HOVERBARGE COMMENTS FROM AGENCIES, FIRST NATIONS AND FISHERMEN
January 2008

Memo to AK DNR from ADFG Commercial Fish and Sport Fish staff biologists, 12/5/07

Department concerns have not been adequately addressed in [Redcorp's] supporting information or the operations plan.

It is not clear to us that the project is consistent with ACMP standards (11 AAC 112.300 Habitats).

The applicant's analysis of potential impacts relies on a broad range of assumptions, which as currently presented are not supported by actual "field experience" in conditions similar to those that will be encountered in the project area.

There has been insufficient work in identifying areas within the proposed transportation corridor that are important to both adult and juvenile fish.

One of our primary concerns continues to be evaluating impacts from vehicles or vessels that are conceptual in design (e.g. amphitrac), and not field tested, nor have been operated in the environments similar to those of the project area.

The potential for channelization is high on the east side of Canyon Island…The applicant claims that channelization will be avoided here…This is a broad assumption not supported by any study or data from the project area or from any submitted supporting information.

The applicant also states that large woody debris is a danger for all river users. This statement is not supported with evidence of past accidents or complaints from other river users…it is extremely important that all large wood (single pieces or accumulations) remain in the river in existing locations… to ensure natural flow conditions…and to ensure the sustainability of important habitats to juvenile salmon.

[Redcorp's] supporting documents make no reference to potential implications of amphitrac, ACB, or shallow draft tug, to generate conditions which would cause substrates to shift and or settle. Disruption of sediments can result in settling due to compaction and or vibration which in turn may render spawning and rearing habitats unusable during key life stages.

Contrary to the stated lack of "wake issues", damage repeatedly occurred to the department fish wheels at Canyon Island.

It is apparent that there is an absence of data on effects of using the ACB, amphitrac and shallow draft tug along the entire transportation route…Direct or indirect effects may occur to spawning salmon, incubating salmon eggs, pre-emergent alevin, rearing or emigrating fry, pre-smolt, smolt as well as spawning eulachon.

It is indicated that a depth of three feet will be sufficient in protecting spawning/rearing fish and fish habitat, however there is no supporting evidence of this.

Proposed mitigation cites monitoring as a measure to identify impacts post operation rather than conducting proactive assessment and development of adaptive management measures... Monitoring is certainly necessary but should not replace the need for information before this project can be adequately reviewed.

Ken Duckett, executive director of the United Southeast Alaska Gillnetters Association quoted in the 11/2/07 Juneau Empire

"We don't believe that the Taku River drainage should be used as an experiment for an untried vehicle and technology. Until those concerns are addressed to the (Fish and Game) department's satisfaction, and to the commercial fishermen's satisfaction, we are not going to support the project," he said.

United Fishermen of Alaska, motion passed October 26, 2007

UFA opposes the Tulsequah Chief Mine transportation plan until such time that the issues raised by the Alaska Department of Fish and Game have been resolved in favor of protection of the fishery resource and associated habitat.

Preliminary memo from Alaska Department of Fish and Game (ADFG) Sportfish Division (for March 2007 draft Volume 1 Project Description document)

…none of the information provided by the applicant demonstrates prior use of this equipment in an environment like that of the Taku River.

Repetitive wake activity may increase erosion and dislodge woody debris that is important for rearing fish.

Without evidence of past use, it appears that the Archimedes screw propulsion and metal studded tires will have a great potential of destroying habitat and/or fish and eggs.

However, during low water stages the mainstem becomes narrower and this may force the barge and tow vehicle to transition in and out of deep water… increasing the frequency of bank disturbance and encountering juvenile fish in shallow rearing areas.

It has not been demonstrated that the amphitrac will be able to operate in river velocities that occur on the Taku

May 2007 preliminary memo from ADFG Commercial Fish Division (for March 2007 draft Volume 1 Project Description document)

…potential threat to the Taku River stock assessment program. The west route around Canyon Island is the most direct and the preferred route. However, the fish wheels are located in this stretch…The river is only slightly wider than the barge at Canyon Island

The alternate or east route around Canyon Island …is an area where many sockeye and coho stage and spawn… after months or years of travel around the east route there is potential for redirecting much of the main flow to this channel due to scouring. That would lead to some significant changes that are not favorable to the fish.

