



United States Department of the Interior

OFFICE OF THE SECRETARY
Office of Environmental Policy and Compliance
1011 E. Tudor Rd
Anchorage, Alaska 99503

VIA ELECTRONIC MAIL, NO HARD COPY TO FOLLOW

9043.1
ER 20/0464
PEP/ANC

January 4, 2020

Mr. Matthew Reece
U.S. Forest Service
Minerals Program Manager, Juneau Ranger District
8510 Mendenhall Loop Road
Juneau, Alaska 99801

Subject: Draft Supplemental Environmental Impact Statement, Plan of Operations,
Amendment 1 for the Kensington Gold Mine

Dear Mr. Reece:

The U.S. Department of the Interior (DOI) has reviewed the U.S. Forest Service's (USFS) request for comments related to the Draft Supplemental Environmental Impact Statement (SEIS) for the proposed expansion of Kensington Gold Mine, located north of Juneau, Alaska, in the Tongass National Forest. Our comments and recommendations are provided in accordance with the National Environmental Policy Act, Endangered Species Act (ESA), Marine Mammal Protection Act, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, Fish and Wildlife Coordination Act, and Alaska National Interest Lands Conservation Act.

The Proposed Action includes the following modifications to ultimately extend the life of the mine for a minimum of 10 years:

- Increasing the tailings storage by raising the dam at the existing Tailings Treatment Facility (TTF) and constructing a Back Dam between the TTF and Upper Slate Lake
- Relocating the seepage collection sumps, access road, power line, pipelines, and stormwater diversion channels at the TTF
- Expanding the size of existing Kensington, Pit #4, and Comet Waste Rock Storage (WRS)
- Constructing a new WRS (Pipeline Road)
- Relocating the water treatment plants at the TTF
- Constructing two deltas, rerouting Fat Rat Creek into South Creek, and replacing culverts for fish passage; delta construction will also require temporary roads for access
- Increasing the mill throughput rate from 2,000 to 3,000 tons per day

The DOI's U.S. Fish and Wildlife Service (USFWS) is participating as a cooperating agency in preparation of the SEIS. We appreciate the USFS's coordination with the USFWS.

The DOI recommends the USFS's Final SEIS fully evaluate potential effects of all aspects of the project on marine mammals, resident and anadromous fish, species listed under the ESA, and migratory birds, including bald and golden eagles. Effects on both fish and wildlife populations and habitat should be evaluated. Specific recommendations are provided in the enclosure, USFWS Comments on the Kensington Mine SEIS.

Thank you for the opportunity to comment. For questions regarding these recommendations, please contact Ms. Sarah Markegard at the USFWS Anchorage Fish and Wildlife Conservation Office at 907-271-2440 or sarah_markegard@fws.gov.

Sincerely,

A handwritten signature in blue ink that reads "Philip C. Johnson". The signature is fluid and cursive, with a long horizontal flourish at the end.

Philip Johnson
Regional Environmental Officer – Alaska

Enclosure

Enclosure. U.S. Fish and Wildlife Service Comments on the Kensington Mine SEIS

The following is a summary of issues of concern to the U.S. Fish and Wildlife Service (USFWS) that we recommend the U.S. Forest Service address in the Final Supplemental Environmental Impact Statement (SEIS). This is not an exhaustive list that identifies every issue for inclusion; rather, it is a list of issues which the USFWS believes other cooperating agencies or members of the public may not have identified or which deserve specific emphasis, either because of our responsibilities under Federal law or the importance to fish, wildlife, and their habitat. Our comments begin with general recommendations, followed by issues related to specific components of the project (e.g., contaminants, climate change, mountain goats), and finally with a comparison of the alternatives.

General Recommendations

1. To minimize project effects on migratory birds, we recommend incorporation of vegetation clearing timing windows (<https://www.fws.gov/alaska/pages/nesting-birds-timing-recommendations-avoid-land-disturbance-vegetation-clearing>). To the maximum extent possible, we recommend avoiding construction activities that may displace birds after they have laid their eggs and before the young have fledged.
2. Construction and operational lighting should be evaluated in the SEIS to ensure it does not unnecessarily overlap with native bird breeding seasons. Specific recommendations include use of down-shielding, directional lighting, and/or low intensity lighting to avoid light trespass into bird habitat. Avoiding installation of lights offshore or within 0.5 mile of the coast will also help reduce impact to migratory birds.
3. Eagle take permits may be necessary for activities that result in removal of nests, loss of habitat, and disturbance of birds during construction, operation, and maintenance of the project (https://www.fws.gov/r7/eaglepermit/bg_eagle_protection_act.htm).
4. Where practicable, we recommend concentrating construction activities, infrastructure, and man-made structures (e.g., roads, parking lots, and staging areas) to minimize the project's footprint and its impact on habitat. Locate construction activities and infrastructure in cultivated, fragmented, or degraded habitats rather than relatively intact areas. Avoid fragmenting large, contiguous tracts of habitat, especially if habitat cannot be fully restored after construction, to facilitate movement and dispersal of wildlife. The Final SEIS should discuss in more detail the effects of relocated and new transportation corridors (e.g., access roads) on fish and wildlife, including changes in wildlife movement or migration patterns.
5. The USFWS recommends that the Final SEIS analyze the effects of relocating pipelines on fish, wildlife, and their habitats including stream crossings, bisected wildlife migratory routes, and disturbance to fish and wildlife from pipeline inspection and maintenance activities and increased human accessibility.
6. Riparian zone developmental setbacks of at least 50 feet should be utilized to maintain water quality, filter contaminants, provide invertebrate and vegetative inputs, and promote vegetative bank stabilization.

