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U.S. Forest Service, Payette National Forest
Attn: Linda Jackson, Forest Supervisor
500 North Mission Street, Building 2
McCall, ID 83638

Submitted electronically to: <https://cara.fs2c.usda.gov/Public/CommentInput?Project=50516>

RE: Comments on the Payette and Boise National Forests' Supplemental Draft Environmental Impact Statement for the Stibnite Gold Project

Dear Ms. Jackson:

The Alaska Miners Association (AMA) is pleased to submit these comments on the October 2022 Supplemental Draft Environmental Impact Statement (SDEIS) that the Payette and Boise National Forests (Forest Service) prepared for Perpetua Resources Ltd.'s (Perpetua's) Stibnite Gold Project (SGP) in Valley County, Idaho. AMA submitted comments on the Forest Service's 2020 Draft Environmental Impact Statement (DEIS) for this important project so we are familiar with the many environmental, ecological, and socioeconomic benefits the SGP will create.

Based on our review of the SDEIS, AMA continues to support the SGP for the following reasons:

- The SGP will become the Nation's only domestic source of antimony, which the U.S. military says is an essential component of small arms, missiles and munitions:
- The mine plan for the SGP includes numerous remediation measures that will restore the environment at the legacy Stibnite Mine where the federal government mined antimony and tungsten during World War II and the Korean War and left behind numerous problematic mine waste piles and other features that are harming the environment;
- The Forest Service and U.S. taxpayers need to capitalize upon Perpetua's unique proposal to invest \$1.1 billion to redevelop, remine, and restore the Stibnite Mine site because without this investment, this legacy mine site will continue to leach contaminants into the watershed and block fish migration; and
- The project will create economic benefits and generate thousands of direct, indirect, and induced jobs for over twenty years.

AMA is a professional membership trade organization established in 1939 to represent the mining industry in Alaska. We are composed of more than 1,400 members that come from eight statewide branches: Anchorage, Denali, Fairbanks, Haines, Juneau, Kenai, Ketchikan/Prince of Wales, and Nome. Our members include individual prospectors, geologists, engineers, suction dredge miners, small family mines, junior mining companies, major mining companies, Alaska Native Corporations, and the contracting sector that supports Alaska's mining industry.

The SGP will Make Significant Fish Habitat Improvements

Given the importance of salmon to Alaskans, AMA's comments on the DEIS focused on Perpetua's commitment to reestablish a viable fish passageway and restore fish migration in the East Fork of the South Fork of the Salmon River (East Fork). Our comments on the SDEIS will also focus on the significant fish habitat improvements that will result from the SGP.

AMA continues to be impressed with Perpetua's commitment to improve stream and fish habitat conditions at in the SGP area. The proposal to construct Stibnite Lake in the backfilled Yellow Pine Pit, which Perpetua added to in its October 2021 updated Plan of Operations (the ModPRO 2)¹, will further enhance fish habitat in the Stibnite mine area.

Perpetua added Stibnite Lake to the ModPRO2, in response to concerns raised in public comments on the DEIS about the loss of lake habitat for fish that the Yellow Pine Pit Lake currently provides. Stibnite Lake will also help mitigate temperature fluctuations in this segment of the East Fork. Perpetua and the Forest Service deserve credit for using these public comments to refine the ModPRO2 for the SGP to provide additional habitat improvements and ecological benefits. This modification to Perpetua's project proposal is an excellent example of how public comments received during the NEPA process can improve and refine a proposed project.

The cascade that flows into the Yellow Pine Pit has created an insurmountable barrier to fish migration for over 80 years. The opportunity to remove this barrier and ultimately reconstruct the East Fork is both exciting and laudable. Perpetua's mine plan includes the above-and-beyond conservation measure to construct a fish passageway tunnel in conjunction with building the diversion channel to route the East Fork around the pit as the first step in preparing to mine the Yellow Pine Pit. This fish passageway tunnel will enable volitional fish migration for the first time in four decades while the Yellow Pine Pit is being mined. Permanent and sustainable post-mining volitional fish migration will be achieved when backfilling of the mined-out Yellow Pine Pit is completed and Perpetua reconstructs the East Fork across the backfilled pit where it will become a meandering stream that flows through Stibnite Lake.

AMA is concerned that the Executive Summary in the SDEIS does not mention that Perpetua added Stibnite Lake to the MMP to mitigate the loss of the fish habitat that the Yellow Pine Pit lake currently provides. Stibnite Lake is a significant conservation measure that should be discussed in the Executive Summary.

