UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
ALASKA OPERATIONS OFFICE
Room 537, Federal Building
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Anchorage, AK 99513-7588

November 15, 2010

Colonel Reinhard W. Koenig
District Engineer, Alaska District
P.O. Box 6898
Elmendorf AFB, Alaska 99506-0898

RE: Public Notice POA-2008-53, Tanana River, Alaska Railroad Corporation

Dear Colonel Koenig:

This letter responds to the U.S. Army Corps of Engineers (USACE) Alaska District's September 15, 2010, Public Notice (PN) for a proposal by the Alaska Railroad Corporation (ARRC) to construct Phase I of an approximately 80-mile-long railway extension from Fairbanks to Delta Junction, Alaska. The project would include the following eight (8) components, as identified in the PN:

- Tom Bear Trail access road and bridge over Piledriver Slough,
- Northeast rail embankment and construction staging area,
- A 100-acre material source site within the active channel of the Tanana River,
- A 3,300-foot long bridge across the Tanana River,
- An 11,065-foot long levee along the east bank of the Tanana River,
- A southwest access road and rail embankment with two separate bridges each,
- Southwest spur dike embankment protection, and
- Ancillary support facilities including a guard shack, gate, and utilities.

The project site is located within Sections 13, 14, 23, 24, and 26, T. 4 S., R. 3 E., and Sections 18, 19, and 30 of T. 4 S., R. 4. E., Fairbanks Meridian; USGS Quad Map Fairbanks C-1; Latitude 64.5591° N., Longitude -147.0716°W.; near Salcha, Alaska.

The precise acreage of waters of the U.S., including wetlands, to be impacted by the footprint of the proposed project is unclear, due to a discrepancy in the figures provided. The PN (see Proposed Work) indicates there would be 145.5 acres of permanent and 21.5 acres of temporary impacts, whereas the applicant's Table of Wetland Impacts states there would be 58 acres of permanent and 109.1 acres of temporary impacts.

On October 7, 2010, EPA requested a 30-day extension of time, in order to allow EPA additional time to review additional information on the proposed project. On October 14, 2010, your office granted this extension. We appreciate your consideration in this matter.

Based on our assessment of this project, it is EPA's conclusion that the proposed project does not comply with the Clean Water Act (CWA) Section 404 (b)(1) Guidelines (Guidelines), and that the USACE should deny issuance of the permit for the proposed project by the applicant. We believe the Tanana River to be an Aquatic Resource of National Importance (ARNI) according to the criteria identified in the August 11, 1992 Memorandum of Agreement (MOA) between our agencies regarding Section 404(q) of the CWA, 33 U.S.C. 1344(q) (404(q) MOA). In our opinion, the proposed project may have substantial and unacceptable impacts to the Tanana River, and we are therefore providing, by this letter, notice pursuant to Part IV, Paragraph 3(a) of the 404(q) MOA.

Aquatic Resource of National Importance (ARNI)

The Tanana River is the second largest tributary basin to the Yukon River and drains approximately 45,000 square miles (ADF&G, 2010). From its headwaters in the Alaska Range, the Tanana River flows 590 river miles to the Yukon River, where it accounts for a 37% increase in the streamflow of the Yukon (Brabets and Schuster, 2008). The Tanana River produces approximately 25% of the Yukon River Chinook salmon, a stock of international importance for commercial, subsistence and sport fisheries in Alaska and Canada (Eiler et al., 2006). With numbers declining since 1998, no commercial Chinook salmon fishery was allowed on the Yukon River in 2009, and in January of 2010, a commercial fishery failure was declared for Chinook salmon due to low returns (Howard et al., 2009; U.S. Dept. of Commerce, 2010).

The Tanana River supports eighteen (18) species of fish, three (3) anadromous, and fifteen (15) resident species (ADF&G, 2010; Johnson and Blanche, 2010). A recent study by the University of Alaska Fairbanks found that the Tanana River is a major spawning area for whitefish (Rozell, 2010). The U.S. Fish & Wildlife Service has indicated whitefish may travel over 1,000 miles from the mouth of the Yukon to spawn in the Tanana River. Whitefish are an important subsistence food for rural Alaskans. Subsistence continues in the present day to be the most valued source of both nutrition and cultural identity for residents of Dot Lake, Tanacross, Tok, Tetlin and Northway (Marcotte, 1991; Martin, 1983). Subsistence harvest comprises a substantial portion of village residents' diets, with most of the harvest consisting of moose, four different species of whitefish, and waterfowl (Marcotte, 1991; Martin, 1983; Andersen and Jennings, 2001).

The Tanana River and its adjacent lands provide residents and tourists with a variety of recreational opportunities such as hunting, fishing, trapping, camping, hiking, dog mushing, cross-country skiing, wildlife viewing, flightseeing, snow machining, gold panning, boating, and berry picking (ADNR, 2010; ADF&G, 2006). The Tanana River flows for 200 miles through the 1.81 million acre Tanana Valley State Forest. At the headwaters of the Tanana River, the 682,602 acre Tetlin National Wildlife Refuge is host to 160 migratory and 30 resident bird species, 42 species of mammals, 15 fish species, one amphibian, and an unknown number of invertebrate species. The refuge is located in a major migration corridor through which up to 200,000 sandhill cranes, representing about one half of the world population, annually migrate. The refuge was established primarily for its unique waterfowl values, and produces an estimated 35,000 to 65,000 ducklings annually (USFWS, 2010).

