportunity to review the cost calculations is not only appropriate, but the potential financial and/or environmental impact on the public is also significant.

The National Environmental Policy Act requires federal agencies to undertake a pre-action analysis in the form of an Environmental Impact Statement (EIS) of potential environmental impacts for "major Federal actions" that may "significantly affect" the quality of the human environment. 42 U.S.C. [sect] 4332(2)(C).

The Code of Federal Regulations, Title 40: Protection of Environment defines "human environment" as;

[sect]1508.14 Human environment.

Human environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment. (See the definition of "effects" ([sect]1508.8).) This means that economic or social effects are not intended by themselves to require preparation of an environmental impact statement. When an environmental impact statement is prepared and economic or social and natural or physical environmental effects are interrelated, then the environmental impact statement will discuss all of these effects on the human environment. (emphasis in original)

If a financial guarantee is required to protect environmental values, like clean water and fish, then 40 CFR 1508.14 clearly suggests that the significant financial assurance required by agency regulations should be evaluated in an EIS. When a federal agency intentionally decides to ignore analyzing the requirement for a financial assurance to protect the environment, the message it clearly sends is that protecting the public is not its primary goal. Deferring the analysis of the financial assurance requirement until later in the permitting process expedites the permitting process, as well as make it more difficult, if not impossible, for the public to review and comment on the adequacy of the financial assurance requirement.

Recommendation: The EIS should contain a financial assurance calculation for at least one of the alternatives.

2.4.5.6 Water Management - Water Use and Water Balance & Water Treatment

Only a qualitative description of the water balance is given, with partial quantification of the water demand, but no quantification of the amount of water that will be discharged to the EFSFSR.

The amount of discharge to the EFSFSR must be quantified because that will determine the type and cost of water treatment required. Provision for water treatment must be available before mine operation, so it is not clear why this information is not available for DEIS.

In the Water Treatment section of Alternative 2, an operational water treatment system is described. For Alternative 1, it is stated that no water treatment system is required because there will be no discharge. Perhaps this is a water balance issue, but this is a good example of why a quantitative water balance needs to be presented in the DEIS.

Recommendation: A quantitative water balance should be presented in the DEIS.

As a result of the discussion of an operational water treatment requirement, as presented in Alternative 2, it is not clear that Alternative 1 is a viable alternative. If this is the case, then water treatment should also be included in Alternative 1.

Recommendation: Include water treatment in Alternative 1.

2.4.6.2 Fiddle DRSF

The Fiddle DRSF (waste rock dump) is designed to hold 68 million tons of waste rock. The Fiddle Creek Valley presently has some mining disturbance in the lower portion where it meets the East Fork South Fork Salmon River, but it is largely undisturbed. Part of Alternative 2, a modified version of Alternative 1 primarily developed by Midas Gold to provide additional avoidance and mitigation measures to address significant impact issues, involves eliminating the West End DRSF. The area that would have hosted the West End DRSF has largely been impacted by previous mining.

The West End DRSF will hold 25 million tons of waste rock. The remainder could probably be backfilled into the Hanger Flats pit, which is presently projected to be only partially backfilled. This could avoid the destruction of the Fiddle Creek Valley.

Recommendation: The elimination of the Fiddle Creek DRSF in order to preserve the undisturbed stream resources, which are larger than those exiting in West End Creek, should be evaluated as an option in the EIS.

2.4.6.6 Water Treatment - Water Treatment

In this section it is noted, "The Centralized WTP would provide treatment for contact water for an indefinite period of time post closure." If the required time for treatment is "indefinite", then this has an effect on the financial assurance.

Recommendation: The details that will drive the cost of water treatment for an indefinite period of time need to be discussed in the DEIS.

It is also noted in this section, "Treatment using a biochemical reactor with polishing through a vertical wetland system is being evaluated by Midas Gold. [hellip] The Fiddle DRSF toe seep water would be treated in a similar passive water system. The system would be designed for a 400 gpm flow rate."

Passive water treatment systems generally are restricted to low flow rates. 400 gpm is high for passive biotreatment system, so the potential viability of a passive biotreatment system is in question.

Recommendation: There should be a discussion in the Water Treatment section of what treatment scheme will be employed if the biotreatment system is not effective, and how this alternative will be treated in terms of its effect on the financial assurance.