7. The use of pelletized Styrofoam insulation for instream work, including culvert installation, should be avoided to prevent pellets creating an ingestion hazard for fish, mammals, and birds. Use appropriate screened intake for water withdrawals to prevent suction entrapment and entrainment injury to small and juvenile fish present in the area of the withdrawal. To prevent bank erosion and maintain natural stream velocities, bank stabilization and/or restoration practices should follow bioengineering techniques to the maximum extent practicable (e.g., root wads and bundled water tolerant willows). The use of riprap (discussed on page 2-11 of the draft SEIS) should be avoided if possible.

Contaminants

1. Contaminants analysis in the Final SEIS should discuss potential mine-related impacts to aquatic organisms important to the food chain and ecosystem functioning. Contaminants may impact birds indirectly through their food sources or directly through contact with toxic pit or tailings facility water or spills. Contact with contaminants could also affect egg laying and nesting success.
2. The USFWS recommends that the Final SEIS quantify the potential amount of annual fugitive mercury emissions from the tailings and other project areas during the mine operation. The analysis should determine the quantity of mercury potentially released and model the deposition zone in which the mercury would settle to area lands and waters. Potential impacts on fish, wildlife, and people should be described. Northern wetlands are hotspots for converting mercury into toxic methyl mercury, and bird species occurring in the area may be prone to toxic mercury exposures through methylation and biomagnification of mercury in wetland systems. Even small to modest increases in mercury in the area from the mine could potentially increase mercury exposures in birds to levels which reduce survival and reproductive success.
3. Water treatment below the Tailings Treatment Facility (TTF) should remain operational until at least 10 years post closure as acid mine drainage takes time to develop. Depending on the success of capping/closure, and how wet or dry the following decade is, it may be difficult to detect whether seepage will occur.
4. The tailings slurry pipe and all other pipes should be removed at closure, as they can continue to alter hydrology for decades and move contaminated water to fish bearing streams.

Mountain Goats

1. White and Gregovich (2017) found that mountain goats avoided winter range habitats within 1.1 miles of the Kensington Mine and that the mine has subsequently reduced the functional winter range carrying capacity of the area by 42 percent. As a result, mine-related disturbance may have indirectly exacerbated the effects of severe winters in the local mountain goat population and contributed to the observed population decline. Therefore, continuing operation of the mine for an additional 10 years beyond the currently permitted lifespan could result in a continuing decline in local mountain goat populations in the area. Coeur Alaska is currently required to minimize disturbances to mountain goats via minimization measures (e.g., helicopter buffers and avoidance of overwintering and kidding habitats), and the Draft SEIS states that results from previous

studies “will continue to be evaluated to determine if continued monitoring is necessary.” The USFWS recommends the following, should the mine continue to operate for an additional 10 years:

- a. Detailed efforts should be made to link temporal and site-specific disturbance factors (e.g., helicopter overflights, blasting, heavy equipment, or mill site machinery operation) to mountain goat movement patterns and habitat selection.
- b. Demographic changes and other potential effects from mining activity should be closely monitored (e.g., using GPS location data) at least throughout the life of the mine.
- c. Impacts from variable environmental conditions (e.g., increased snowfall, severe winter events) should be integrated into monitoring efforts and management plans (e.g., White and Gregovich 2017, White et al. 2012).

Climate Change

1. The USFWS recommends the Final SEIS evaluate potential climate change impacts on the project (i.e., water management, revegetation, reclamation, and long-term or perpetual water treatment) and adaptive management in response to changing temperature and precipitation regimes. We recommend the Final SEIS include analyses of climate change-induced effects on precipitation, snowpack, and stream flows. Analyses should consider changes in the hydrologic regime of the Slate, Sherman, and Johnson Creek drainages on water management and treatment.
2. Mercury inputs and methylation rates in Alaska rivers are expected to increase with climate change (Schuster et al. 2011). While project related levels of mercury input may or may not have significant effects when considered alone, we recommend evaluating both permitted and accidental inputs of additional mercury in the context of the existing environment.

Mitigation

1. While on-site mitigation for loss of wetlands or spawning habitat is ideal, it is not always the environmentally preferred or practical alternative. Given the scope of the proposed expansion, purchasing off-site mitigation credits through in-lieu fees or from a mitigation bank may be an option for complying with Federal statutes protecting these habitats.