Substantial and Unacceptable Adverse Impacts to an ARNI

Our environmental concerns regarding this project involve the likely substantial effects on the natural ecology and hydrology of the Tanana River, both upstream and downstream of the project site. Ecological productivity of the Tanana River is a result of and dependent on hydrologic processes over the extent of the entire braidplain. The braidplain at the proposed project site has a flood zone width of 4.57 miles (Metz, 2005). The proposed 3,300-foot long bridge, 11,065-foot long levee, and solid-fill rail embankment on the left bank associated with both Phase 1 and Phase 3, would constrict this flood zone by approximately 86%.

This constriction of the flood zone would impound water behind the solid fill and increase water velocity beneath the bridge. During an October 12, 2010 meeting with ARRC, project hydrologist Robin Beebee stated that the existing velocity at the proposed crossing location is approximately eight (8) feet per second and would increase to ten (10) feet per second as a result of the project, a 25% increase in velocity. The contraction and pier scour at the bridge would likely result in deepening of the main channels and head-cuts that propagate upstream. The main channels would be destabilized, and naturally-occurring lateral channel migration would be substantially altered. Outside of the main channels, the impoundment of water would cause sediment to drop out. Side channels and sloughs now providing shallow, low velocity refugia for fish spawning, rearing, and overwintering would disappear at the site, and possibly for some distance upstream and downstream because of the combined effect of impoundment and scour.

The full range of successional stages now extant within the braidplain—ranging from gravel and sand bars, to sparse willows and grasses, to willow thickets, to broadleaf and conifer forests—would be permanently altered, both upstream and downstream. The consequent reduction in biodiversity and extent of early successional habitats, as well as losses of spawning habitats, would adversely impact the sustainability of various fisheries, and would negatively affect both human use and wildlife habitat. The wide braidplain and channel morphology at this location increase the risk that the bridge will capture woody debris and increase ice jamming.

In addition to increasing flow velocity, the channel constriction is also predicted to increase the river's stage elevation. The proposed levee is intended to mitigate the effect of this stage increase on the community of Salcha. Salcha currently experiences nearly annual flooding from groundwater upwelling during high river stages, and overbank flow when ice jams form. The levee may reduce overbank flooding and stabilize the right bank of the Tanana River but will not reduce flooding from groundwater upwelling. The stage increase caused by the project may actually lead to increased groundwater upwelling.

The proposed filling of approximately 50 acres of channel for levee construction would eliminate fish habitat, cut off a substantial amount of flow north of the island where the proposed access road and bridge would join, and alter the interaction between surface and groundwater.

Alternatives Analysis

In our February 2, 2009 letter on the *Draft Environmental Impact Statement for the Alaska Railroad Corporation Construction and Operation of a Rail Line between North Pole and Delta Junction, Alaska* (DEIS), EPA rated the DEIS as EC-2 (Environmental Concerns, Insufficient Information), and expressed environmental concerns regarding potential impacts to water quality, open water habitats, wetlands, stream channels, and riparian areas. We encouraged the consideration of full span bridges for stream, river and wetland crossings. We also found that there was insufficient information regarding the purpose and need for the project, and requested data be provided to support the project utility and need identified, to include discussion of the interest of the US Army and US Air Force, or private industry (tourism, agriculture, mining and petrochemical) to utilize the proposed service. After reviewing the Final EIS, we stated in our letter of October 22, 2009, that our concerns remain unaddressed.

The importance of having sufficient data to support all identified project purposes and needs cannot be overemphasized. Without compelling evidence of current demand, and/or a demonstration that existing capacity is inadequate to meet future demands, the no-build alternative must be presumed to be a practicable alternative to meeting the transportation needs of the area, and the discharge of fill into waters of the U.S. cannot be authorized.

Conclusion

Section 230.10(a) of the CWA's Section 404(b)(1) Guidelines prohibits the discharge of dredged and/or fill material into waters of the U.S. when there is a practicable alternative that would have less adverse impact on the aquatic ecosystem, so long as that alternative does not have other significant impacts. Section 230.10(c) of the Guidelines prohibits the discharge of dredged or fill material which will cause or contribute to significant degradation of the waters of the U.S. We are concerned that the applicant has not fully demonstrated that the proposed project is both the least environmentally damaging practicable alternative and would not result in significant degradation to the Tanana River, as required by the Guidelines. Our review of the information available to us to date leads us to conclude that the applicant has not provided sufficient information to support a determination that alternative bridge designs and/or crossing locations are not practicable. EPA believes there may be practicable alternatives—such as crossing at Flag Hill or the Little Delta River—that would not substantially constrict the flood zone, would not require construction of a levee, and would have less adverse effect on the aquatic environment.

Thank you for the opportunity to review this project. We greatly appreciate the coordination of information on this complex project which has been provided by the District and the applicant thus far. We will provide further information on our concerns within 25 days of this letter in accordance with Part IV, Paragraph 3(b) of the 404(q) MOA. In the interim, should you have any questions or require any additional information, please do not hesitate to contact me at (907) 271-6555 or have your staff contact Tracy DeGering at (907) 271-3419.

Sincerely,

John Pavitt, for

Marcia Combes, Director
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cc (via e-mail):

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