2.6.5.1 Tailings Storage Facility

In Alternative 4, the Hangar Flats Tailings Facility is proposed to incorporate a seepage detection/collection layer. It is noted that this system would include; "[hellip] a leak detection and collection system designed to remove process water to prevent greater than 12 inches of hydraulic head pressure on the primary liner; [hellip]"

Leak detection/seepage collection layers are generally not designed to prevent hydraulic head pressure on the primary liner. The leak detection/seepage collection system is designed to detect and collect water that is seeping through the primary liner. The leak detection/seepage collection system is not capable of maintaining a desired head pressure on the primary liner. There should be a drain layer on top of the primary liner to minimize the hydraulic head on the liner. It is not clear if this is what is envisioned.

There is no figure presented in the DEIS to clarify this issue.

Recommendation: A full discussion of the liner configuration for Alternative 4, along with a figure depicting the liner, is required in the EIS.

2.7 Alternative 5 - No Action

In this section it is noted, "The No Action Alternative means that no permits would be issued, and the proposed project would not be undertaken."

One of the significant unaddressed issues in the DEIS is what water quality in the EFSFSR will be post- mining. Presently this stream is significantly degraded by impacts from past mining. The area has been under consideration for addition to the Superfund program, and EPA has been investigating how a cleanup of the area might be accomplished (USEPA 2020).

The current predictions for post-Stibnite Project water quality in the EFSFSR show water quality being essentially the same for antimony and arsenic, and significantly worse for mercury (Brown & Caldwell 2019e). There is also always the potential that post-Stibnite Project water quality could be worse than predicted. This has been an issue with many proposed mines (Kuipers et al 2006).

It is not appropriate to use the existing degraded water quality conditions as baseline. When looking to what

water quality conditions should be post-Stibnite Project mining, the conditions post-cleanup of the existing problems is probably the best measure of what the "baseline" water quality conditions should be.

Post-cleanup water quality conditions can be predicted with the same techniques used to predict post- Stibnite Project water quality conditions. It is very likely that no additional data on existing water quality need to be collected in order to accomplish this modeling.

Recommendation: In order to facilitate the discussion of water quality objectives, and to provide a more realistic "No Action" Alternative, the No Action Alternative should be based on what the area will look like after a mandated cleanup is implemented, not on exiting the degraded conditions.

4.2.2.1.2 Geotechnical Stability of Proposed Mine Site Structures

Because of the size of the Hanger Flats DRSF that buttresses the tailings dam, the factors of safety calculated for the dam are above the generally required minimums of 1.5 for static factor of safety, and

1.1 for pseudostatic (seismic) factor of safety (see Table 4.2-1 Calculated Factors of Safety for Hangar Flats DRSF and TSF Dam).

However, the pseudostatic analysis is based on a seismic risk report provide by URS (2013). For an unexplained reason, the Forest Service has made the URS report "Confidential" so it cannot be reviewed. These reports are typically based on publically available information, and this reviewer has never seen this type of report placed in a confidential status for an EIS. By making this report inaccessible, it is not possible to check to see what sources URS used in determining its probabilistic and deterministic seismic events.

The URS report is also somewhat dated (2013). Typically, this report would rely in part on seismic information from the USGS. The USGS has updated its seismic risk information twice, in 2014 and again in 2018, since the URS report was written. Without access to the URS report, the geotechnical stability calculations by the Tierra Group cannot be critiqued. This is not adequate for an EIS.

Static and dynamic (seismic) geotechnical stability analysis was performed by the Tierra Group (2017). Tierra Group prepared a memo (2017) that summarized their modeling and calculations to that time, but a detailed report is not presented. Subsequently, the Tierra Groups performed additional geotechnical analysis (2018), but it is not clear what this analysis addressed because it has been deemed Confidential by the Forest Service, again for reasons that are not explained in the EIS.

I have formally requested that the US Forest Service release the URS (2013) report so that I may review the information in that report for its relevance and accuracy as applied to the DEIS (see Figure 1, attached). The US Forest Service has acknowledged my request, but as of this writing, I have yet to receive a final response to my request. As it now stands, more than two weeks after I made my request to the US Forest Service, I will not be able to review the URS report before the comment deadline, because the US Forest Service has not replied to my request.

