United States Department of the Interior

U.S. FISH AND WILDLIFE SERVICE
Northern Alaska Fish and Wildlife Field Office
101 12th Avenue, Room 110
Fairbanks, Alaska 99701
May 17, 2024

VIA ELECTRONIC MAIL, NO HARD COPY TO FOLLOW

Kinney Engineering, LLC
Attn: Phoebe Bredlie, P.E (comments@akrichsteese.com)
100 Cushman St, Ste 311
Fairbanks, AK 99701

Re: Draft Alaska, Richardson, Steese Highways Corridor Action Plan

Dear Ms. Bredlie:

The U.S. Fish and Wildlife Service (Service) has reviewed the Draft Alaska Richardson Steese (ARS) Highways Corridor Action Plan which analyzes the impacts and potential implications of the proposed Mahn Choh ore haul operations to public resources along the 247-mile ARS route. The Department of Transportation and Public Facilities (ADOT&PF) plan includes upgrades between Tok in the south near the Tetlin National Wildlife Refuge, and Kinross Fort Knox Gold mine at the northern terminus. Ore haul operations are expected to begin in 2024 and continue year-round for four to five years. As proposed, the ore haul will make approximately 60 roundtrips daily using purpose-built trucks on a route that includes segments of State-maintained roads, specifically segments of the Alaska, Richardson, and Steese Highways. We would like to offer comments about this draft plan because the increased highway use, and the specific way in which the ore haul will be carried out, will likely have effects to the health and sustainability of the Service's trust resources.

Potentially Affected Fish and Wildlife Trust Resources: The Service's trust resources are natural resources we are entrusted to protect for the benefit of the American people. Within the proposed project area these resources include species listed as threatened or endangered under the Endangered Species Act (ESA), migratory birds including bald and golden eagles, inter-jurisdictional fish, wetland and upland habitats used by these species, and lands managed by the Service (e.g., national wildlife refuges).

Comments and Recommendations: We appreciate the opportunity to share with you the potential for effects of the proposed project's impacts on fish and wildlife, mainly through potential to cause negative impacts to their habitats. In some cases, these impacts can be mitigated to an extent, and in some cases they cannot. The following trust resources are those we see as having the potential to be most affected by the actions described in this draft plan.

Toxicant Loading and Trust Species Habitats:

Fugitive Dust: We understand that mitigation for fugitive dust is in place (covered vehicle loads), and we appreciate the effort to minimize escapement of ore minerals along the route. However, unless the loads are sealed in transit there will always be a portion of dust escapement, and there is the likelihood of ore contamination into the environment during highway vehicle accidents. For example, studies by Neitlich et al. (2017) and Hasselbach et al. (2005) show that even with using minimization measures at the Red Dog mine (e.g., hydraulically sealed lids, truck rinsing procedures), ore concentrates can escape during transportation and were found in measurable concentrations up to 2.5 miles from the haul route and sometimes much farther. The Service is concerned ore concentrates can introduce hazardous compounds into the surrounding environment proximate to and beyond the 247-mile route. Fugitive dust from any source has documented impacts on vegetation, permafrost, surface waters and waterfowl (Auerbach et al. 1997) (Walker & Everett 1987; Walker et al. 2022; Myers-Smith et al. 2006; McGanahan and Poling 2021) within a predictable deposition area of up to 328 feet (100 meters) from the haul route road.[1]

Arsenic and acid leaching minerals management: Four Environmental Information Documents from various consultants to Peak Gold, LLC.[2] describe arsenic and acid-forming sulfides (Illig 2015) in the ore body of both Mahn Choh mine pits. At the mine site, mitigation measures are in place to prevent dust from reaching surface and ground waters; but as small amounts of ore dust containing acid-forming minerals and arsenic accumulate along the route over the 60 round trips per day for five years there is no mitigation planned for preventing this dust reaching adjacent plants, soils and waters including wetlands and stream crossing. Sulfides in ore dust can acidify upon exposure to air and can be leached into surface water through rain and snowmelt; these and arsenic can could substantially alter water chemistry, degrade aquatic habitat and affect the health of fish and invertebrate populations. These potential effects are long-term and difficult to mitigate after they occur.