…many concerns about obvious and significant habitat damage and other negative impacts … The department does not agree that this critical habitat area of the lower Taku River watershed should be the testing ground for the unproven application of this technology .

This proposal by Redfern Corp. will damage valuable salmon spawning and rearing habitat which will lead to reduced numbers of salmon returning to the Taku River and the coastal waters near Juneau.

The displacement of 450+ tons moving 4-5 knots over shallow water will likely have negative effects on the environment and the fish and wildlife…

In the winter, ice and snow cover provide a buffer to salmon presmolt and fry against the severity of extreme cold temperatures. There is potential for the air barge and amphitrac tug to disrupt normal ice formation and snow coverage…

June 13 letter from Alaska Department of Natural Resources to BC Environmental Assessment Office (EAO) (for March 2007 draft Volume 1 Project Description document)

The project draft for discussion states that on ice and land, the ACB operates with a ground pressure of approximately 1 psi, but does not address forces that could result in direct injury to juvenile fish, eggs or spawning adults in shallow water areas from spraying water.

ACB operation could impact both hunt quality and aesthetics in a variety of ways, including the displacement of wildlife. Although trapping is less of a concern, the few trappers using the river corridor would also likely be impacted.

June 14 letter from US EPA to BC EAO (for March 2007 draft Volume 1 Project Description document)

The cumulative effects analysis should address the cumulative effects to the Taku River and its resources due to the barge and current uses (current Taku traffic and other uses) and reasonably foreseeable future uses (the proposed Tulsequah mine itself).

October 5, 2007 letter from US Department of Interior to BC EAO (for September 2007 Volume 1 Project Description and Volume 2 Supporting Information documents)

While the ACB technology has been used in Alaska and elsewhere in the world, there is no experience in using the ACB with the amphitrac...

…we do not believe that the documents as currently written, provide sufficient information for us to analyze the potential impacts on resources of concern to DOI; e.g., aquatic resources (including anadromous fish) and migratory birds. Nor do we believe the document includes sufficient information with respect to the interests of the Douglas Indian Association.

The analyses of potential impacts generally rely on a broad range of assumptions, which as currently presented, are not supported by actual "field experience" in conditions similar to those that will be encountered in the project area.

The documents include statements that vessel prop wash could disturb sand and gravels, but that redistribution occurs naturally with freshet and jokulhlaup flows...additional information needs to be provided on whether this vessel disturbance is similar in scope to these natural disturbances,…since it will occur much more frequently than what would occur naturally.

Monitoring of shoreline areas that could be potentially sensitive to erosion is mentioned as a part of mitigation procedures. We believe those areas need to be identified, and appropriate measurements need to be made in order to conduct monitoring, before operations are initiated, assuming the activities are permitted.

Snag and large woody debris relocation from river to channel sides may cause sediment and gravel suspension and displacement over shallow areas of the river where salmon fry occur.

Movement of the amphitrac over the gravel / water interface may cause sediment disturbance to shallow water areas which salmon use. We believe this needs to be addressed in Section. 5.7.

If the sand flats identified in the Juneau State Land Plan are the only areas used by eulachon spawning, then we believe these areas may be critical to this species in the Taku River (see page 5-27). This is of particular concern since the Taku River eulachon population is an important food source for other fish and a variety of birds… We believe additional information on eulachon egg disturbance is needed to determine how to avoid affecting this species through ACB operations.

October 5, 2007 letter from Department of Fisheries and Oceans to BC EAO (for September 2007 Volume 1 Project Description and Volume 2 Supporting Information documents)

Absence of current and traditional activities being practiced by First Nations in the vicinity of the project, where they have taken place and how the proposed project may impact these activities.