Recommendation: At a minimum, the URS (2013) and Tierra Group (2018) reports should be made available for review for the EIS. It is possible that both the URS and Tierra Group reports may need to be updated to reflect current information.

4.7.2.3 Standards of Practice Under the International Cyanide Management Code

In the DEIS it is correctly noted that, "The International Cyanide Management Code (ICMC) is a voluntary initiative for the gold and silver mining industries and the producers and transporters of cyanide used in gold and

silver mining." The ICMI process, although voluntary, is set up to certify both mines and cyanide transporters.

According to Table 2.3-6 Proposed Materials, Supplies, and Reagents, truckloads of cyanide will be arriving at the mine approximately three times a week. The potential for a cyanide-related transportation accident is not insignificant.

Recommendation: It should be clearly stated in the EIS that both the mine, and the company transporting cyanide to the mine, shall be certified by the International Cyanide Management Institute.

4.9.2.2.2 Surface Water Quality - Alternative 2

The water quality predictions for Alternative 2 in the EIS (Figure 4.9-12 Alternative 2 Predicted Surface Water Concentrations, as presented, without water treatment), do not offer any significant improvement over existing conditions for arsenic and antimony, and mercury is significantly worse.

The EIS itself does not present predictions for Alternative 4 (covers on the waste rock dumps).

However, in reviewing the source document for water quality predictions, Brown & Caldwell (2019e) does provide post-closure water quality predictive modeling that includes the effect of a cover on the Fiddle DRSF and a partial cover on the Hanger Flats DRSF. In the EFSFSR downstream of all proposed mining activities after Sugar Creek confluence, which does include the effect of geosynthetic covers on the Fiddle and partial cover on the Hanger Flats DRSFs, maximum baseline for arsenic will be exceeded for a period of 20 years post-closure, and occasional exceedances for an indeterminate beyond that (Brown & Caldwell 2019e, Figure C-45). Antimony from the mine will be increasing the background loading about half the time (Brown & Caldwell 2019e, Figure C-45).

If a recommendation on mine development is limited to this information, then the conclusion must be that the mine will make an already unacceptable water quality situation worse, and further mining should not be allowed.

However, there is still the issue the water quality standards will be imposed in an IPDES permit. There is no discussion in the EIS about permit limits. The IPDES permit will likely drive water treatment requirements, both in terms of the type of water treatment required, i.e. active or passive, and the cost of the water treatment. This also has great importance in determining the amount of the financial assurance.

Recommendation: Information on the IPDES permit requirements is necessary to determine whether mining is viable from a water quality standpoint, and to determine the type and cost of water treatment that would be required to make any mining Alternative.evaluated in the EIS acceptable.

References

There are several key references for the DEIS that have been designated "Confidential" by the Forest Service, including critical geotechnical calculations performed by URS (2013) and Tierra Group (2018). It is unusual that these reports would be confidential, because they typically do not use proprietary information for their preparation.

In the experience of this reviewer, utilizing information from confidential reports is highly unusual for an EIS.

Recommendation: The Forest Service must explain why each report it has deemed "Confidential" has been restricted to the public.

Thank you for the opportunity to comment on this Draft EIS.

Figures:

Figure 1: September 8, 2020, Chambers request to US Forest Service for reports, and September 9, 2020, US Forest Service acknowledgement of the receipt of the request

Figure 2.3-5 TSF and Hangar Flats DRSF General Cross Section

Drawing 18.4: TSF Dam Cross-Section

References Cited:

BC Auditor General 2016. "An Audit of Compliance and Enforcement of the Mining Sector," Auditor General of British Columbia, May 2016. Total underfunded liability in 2015: $1.2 billion.

Brown & Caldwell 2019e. Stibnite Gold Project Modified PRO Alternative Modeling Report, Brown and Caldwell, September 2019

Kuipers et al 2006. Comparison of Predicted and Actual Water Quality at Hardrock Mines, The Reliability of Predictions in Environmental Impact Statements, James R. Kuipers Ann S. Maest, Kimberley A. MacHardy, Gregory Lawson, 2006.

Tierra Group 2017. TSF-DRSF Slope Stability Analyses, Prepared by Tierra Group International, Ltd., Salt Lake City, Utah, September 1, 2017.

Tierra Group 2018. Stibnite Gold Project Geotechnical Investigations Summary Report and Appendices. Prepared for Midas Gold, Boise, Idaho. Prepared by Tierra Group International, Ltd., Salt Lake City, Utah, 2018. [Confidential; Not available to the public].