Tire contaminants 6PPD and 6PPD-quinone: In March 2023, the Environmental Protection Agency held an informational webinar with the Alaska DOT&PF to share recent scientific findings linking the compounds 6PPD and 6PPD-quinone to salmon die-offs in anadromous tributaries of the Puget Sound (Williams and Bristol 2023). 6PPD and 6PPD-quinone are components of truck and car tires; a large body of research points to their ubiquitousness in roadside waterways with heavy traffic and to their toxicity to fish, especially salmonids. The compounds cause spawning and juvenile salmonid mortality, especially in Coho salmon, and were pinpointed as the cause of mass die-offs of fish following stormwater events in the Puget Sound (Scholz et al. 2011). Notable symptoms upon contact with these chemicals included

[1] Ambler Road DEIS Vol 1. Page 3-41; and Vol 3. Appendix L

[2] Reports prepared for Peak Gold, LLC. include Piteau Associates. 2021. Manh Choh Project Hydrogeological Characterization and Groundwater Modeling Summary Report; Piteau Associates. 2021. Manh Choh Project Water Management Plan; SRK Consulting. 2021. Manh Choh Project. Waste Rock Management Plan; SRK Consulting. 2021. Manh Choh Project Reclamation and Closure Plan.

disorientation, swimming on side, gasping, and pre-spawn mortality (Chow et al. 2019). Toxicity affects all life stages of salmonids, including alevin, juveniles, adults, and spawners.

As proposed, the ore haul will make approximately 60 roundtrips daily utilizing purpose-built trucks which each have double trailers with twelve sets of trailer tires and four sets of truck tires plus two front tires for a total of 32 tires per truck. The resulting tire dust deposition, containing 6PPD and 6PPD-quinone, will increase by 1,920 tires per day. Over five years this would result in over 3.5 million additional tire dust deposition incidents over current levels. Recent literature has also shown that mortality can be prevented by infiltrating road runoff through soil media containing organic matter, which removes 6PPD-quinone (Fardel et al. 2020; Spromberg et al. 2016; McIntyre et al. 2015). Research and corresponding adaptive management surrounding 6PPD is rapidly evolving, but the Service highly suggests using mitigative measures to avoid the toxic effects of increased 6PPD and 6PPD-quinone concentrations along the haul route from ore haul activities, including but not necessarily limited to employing filtration systems for road runoff where roads intersect with wetlands or surface waters, including streams.

Fish: The Service has major concerns that interjurisdictional fish along the haul route will be negatively affected by the accumulated ore dust load and potential spills of ore along the route. Interjurisdictional fish species include subsistence species which are of major importance to Alaskans and include multiple salmon species and whitefish. Those fisheries within the dust shadow along the haul route would be subject to contaminants from fugitive dust.

Humpback Whitefish (*Coregonus pidschian*) is the major species targeted in subsistence fisheries in and adjacent to the Tetlin National Wildlife Refuge in the upper Tanana River drainage (Native Village of Tetlin, 2020). Whitefish are harvested throughout the summer, and average household harvests were between 170 and 258 kg/year (Case 1986, Halpin 1987). Tetlin and Northway residents depend on their white fish catch (and moose harvest) to fill freezers for winter (Native Village of Tetlin, 2020). Whitefish are caught from the Tetlin River during migrations in and out of Tetlin Lake (Halpin 1987), and on the Tetlin River upstream of Tetlin Lake (Halpin 1987). Brown (2006) described the migrations of humpback whitefish to spawning areas in braided regions of the lower Nabesna River and the Chisana River near the mouth of Scottie Creek, and subsequent migrations downstream into the Tanana River and then for many, up the Tetlin River to overwintering habitat in Tetlin Lake. These locations can all be affected by ore dust, tire dust, and fuel or ore spills along the haul route.

