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VIA HAND-DELIVERY

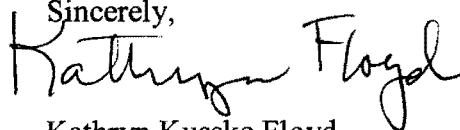
Ms. Victoria J. Rutson
Chief, Section of Environmental Analysis
Surface Transportation Board
395 E Street, S.W.
Room 1106
Washington, D.C. 20423

Re: Finance Docket No. 34658, The Alaska Railroad Corp. -- Petition For Exemption
From 49 U.S.C. §10901 To Construct and Operate a Rail Line Between North
Pole, Alaska and Delta Junction

Dear Ms. Rutson:

On behalf of the Alaska Railroad Corporation (ARRC), enclosed please find information in response to the EFH Conservation Recommendations included in the February 27, 2009 letter from Robert D. Mecum, Acting Administrator, Alaska Region, National Marine Fisheries Service.

Please let me know if you have any questions.

Sincerely,

Kathryn Kusske Floyd

Enclosure

cc: David C. Navecky, SEA
Alan Summerville, ICF
Brian Lindamood, ARRC

ARRC Comments on EFH Recommendations

- 1) Construct bridges to span large rivers and arched or box culverts to cross smaller streams (>10 feet FBW). Free span structures, such as bridges over rivers and streams, provide migratory corridors for anadromous fish species and aquatic organisms, while maintaining ecosystem connectivity and natural substrate function in EFH.

Comment: Although ARRC understands the EFH conservation concepts presented above, it is simply not economically feasible to use clear spans over all waterbodies for this project, or even over the major rivers including the Tanana, Delta, Little Delta, Salsh, Rivers and Little Delta Creek. As a rule of thumb, the increase in cost of bridge structures over culverts increases the span length cost by a factor of 10. To increase the span length over approximately 30 feet, that cost doubles again; over 65 feet, it doubles again, over 150 feet, it is another 2-3 times the cost.¹

A major component of overall project cost is bridge structures. This project has a significant number of stream crossings (more than 20). The existing railroad span at Nenana, whose design load is considerably less than present design standards, is one of the longest railroad clear spans in North America at 700 feet. The five major river crossings for this project (Tanana River, Salcha River, Little Delta River, Delta Creek, and the Delta River) are all expected to exceed even this length. Clear spanning these crossings may in fact be physically impossible due to their length and, in any event, would result in such a significant increase in overall project costs as to be economically infeasible.

With the careful design and construction being planned for the NRE project, it is highly unlikely that bridge piles or piers supporting the bridge superstructure over these rivers would have a significant adverse effect on migratory corridors for anadromous fish and aquatic organisms. In addition, hydraulic analyses and fish passage modeling will be conducted during final design and prior to permitting to ensure such impacts do not occur. ARRC therefore believes that the intent of this conservation suggestion is addressed by the numerous mitigation/conservation measures already included in the EIS and Essential Fish Habitat Assessment.

¹ For a point of reference, here are some estimates of the comparative costs for new construction:

Culverts start at about \$2000 per foot for 3-foot, increasing to almost \$10,000 per foot for natural bottom 10-foot pipe (maximum); short span bridges from 12-foot spans up to about 33-feet generally are cost \$15,000 to \$20,000 per foot; mid-span composite steel/concrete bridges cost \$22,000 to \$30,000 per foot; deck plate girder spans (70-150 feet) are generally in the \$40,000-\$50,000 per foot range; and, truss spans, in excess of 150 feet in length, will likely start at \$80,000 to over \$100,000 per foot depending on a number of different factors.

- 2) Use stream simulation modeling to site tributary crossings with traditional corrugated large culverts (round or oval, 10 feet and 60 inches in diameter). Stream simulation methods consider natural environmental variables and incorporate habitat substrate within the structure, providing EFH and migratory corridors for anadromous fish species and aquatic organisms.