Figure 4.12-1, "Stream Channel Changes During Construction, Active Mining, and Reclamation/Restoration Phases," documents the numerous restored stream segments resulting from the MMP. The Executive Summary should include a copy of Figure 4.12-1 or at least mention it so that readers can readily understand how the SGP will improve riparian and fish habitats. Additionally, the Executive Summary should give credit to Perpetua for adding Stibnite Lake to the MMP in response to public comments on the DEIS.

In the Final EIS, AMA suggests that the Forest Service clarify the vocabulary used to describe the fish passageway tunnel. Throughout much of the SDEIS, the fish passageway tunnel is called "the tunnel" without mentioning that it will be built as a fish passageway. Specifically, in Chapter 4, the first description

¹ Perpetua calls its updated Plan of Operations "the ModPRO2." The Forest Service calls this revised Plan "the Modified Mine Plan or MMP" in the SDEIS.

of the tunnel as a “fishway” does not occur until Page 4-334. Some readers may not understand that the “tunnel” (without qualification) and the “fishway” are the same structure. The Final EIS should more consistently and clearly describe the tunnel around the Yellow Pine Pit as a fish passageway tunnel.

Moreover, the discussion of the tunnel in Chapter 4 generally reads as if this tunnel may create adverse impacts to fish rather than emphasizing it will provide immediate passage for chinook salmon, bull trout, and steelhead to miles of stream habitat that have been blocked for over 80 years by the Yellow Pine Pit and the cascade into the pit. Section 4.12 of the SDEIS, “Fish Resources and Fish Habitat,” is difficult for the public to understand because it obscures the overarching conclusion that the stream restoration measures in the MMP will improve fish habitat. The tone of this section lacks objectivity because it does not present an appropriately balanced discussion of the potentially adverse impacts versus the significant benefits that would result from constructing the fish passageway tunnel around the Yellow Pine Pit early during project operation and reconstructing the East Fork channel through the backfilled Yellow Pine Pit in about ten years.

The absence of balance and objectivity are especially evident in the No Action discussion in Section 4.12.2.1, which fails to acknowledge that under the No Action Alternatives, the barrier to fish migration created by the cascade into the Yellow Pine Pit would remain in place – perhaps for decades – and East Fork would continue to be disrupted by the Yellow Pine Pit. Instead, Section 4.12.2.1 states that no negative impacts to fish or fish habitat would occur if the MMP is not built and inappropriately omits any discussion of the habitat restoration and water quality improvements that would not occur without the project.

Although the stream restoration/fish habitat benefits (e.g., the perennial stream segments that would be restored) are clearly shown in Figure 4.12-1, the SDEIS discusses this figure in a distorted way that fails to properly describe the net improvements. The text lumps “dewatering, restoration, and enhancements” together and mentions “impacts to fish” without qualifying the impacts as beneficial:

The SGP would result in stream channel changes, including dewatering, restoration, and enhancements within the active mine area (**Figure 4.12-1**). Physical alterations to stream structure from the SGP that would result in impacts to fish generally fall into three phased categories construction, active mining, and reclamation and restoration. Page 4-433

A clearer and more complete discussion would explain that Figure 4.12-1 illustrates the project area stream channels that would be restored as a result of the MMP and state that these restoration measures are expected to be beneficial to fish and fish habitat.

The integrated effects to bull trout discussion on Page 4-378 is another example of an incomplete and confusing narrative that includes internally inconsistent statements. First it says there will be adverse impacts to bull trout: “Post-closure, a net decrease in quantity and quality of bull trout habitat would occur despite removal of passage barriers and an increase of lake habitat for bull trout,” but then lists the following *beneficial or mitigated* impacts to bull trout:

- Changes to water chemistry would primarily have minor effects but would have an unknown level of beneficial effects through the reduction of arsenic and antimony.

- The loss of the Yellow Pine pit lake would result in a net long-term impact² to bull trout, but a permanent negligible net change once the Stibnite Lake is constructed by Mine Year 11. The construction of the fishway, and subsequent channel restoration of the East Fork SFSR, would provide volitional access to habitat that was not previously accessible to the adfluvial population, which may provide additional spawning habitat. Additional enhancements to the East Fork SFSR and Meadow Creek would provide additional habitat benefits.
- The removal of barriers would provide access to upstream habitat not previously volitionally accessed. This would result in a benefit to bull trout. A new barrier would be constructed in Meadow Creek along the TSF, which would result in blockage. Overall, there would be a net increase in accessibility to habitat for bull trout.
- There would be a minor net increase in occupancy potential for bull trout.