Comparison of Alternatives

The USFWS recommends selection of the alternative that will result in the least amount of impact to wildlife and habitat within the project footprint. Based on the information included in the Draft SEIS, the USFWS has concluded that the No Action Alternative has the potential for the least adverse effects, and the Proposed Action Alternative has the potential for the greatest adverse effects on the local environment. The USFWS expects the Filtered Tailings Facility (FTF) Alternative to have a reduced impact on important fish habitat, marine resources, and water quality when compared with the other action alternatives. In comparison, the TTF Closure with Reduced Water Alternative (hereafter referred to as the Reduced Water Alternative) is anticipated to result in fewer impacts to wetland and productive old-growth forest (POG)

resources than the other action alternatives. The USFWS expects that the potential impacts to aquatic communities from either the Proposed Action Alternative or the Reduced Water Alternative will be of greater magnitude than the potential impacts to wetland and forest communities from the FTF Alternative. We offer the following additional details regarding our analysis of the alternatives:

- The proposed Stage 4 Dam would be 124-feet high and create a potential risk of breaching and releasing tailings into Berners Bay; such a release could depress eulachon and herring spawning and decrease food for the species that depend on them. Eulachon only spawn in eight estuaries in Southeast Alaska, so impacts to one spawning location would be a significant impact to the species. Additionally, a dam failure could damage or destroy salmon habitat in Slate Creek. Tailings dam failures have become more frequent worldwide (Armstrong et al. 2019) and regionally (e.g., Mount Polley). There also is potential for a catastrophic event (e.g., rockslide, avalanche, earthquake) to damage a significant amount of important fish habitat. The FTF and No Action Alternatives are the least likely to result in a breach of the TTF dam and subsequent downstream impacts, as no additional water and tailings will be placed behind the dam under either of these alternatives. The likelihood of dam failure would also be reduced under the Reduced Water Alternative because there would be no water directly adjacent to the dam.
- No additional impacts to water quality will occur under the No Action Alternative. Of the action alternatives, the FTF Alternative is least likely to result in additional contamination of the Slate Creek watershed.
- The Draft SEIS states that the expansion of the TTF under the Proposed Action Alternative would result in a loss of 15.9 acres of moderately functioning wetland habitat and 5.5 acres of highly functioning wetland habitat, whereas the FTF Alternative and the Reduced Water Alternative are expected to result in the loss of only 5.4 and 0.6 acres of low to moderately functioning wetland habitat, respectively.
- Given the difficulty of restoring POG following disturbance, the USFWS recommends choosing an alternative that involves minimal impacts to POG. Under the Proposed Action, approximately 131 acres of POG would be affected. The FTF Alternative would affect 98 acres of POG, and the Reduced Water Alternative would affect approximately 79 acres of POG.
- Under the Proposed Action, the water level of the TTF would intersect Upper Slate Lake, inundating 39 acres of native soils, 12 acres of native lake bottom, and the lower portions of three known fish-bearing tributaries. Some stream habitat would also be covered, likely reducing rearing habitat for Dolly Varden as well as potentially impacting downstream drifting food sources. In contrast, the FTF Alternative is expected to result in impacts to freshwater habitat similar to the No Action Alternative, except in the region of the new disturbance footprint for the FTF. Although new deltas would be constructed and Fat Rat Creek would be diverted to augment lost spawning and rearing habitat under the Proposed Action, the No Action and FTF Alternatives are the least impactful to important spawning areas in the lake complex area.
- Adverse impacts to the local population of mountain goats from mine operations will continue to occur under all action alternatives. The No Action Alternative is the only one

that will halt disturbance and ongoing declines caused by mine operations. Additionally, under all action alternatives, waste rock storage sites will be expanded, resulting in additional losses of forest and wetland habitat; under the No Action Alternative, no additional habitat will be lost due to expanded waste rock storage operations.

Literature Cited

- Armstrong, M., R. Petter, and C. Petter. 2019. Why have so many tailings dams failed in recent years? *Resources Policy*, Vol. 63, October 2019.
<https://doi.org/10.1016/j.resourpol.2019.101412>.
- Schuster P.F., R.G. Striegl, G.R. Aiken, D.P. Krabbenhoft, J.F. Dewild, K. Butler, B. Kamark, and M. Dornblaser. 2011. Mercury export from the Yukon River Basin and potential response to a changing climate. *Environmental Science & Technology* 45(21):9262-9267.
- White, K.S., and D.P. Gregovich. 2017. Mountain goat resource selection and habitat use in relation to mining related disturbance. *Wildlife Biology*, Vol. 2017(4).
<https://bioone.org/journals/wildlife-biology/volume-2017/issue-4/wlb.00277/Mountain-goat-resource-selection-in-relation-to-mining-related-disturbance/10.2981/wlb.00277.full>
- White, K. S., D.P. Gregovich, G.W. Pendleton, N.L. Barten, R. Scott, A. Crupi, and D.N. Larsen. 2012. Mountain goat population ecology and habitat use along the Juneau Access road corridor, Alaska: Wildlife Research Final Report. Alaska Dept of Fish and Game, Juneau, AK.