URS 2013. Site Specific Seismic Hazard Analysis for the Golden Meadows Project, Idaho, Prepared for Midas Gold Inc. Unpublished Company Report, URS Corporation (URS), 2013. [Confidential; Not available to the public].

USEPA 2020. Letter to Midas Gold, USEPA, Susan Parker Bodine, Assistant Administrator, Office of Enforcement and Compliance Assurance, and Peter C. Wright, Assistant Administrator, Office of Land and Emergency Management, July 7, 2020

USFS 2020. Stibnite Gold Project Draft Environmental Impact Statement, US Forest Service, Payette and Boise National Forests, Idaho, August 2020

SEE LETTER SUBMISSION: Figure 1: September 8, 2020 Chambers Request to US Forest Service for reports, and September 9, 2020 US Forest Service acknowledgement of request

SEE LETTER SUBMISSION: Figure 2.3-5 TSF and Hangar Flats DSFR General Cross Section

SEE LETTER SUBMISSION: Drawing 19.4 TSF Dam Cross Section

SUBMITTED REFERENCE: Kuipers, J.R., Maest, A.S., MacHardy, K.A., and Lawson, G. 2006. Comparison of Predicted and Actual Water Quality at Hardrock Mines: The reliability of predictions in Environmental Impact Statements.

SUBMITTED REFERENCE: Bellringer, C. 2016. An Audit of Compliance and Enforcement of the Mining Sector.

Thank you for the information. I have reviewed the URS (2013) seismic analysis, and two points need to be noted.

First, the analysis for the site-specific probabilistic and deterministic seismic hazard analyses utilized the NGA (2008) ground motion prediction model. Since that time, the model has been updated to the NGA-West-2 model. The data bases associated with the model have also been updated a number of times.

Similarly, the deterministic seismic hazard analysis uses data from the USGS to check its calculations. The USGS National Hazard Maps have been revised twice since 2008 (2014 & 2018).

The URS report is not current, and needs to be updated to reflect current information and models.

Second, the URS report assumes that the probability of an earthquake occurring on the Deadwood - Reeves Creek Fault Zone, located only 12 km from the minesite, is so unlikely that it will not influence the size of the Maximum Credible Earthquake used for the tailings dam safety calculations. However, because URS does note that [ldquo][hellip] the Deadwood - Reeves Creek fault zone is potentially active[rdquo], it is not clear why this potential earthquake source is essentially being ignored. Because a tailings dam is a facility that must stand in perpetuity, design and safety assumptions should be very conservative.

The assumptions URS has made are appropriate for the mill design, but for the tailings dam and waste rock piles, facilities that must retain their integrity in perpetuity, I believe a potential earthquake on the Deadwood - Reeves Creek fault should have more weight.

Finally, I had no way of knowing this report had been made publically available on October 8, 2020. I am glad the Forest Service agreed to make this information available. There really was no reason for this information to be classified CONFIDENTIAL. I hope the USFS will not create these unnecessary barriers in future EISs.

I would appreciate if the comments above were attached to the comments I submitted on the DEIS, so that they might be considered by the DEIS review team.

Thank you for the information. I have reviewed the URS (2013) seismic analysis, and two points need to be noted.

First, the analysis for the site-specific probabilistic and deterministic seismic hazard analyses utilized the NGA (2008) ground motion prediction model. Since that time, the model has been updated to the NGA-West-2 model. The data bases associated with the model have also been updated a number of times.

Similarly, the deterministic seismic hazard analysis uses data from the USGS to check its calculations. The USGS National Hazard Maps have been revised twice since 2008 (2014 & 2018).

The URS report is not current, and needs to be updated to reflect current information and models.

Second, the URS report assumes that the probability of an earthquake occurring on the Deadwood - Reeves

Creek Fault Zone, located only 12 km from the minesite, is so unlikely that it will not influence the size of the Maximum Credible Earthquake used for the tailings dam safety calculations. However, because URS does note that [ldquo][hellip] the Deadwood - Reeves Creek fault zone is potentially active[rdquo], it is not clear why this potential earthquake source is essentially being ignored. Because a tailings dam is a facility that must stand in perpetuity, design and safety assumptions should be very conservative.

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