The Tanana River is also a major producer of salmonids, many of which are in decline and are controlled by international treaty. In particular, the Salcha and Chena Rivers are major spawning and rearing habitats for Chinook salmon (Brown et al. 2017) which are in precipitous decline in the overall Yukon River watershed and whose populations are subject to compliance by the Yukon River Agreement, an annex to the 1985 Pacific Salmon Treaty between the United States and Canada. The seriousness of decline of this population of interjurisdictional fish was again highlighted by the State of Alaska in 2024 when it signed additional international agreements with Fisheries and Oceans Canada for Yukon River Chinook recovery. While the negative impacts of increased ore dust load and contaminants to the Chena and Salcha Rivers via their feeder tributaries and connected wetlands are of great concern due to the high productivity of these rivers, there are many documented crossings of anadromous fish bearing streams in the

pathway of the route (Table 1), and additional likely but undocumented anadromous streams along and downstream of the haul route.

Table 1. The Alaska Department of Fish and Game (Alaska Department of Fish and Game 2022) has documented nineteen streams along the route with known presence of Chinook (k), Coho (CO), Chum (Ch), and Sockeye (S) salmon using the waterbody for rearing (r), spawning (s) or simply being present (p).

River	Anadromous Waters Catalog	Species/Use
Chena River	334-40-11000-2490-3301	CHp,Kp
Little Salcha River	334-40-11000-2490-3325	CHp
Tanana River	334-40-11000-2490	CHp,COp,Kp,Sp
Salcha River	334-40-11000-2490-3329	CHs,Ksr
Piledriver Slough	334-40-11000-2490-3315	CHs
Moose Creek	334-40-11000-2490-3315-4009	CHp,COp,Kp,Sp
Tenderfoot Creek	334-40-11000-2490-3373	COr
Shaw Creek	334-40-11000-2490-3375	CHp,COp,Kp
Tanana River	334-40-11000-2490	CHp,COp,Kp,Sp
Unnamed Creek	334-40-11000-2490-3382	COsr
Delta River	334-40-11000-2490-3390	CHs,COsr
Tanana River	334-40-11000-2490	CHp,COp,Kp,Sp
Unnamed Creek	334-40-11000-2490-3376	COs
Unnamed Creek	334-40-11000-2490-3378	CHs,COr
Blue Creek	334-40-11000-2490-3398	CHs,COsr
Johnson Slough	334-40-11000-2490-3440	CHp
Tanana River	334-40-11000-2490	CHp,COp,Kp,Sp
Johnson River	334-40-11000-2490-3438	COp
Tok River	334-40-11000-2490-3660	COp

Wetlands: As mentioned above, the haul route intersects with hundreds of acres of wetlands, each of which contribute water to the main stem or tributaries of the Tanana River through surface and shallow groundwater. Wetlands along this route act as a filtration and capture system to streams and rivers, intercepting and accumulating contaminants generated by all roadway activities. As such, they are bioaccumulating systems, and over time those in proximity to ore haul activities will contain higher levels of captured chemicals than similar wetlands outside of the area of potential affects described in the Action Plan. This is of concern to the Service because wetlands are also heavily used habitats for trust species during parts of their lifecycles (e.g., salmonids for spawning and rearing, migratory birds for rest and refueling) or for their entire lifecycle (e.g., bald eagles and other raptors inhabiting floodplains). Higher levels of toxicants accumulated in wetlands adjacent to the route may cause decreased habitat quality for wildlife, which can affect populations.