This discussion should be clarified in the Final EIS to make it easier to understand the streams where there will be benefits to bull trout and those stream segments where there will be new barriers or temperature impacts to bull trout. The Final EIS should be more balanced and give equal treatment to beneficial and adverse impacts. For example, rather than saying: “Post-closure, a net decrease in quantity and quality of bull trout habitat would occur despite removal of passage barriers and an increase of lake habitat for bull trout,” the Forest Service should consider editing this to say:

“Post-closure, there would be an improvement in quantity and quality of net bull trout habitat in the East Fork SFSR due to the restored East Fork SFSR stream channel in the backfilled Yellow Pine Pit and the addition of Stibnite Lake to the MMP to replace the function of the fish habitat in the current Yellow Pine Pit Lake and to minimize temperature fluctuations in the East Fork SFSR in and downstream of the SGP. Although the TSF would create a new barrier in Meadow Creek to bull trout, overall there would be a net increase in accessibility to habitat for bull trout and a minor increase in occupancy potential for bull trout.”

Section 4.12 in the Final EIS should make better use of Figure 4.12-1 to clearly describe the stream restoration accomplishments in numerous segments of the East Fork, Meadow Creek, and the East Fork of Meadow Creek. Section 4.12 presents a great deal of information that would benefit from a careful editing to better organize this section and to include a summary that clearly discusses the stream restoration benefits shown in Figure 4.12-1.

Redeveloping, Remining, and Restoring a Problematic Legacy Mine Site

The SGP entails remining and reprocessing historic mine wastes that contain residual gold and antimony that can be economically recovered, and remining other mine wastes that do not contain valuable minerals and placing them in engineered containment facilities to isolate them from the environment. Both remining activities are important environmental restoration measures that will remove legacy materials from area streams (primarily Meadow Creek) where they are leaching arsenic, antimony and other contaminants into the watershed. The remining components of the MMP and the recovery of antimony from some of the legacy mine wastes are precisely the type of remining activity that recent critical minerals policies have identified as a potential source of critical minerals.

On February 24, 2021, President Biden issued Executive Order 14017 (EO 14017) “On America’s Supply Chains.” EO 14017 directed the Secretaries of Commerce, Energy, Defense, and Health and Human Services

² AMA believes it is inappropriate to describe the loss of the Yellow Pine Pit for a period of roughly 11 years before construction of Stibnite Lake as a “long-term” adverse impact in light of the existing barrier to fish migration that the Yellow Pine Pit cascade has created for over 80 years.

to complete a supply chain review in 100 days and specified that the Secretary of Defense must prepare “a report identifying risks in the supply chain for critical minerals.”

The June 2021 report “Building Resilient Supply Chains, Revitalizing American Manufacturing, and Fostering Broad-Based Growth,” which is the 100-day Supply Chain Review Report prepared in response to EO 14017, is directly relevant to the SGP because this report explicitly requires the Secretaries to evaluate reprocessing mine wastes as a viable source of critical minerals. As a remining and reprocessing project that will recover the critical mineral antimony from legacy mine wastes, the SGP illustrates the viability of the concept in the 100-Day Report that critical minerals could be recovered from certain legacy mine wastes.

The SGP could become a template for how remining and reprocessing some legacy mine sites could recover critical minerals while concurrently remediating the impacts from past, unregulated mining practices.³ As a prototype remining/reprocessing project, putting the SGP into production would help validate the concept that redeveloping and remediating old mine sites by remining and reprocessing legacy mine wastes represents a significant win for both the environment and the security of the Nation’s critical minerals supply chains.

The SGP also illustrates the complexity of the technical and economic issues encountered at legacy mine sites. At the SGP, it is not economically feasible to include all of the problematic legacy features in a mine plan. This is the likely the case for many other legacy sites. Although the MMP includes substantial environmental restoration measures, some problematic legacy mine waste piles will not be remediated because they are located outside of the project boundary for the MMP.