Comment: ARRC assumes that this recommendation refers to use of modeling to design crossings. ARRC has been continuing its work with regulatory agencies in the design and selection of the most practicable means for waterbody crossings. The recent NMFS 2008 Publication, "Anadromous Salmonid Passage Facility Design" allows for, but is not limited to, the following design methods:

- *Bridge or stream simulation.*
- *Embedded pipe culvert, bottomless arch designs or non-floodplain spanning stream simulation.*
- *Hydraulic design method, associated with more traditional culvert design approaches - limited to low stream gradients (0% to 1%) or for retrofits.*

If it is determined during the design phase that Embedded Pipe Design will not provide satisfactory EFH and migratory corridors, then other methods could be employed. To address the concern, ARRC proposes that VM-9 be re-phrased in the FEIS as follows:

For all proposed crossings of anadromous waters incorporating culverts, Applicant shall design said structures in accordance with the NMFS 2008 Publication, "Anadromous Salmonid Passage Facility Design."

- 3) Use stream simulation modeling to site tributary crossings with traditional corrugated small culverts (round or oval, < 60 inches in diameter) to help maintain water quality and tributary connectivity while minimizing impacts from head cut, perched culverts and velocity barriers.

Comment: See Comment #2 above.

- 4) Conduct fish surveys for all tributaries transected by the rail alignment to characterize the range and life histories of species within these watersheds, fill in data gaps in the Alaska Department of Fish and Game's anadromous waters catalogue, and improve information on appropriate mitigation measures.

Comment: Given the large body of information available on mitigating impacts to anadromous fish, ARRC believes that it is not necessary in most areas to conduct extensive fish surveys to supplement existing information and fill in gaps in data. With the careful design and construction being planned for the NRE project and in accordance with the numerous mitigation/

conservation measures already included in the EIS and Essential Fish Habitat Assessment, impacts to anadromous species will be avoided or minimized. Please also refer to Comment #2 above.

In addition, the area known as the Fivemile Clearwater area is considered an ecologically complex and extremely productive habitat, containing alluvial floodplains with multiple channels and underlying aquifers that sustain favorable conditions of flow, temperature, and food web production. To guide design and construction activities so as to minimize potential impacts to this area, ARRC proposes that the following mitigation measure be included in the FEIS:

Before final design of the railroad alignment through the Fivemile Clearwater area, ARRC shall conduct a study, in consultation with relevant agencies, characterizing the environmental attributes of the area that are critical to the survival of salmonids and resident fish species. The information obtained during this study shall be used by ARRC to minimize potential impacts in the area during construction.

- 5) Elevate the rail line in wetland areas adjacent to and known to support anadromous spawning habitat to maintain connectivity of the groundwater hydrology and related hyporheic function (up and down welling water) that is critical to spawning site selection, egg and larval survival.

Comment: Unfortunately, given the extensive wetlands throughout the project area, and the high cost of elevating the rail line, it is not economically feasible to elevate the rail line in wetland areas adjacent to and known to support anadromous spawning habitat. The cost associated with elevating the rail line is significantly higher than the normal cost of rail line construction (\$15,000 per foot as compared to \$400 per foot). ARRC's view is that proposed mitigation/conservation measures as proposed in the EIS will ensure that the new rail line, including bridges and culverts, will be designed and constructed in such a way as to maintain existing water flow and drainage patterns as practicable. This may include placing a sufficient number and size of equalization culverts or bridges through the embankment, preventing impoundment of water or excessive drainage, and maintaining the connectivity of floodplains and wetlands.

- 6) Employ Best Management Practices when constructing and placing artificial structures to promote natural hydrology and instream flows. Structures built over naturally occurring waters should conform to the natural stream gradients and stream channel alignment. Supporting structures should be designed to prevent scour and velocity barriers to anadromous species.

Comment: ARRC observes that the EIS contains a number of proposed mitigation/conservation measures designed to ensure that best management

practices are followed during construction to maintain natural stream gradients and stream channel alignment to the extent practicable, and to design supporting structures to prevent scour and velocity barriers. Incorporating use of the recent NMFS 2008 Publication, "Anadromous Salmonid Passage Facility Design" as a voluntary mitigation measure generally provides for the consideration of stream flow hydraulics relative to fish passage such that impacts would be mitigated to the extent practicable and, therefore, addresses the concern raised by this recommendation.