Threatened and Endangered Species:
The purpose of the Endangered Species Act (ESA) is to conserve threatened and endangered species and the ecosystems upon which they depend. Projects that may affect listed species and/or designated critical habitat must be evaluated under section 7(a)(2) of the ESA to ensure Federal agencies authorizing, funding, and/or conducting projects (i.e., a federal nexus) are not likely to jeopardize the

continued existence of any listed species or result in the destruction or adverse modification of designated critical habitat. A list of species potentially affected can be found on the Information for Planning and Consultation (IPaC) tool at https://ecos.fws.gov/ipac/. In this case, one ESA-listed species, the wood bison (*Bison bison athabascae*) may occur within the project area but are listed as a Nonessential Experimental Population under section 10(j) of the ESA.[1] It does not have a designated critical habitat, and no consultation is necessary at the present. For additional information or guidance regarding ESA listed species, we recommend contacting the Northern Alaska Fish and Wildlife Field Office, Consultation Branch at 907-456-0277.

Invasive Species: Transporting invasive species seeds (such as bird vetch, white sweet clover, and bird cherry) which are common along the Fairbanks and North Pole haul route to more weed-free portions of the route in the south is a concern for the Service. Seeds are transported in residual soils of the undercarriage and tire treads of transport vehicles. While non-haul truck traffic along the route also transports seeds from the same sources to the same pristine areas, the increased traffic and number of wheels represented by each truck exponentiates the likelihood of invasive species spread beyond the existing levels. The Service recommends implementing the following best management practices for minimizing the introduction and proliferation of damaging invasive species: thoroughly washing equipment before entering the jobsite to remove dirt and debris that might harbor invasive seeds; using weed-free fill[2] and certified weed-free erosion control materials; appropriately disposing of spoil and vegetation contaminated with invasive species; and revegetating the area with local native plant species. To assist on-the-ground operators in understanding their role in preventing and controlling the introduction and spread of invasive species, we recommend project operators review a free, self-paced training course on invasive species control, which can be found at http://weedcontrol.open.uaf.edu.

Migratory Birds: About half the haul route is within the Upper Tanana Valley Important Bird Area flyway, designated by the International Audubon Society in Partnership with Cornell University.[3] The importance of the flyway as a migration corridor for birds that travel to and from Alaska and western Siberia to breed each year is widely recognized. Hundreds of thousands of migratory birds including swans, geese, ducks, cranes, and raptors pass through the valley each spring and fall. More than 3/4 of the entire mid-continental population of Lesser Sandhill Cranes pass through the and over the haul route annually in addition to thousands of swans.[4] Recent state-wide late-summer surveys located nearly 10% of North American Trumpeter Swan population within the flyway area. Wetlands and open water along the haul route provide crucial habitats to these birds for rest, refueling and refuge on their migratory pathway. The Service is concerned that the effects of chemicals deposited by dust and tires will have cumulative negative effects to the bird populations who rely upon these habitats.

Conclusion: We appreciate this opportunity for comment, and we would welcome a discussion regarding our comments and recommendations. Our comments are based on the information provided in this scoping request. Should the project plans change, we would appreciate an

[1] https://ipac.ecosphere.fws.gov/location/VCS5L7PGOVAONC5IQHKHUCT4YE/resources
[2] https://dnr.alaska.gov/ag/akpmc/pdf/WeedFreeGravel.pdf
[3] https://gis.audubon.org/portal/apps/sites/?_gl=1*jsbgdb*_ga*MTc0Nzg4Nzg2OS4xNzAwNTEzMDkz*_ga_X2XNL2MWTT*MTcxNDc2NTk0NS43LjAuMTcxNDc2NTk0NS42MC4wLjA.#/nas-hub-site/pages/iba-overlays
[4] https://netapp.audubon.org/iba/Reports/2967

opportunity to review the changes. Please contact Amy Tippery at 907-456-0558 or amy.tippery@fws.gov should you have any questions concerning these comments.

Sincerely,

NEESHA STELLRECHT
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Neesha Stellrecht
Field Office Supervisor, Northern Alaska Fish and Wildlife Field Office

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Citations

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