The substantial but partial restoration of the SGP proposed in the MMP illustrates three important principles with potential applications at other legacy sites:

1. There is considerable merit in pursuing partial cleanup measures because some environmental restoration and improvement is better than no improvement;
2. A partial cleanup effort will get the ball rolling, which may stimulate and enable future more comprehensive cleanup measures; and
3. Addressing the range of environmental problems at a legacy site is complex and expensive.

Recognizing the urgency to eliminate selected mine waste piles that are outside of the MMP project boundary as ongoing sources of contaminated leachate, Perpetua entered into an Administrative Settlement and Order on Consent (ASAOC) with the Forest Service and the U.S. Environmental Protection Agency (EPA) in January 2021. As described in Section 1.3 of the SDEIS, the ASAOC is a phased plan designed to remediate the legacy features outside of the MMP project boundary. Perpetua initiated Phase 1 of the ASAOC in July 2022. In the future, Perpetua may be able to pursue the conceptual site restoration measures in Phases 2 and 3 of the ASAOC if and when Perpetua is producing gold and antimony from the Stibnite Mine.

³ The federal government’s antimony and tungsten from the Stibnite Mine during World War II and the Korean War is credited with saving over one million American soldiers’ lives and shortening the war by at least one year. (1956 Congressional Record). However, it left behind a legacy of environmental and ecological problems that the SGP is proposing to ameliorate.

Under Phase I of the ASAOC, Perpetua is voluntarily addressing several areas identified as being time-critical by implementing restoration measures that will eliminate or reduce contaminant sources from these areas as quickly as possible. The Forest Service and the EPA are directing and supervising the ASAOC Phase I remediation activities, which will cost Perpetua \$12 million to complete. In addition to these direct, on-the-ground remediation costs, Perpetua provided the agencies with a \$7.5 million performance bond to guarantee this work.

The ASAOC Phase I water quality improvements are anticipated to be completed by 2025 and include constructing stream diversion ditches to divert water away from legacy mine wastes that are contaminating area streams, removing approximately 325,000 tons of legacy development rock and tailings from locations in Meadow Creek and the East Fork that are currently adversely impacting water quality. Phase I also entails conducting baseline studies at five historic mine adits that are discharging mine drainage.

Once the SGP has all of its operating permits and production is underway, Phases 2 and 3 of the ASAOC give Perpetua the option to remediate additional legacy mine features located outside the MMP project boundary. These phases will require additional baseline data and engineering studies. They will also require funding using a portion of the revenue derived from mine production.

The sequential combination of the ASAOC Phase 1, the MMP, and the future ASAOC Phases 2 and 3 would ultimately achieve a comprehensive, site-wide restoration and cleanup of the Stibnite Mine site. It is therefore imperative that the Forest Service, the U.S. Army Corps of Engineers, and the Idaho State regulatory agencies take immediate steps to set this remediation sequence in motion.

The opportunity to achieve a complete cleanup of the Stibnite Mine site that Perpetua will subsidize is both unique and important. There may not be a similar opportunity in the future if the SGP is not built and operated. If this occurs, the lost opportunity costs would be enormous and the *status quo* environmental problems would adversely affect water quality, fish habitat, and ultimately people and communities for many years.

As described in Section 4.21.2.2 of the SDEIS, Perpetua is proposing to invest \$1.1 billion to construct the SGP. It does not appear that there are any other companies, communities, Tribes, conservation groups, or ENGOs that are ready to make this extraordinary investment to restore the Stibnite Mine site. It is thus obvious that the most certain path to cleaning up the Stibnite Mine site is for the Forest Service to publish a Final EIS and issue a Record of Decision (ROD) to approve the SGP as soon as possible.

In evaluating the MMP, the Forest Service must carefully consider whether Congress is likely to appropriate the money necessary to remediate the Stibnite Mine site. In the past, the Forest Service and other federal agencies conducted some very limited remediation activities at the Stibnite Mine that consisted of partial remedies that were ineffective in stemming the flow of contaminants that continue to leach from this site.

According to the November 8, 2021 letter from the Intermountain Region Regional Forester, Mary Farnsworth, to Idaho Congressmen Russ Fulcher and Mike Simpson, the Forest Service spent \$5.2 million to remediate the Stibnite mine site between 1992 and 2013. The whopping difference between \$5.2 million and \$1.1 billion suggests that it is highly unlikely that Congress will appropriate the funds necessary to enable the Forest Service to perform a meaningful cleanup at Stibnite. Without Perpetua's proposed investment of \$1.1 billion to redevelop and remediate this site, the Stibnite Mine area will continue to create

serious environmental and ecological problems in the Payette and Boise National Forests for the foreseeable future.