Absence of consultation and support of commercial fishers potentially affected from barge operations.

Absence of a cumulative effects assessment which considers the implications of the fishery as it relates to downstream habitats impacts within the State of Alaska.

Conclusions for significant adverse effects are provided in the absence of detailed site information or modeling which supports prediction of effects.

Proposed mitigation cites monitoring as a measure to identify impacts post operation, rather than conducting proactive assessment and development of adaptive management measures and thresholds to avoid, monitor and measure potential impacts of barge operations.

No specific biophysical fish habitat assessments have been provided for the Taku River and the Big Bull Slough.

Proposed barge navigation channel will result in a disruption to the commercial fishery, and potentially impact other human activities on the river.

No river morphology profiles which demonstrate river (thalweg) width and depth have been provided for the Taku River or Big Bull Slough at varying locations and water discharges experienced during the open water navigation period

Disruption of sediments…may render spawning and rearing habitats unusable during key life stage periods. Document makes no reference to potential implications of air cushion barge to generate conditions which would cause substrates to shift and or settle.

Importances of lateral and off channel Taku River habitats for juvenile salmonid rearing and migration have been noted. No specific barge wake modeling provided. No specific assessment for sediment erodibility along the navigational route provided.

Recommend clarification of barge operating procedures during ice formation and ice break up conditions and how the operating plan is designed to minimize effects of these periods.

Management of large woody debris within the navigational channel will result in an impact to fish habitat throughout the Taku River and the Big Bull Slough.

No specific amalgamated representation of existing biophysical information and those areas where information is absent has been presented. No specific habitat areas of concern have been presented.

The Taku River fishery is a critical vector which should be considered within a cumulative effects assessment. Proposed mitigation and monitoring of potential impacts within Canadian waters has direct downstream implications to health of fish habitats supporting the fishery. Recommend the proponent conduct a cumulative effects assessment as per CEAA.

October 8, 2007 letter from Taku River Tlingit First Nation to BC EAO (for September 2007 Volume 1 Project Description and Volume 2 Supporting Information documents)

It seems inadequate to cite a 1996 literature review to indicate there is "no specific information found on marine mammals in Taku Inlet" - that was more than 10 years ago and based on a literature review.

Table 3-7 indicates that pink salmon spawning in the mainstem is 'unlikely'. Pinks are known to spawn in main channel, shoreline, depositional gravels on the inside of bends, as in the Skeena River. The conclusion stated here needs to be demonstrated.

Overall, the information and analysis present in the baseline section (Sec.3,4) and the impact section (Sec.4.5) is inadequate…it is impossible or difficult to discern…what information is available for the terrestrial resources of the study area; what methodologies were used to gather existing information (and so we have no way of evaluating the usefulness of the information); and, what information was used to evaluate the impacts of the project.

There is no information on population status for any species (e.g., past and recent surveys for moose, for example, will provide some baseline information). There is no information on movements and seasonal use patterns.

The method of identifying areas of erosion vulnerability is not described, nor is the monitoring methodology. The feasibility of doing this is not demonstrated. The feasibility of the proposed mitigation (reduction in vessel speed) is not demonstrated.

Sec.4.4,4.3 discusses the potential for entrainment of fish in the air cushion, and concludes that the likelihood of any impact is 'minimal'. No evidence is presented to defend this conclusion.

The analysis of potential impacts…for particularly key species such as moose and grizzly bear is inadequate. A key concern, relayed to the proponent early in the process, is the potential movement across the river ice for these animals and whether the barge operation will result in habitat fragmentation or displacement from riparian habitats…The wildlife assessment presented as a "detailed evaluation" in Table 4-9 is purely theoretical…

Additional impacts for moose need to be more fully evaluated, including: barge transit effects in winter,…due to either blocking moose crossing the river, changing the ability of moose to cross the river (particularly in spring and fall if barge causes a change in timing of ice break up).

The general conclusion of 'no measurable impact' to the Canadian commercial fishery is not supported here.