



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration

National Marine Fisheries Service

P.O. Box 21668

Juneau, Alaska 99802-1668

June 16, 2008

Ms. Diane Spencer, Environmental Program Manager
Federal Highway Administration
Western Federal Lands Highway Division
610 East Fifth Street
Vancouver, WA 98661-3801

RE: Coffman Cove Road Phase II: Draft Site Characterization Plan

Dear Ms. Spencer,

The National Marine Fisheries Service (NMFS) has reviewed the Draft Site Characterization Plan and Preliminary Report – Coffman Cove Road Water Quality Assessment. This plan was prepared in response to a January 2008 compliance letter to the Federal Highway Administration Western Federal Lands Highway Division (WFLHD) from the Alaska Department of Environmental Conservation resulting from a water quality violation on the Coffman Cove Road construction project. A significant source of rock for the roadway embankment was designated B-5. The Draft Site Characterization Plan and Preliminary Report concludes that the B-5 material was geochemically unsuitable fill material for the environment into which it was placed and that it has resulted in acid rock drainage and metals leachate into a minimum of 2180 linear feet of anadromous stream waters.

Streams adjacent to the B-5 road fill and in saturated areas have elevated copper and iron concentrations in areas immediately downstream of the road prism. Additionally, the drainage from the fill materials at some locations is low for dissolved oxygen and pH. These streams provide spawning and rearing habitat for pink, chum, coho and sockeye salmon and have been impacted by the fill since it was placed in 2006. The report further concludes that the adverse impacts will likely become worse over time as pH falls within the fill and mobilization of the actinides increases until they are leached from the fill. NMFS research on toxicological effects thresholds for dissolved copper on juvenile salmon has documented sublethal benchmark effects thresholds at concentrations of 0.18 – 2.1 µg/L and an LC₅₀ of 21-22 µg/L (NMFS 2007). Sublethal effects thresholds correspond to decreased predator avoidance which can adversely affect juvenile salmon survival. From table 2 in the Draft Site Plan appendices dissolved copper concentrations within sampled streams range from 41 to 890 µg/L. These levels are well beyond conditions in which salmon can survive.

The Plan proposed immediate and long-term corrective actions as well as additional monitoring. Immediate actions include temporary mitigation measures to be installed in the summer of 2008, while the implementation schedule for long-term corrective actions has not been specified. NMFS is concerned that the adverse impacts to anadromous fish habitat should not continue or



be allowed to worsen. Continued leaching of metals from the B-5 material poses an immediate threat to the environment and the survival of salmon populations within the affected streams. Therefore, we recommend that WFLHD commence with plans to remove the B-5 material and that this removal should begin before the end of summer 2008. Proceeding with removal of the B-5 material should not affect plans for further studies on groundwater flow or in-situ treatment of affected streams and should not be delayed while additional studies are undertaken.

In the minutes from the 5 June 2008 conference calls, the Alaska Department of Transportation and Public Facilities recommended proceeding with placing aggregate base and pavement on the road to allow the road to be open to traffic while permanent remediation is being developed. NMFS disagrees with this recommendation. Removal of the B-5 fill material should be the highest priority. The sooner the material is removed and replaced with a more environmentally acceptable fill, the sooner the road will be able to open for traffic.

Please contact Katharine Miller (907-586-7643) if you have any questions regarding this letter.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert D. Mecum", with a long horizontal flourish extending to the right.

Robert D. Mecum
Acting Administrator, Alaska Region

Cc: *Bill Ballard, ADOT

National Marine Fisheries Service (NMFS) 2007 An overview of the sensory effects on juvenile salmonids exposed to dissolved copper: applying a benchmark concentration approach to evaluate sublethal neurobehavioral toxicity. NOAA Technical Memorandum NMFS-NWFSC-83.

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