Antimony from the SGP is Uniquely Suited to Meet the U.S. Military's Needs

In its December 19, 2022 announcement of the \$24.8 million Title III Defense Production Act (DPA) award to Perpetua to help complete the NEPA process⁴, the Department of Defense said the SGP contains “the sole domestic geologic reserve of antimony that can meet Department of Defense (DoD) requirements⁵.” The DoD announcement includes other statements that underscore the national security importance of this project:

“This investment is essential to ensure the timely development of a domestic source of antimony trisulfide for the manufacture of small arms and medium caliber cartridges, as well as many other missile and munition items.”

“This action reinforces the Administration’s goals to increase the resilience of our critical mineral supply chains while deterring adversarial aggression.”

The DoD award reflects the vulnerable status of the country’s antimony supply chain and our risky reliance on China and other foreign countries for much of the antimony the military needs to manufacture the “small arms and medium caliber cartridges,...missile and munitions items” that are clearly needed for national defense. According to the U.S. Geological Survey’s 2022 Minerals Commodity Summaries, the U.S. imports 84 percent of the antimony we use. Over half of this antimony was imported from China⁶. DoD’s Title III DPA award to support the SGP suggests that the U.S. military is concerned that the country’s substantial antimony import reliance creates an untenable situation for the U.S. military and a significant threat to national security.

Conclusions

The following are some of the compelling reasons why the Forest Service needs to expedite the completion of the remainder of the NEPA process and approve the SGP as early as possible in 2023:

- It is highly unlikely that Congress would appropriate the \$1.1 billion for the Forest Service or other federal agencies to clean up this site. Additionally, there are no other identified alternative sources of funding. Therefore, the Forest Service needs to capitalize on Perpetua’s unique proposal to invest \$1.1 billion to significantly improve the environment and ecological conditions at the Stibnite Mine area;
- Production from the SGP would generate revenue that could be used in the future to help fund a comprehensive, site-wide remediation pursuant to Phases 2 and 3 of the ASAOC;
- The SGP will create thousands of jobs for the life of the mine, bring economic prosperity and diversification to central Idaho, and pay local, state, and federal taxes;

⁴ The DoD’s announcement specifies the award is to help Perpetua “complete environmental and engineering studies necessary to obtain a Final Environmental Impact Statement, a Final Record of Decision, and other ancillary permits.”

⁵<https://www.defense.gov/News/Releases/Release/Article/3249350/dod-issues-248m-critical-minerals-award-to-perpetua-resources/>
<https://pubs.er.usgs.gov/publication/mcs2022>

- Approving the MMP for the SGP will provide the Payette and Boise National Forests with an important opportunity to restore this blighted area and improve the overall health of these National Forest System lands, consistent with the Agency’s core mission “to sustain the health, diversity, and productivity of the nation’s forests and grasslands to meet the needs of present and future generations⁷;
- The U.S. military has an urgent need for the antimony from the SGP to strengthen the country’s antimony supply chain to address national security concerns; and
- The Stibnite antimony deposit is the only known source of antimony that can satisfy the military’s technical specifications for manufacturing specific weaponry.

Any one of these factors alone should be reason enough for the Forest Service to expedite issuance of the ROD approving the SGP. It would be absurd for the Forest Service to turn down Perpetua’s redevelopment and restoration proposal for the SGP and allow this legacy site to remain a long-term source of contamination. Delaying the ROD should not be an option either because the military has national security demands for the antimony from Stibnite now, and there are no valid reasons to prolong the environmental and ecological problems at Stibnite.

For these reasons, AMA urges the Forest Service to issue a ROD in 2023 approving the Burntlog Route Alternative (the Agency Preferred Alternative identified in the SDEIS). The Forest Service has analyzed an enormous amount of environmental baseline data and has performed a thorough evaluation of the proposed SGP. The massive amount of information in the DEIS, SDEIS, and associated Specialists Reports provide the Forest Service with a very strong foundation for authorizing the SGP that clearly satisfies the NEPA requirement to take a hard look at the environmental impacts associated with a proposed project.

Thank you for this opportunity to submit these comments on the SDEIS. Please do not hesitate to contact me if you have any questions.

Sincerely,



Deantha Skibinski
Executive Director

⁷ <https://www.fs.usda.gov/about-agency/meet-forest-service>