



Fish Habitat Management
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Gestion de l'Habitat du Poisson
Suite 101 5204, 50e Avenue
Yellowknife (Territoires du Nord-Ouest)
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Your file *Votre référence*
EA 0809-004
Our file *Notre référence*
YK-09-0014

October 16, 2009

Mr. Chuck Hubert
Environmental Assessment Officer
Mackenzie Valley Environmental Impact Review Board
Box 938, #200 Scotia Centre
5102-50th Avenue
Yellowknife, NT
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Dear Mr. Hubert:

**RE: Draft Terms of Reference Review for EA 0809-004
Fortune Minerals Ltd., NICO Project
Lou Lake Area, NT**

As requested in correspondence dated September 15, 2009, the Department of Fisheries and Oceans, Fish Habitat Management – Western Arctic Area (DFO) has reviewed the draft terms of reference released by the Mackenzie Valley Environment Impact Review Board (the Review Board) for the environmental assessment related to Fortune Minerals Ltd. for mining and milling at the NICO Project near Lou Lake, NT.

Our review was limited to potential impacts of the project on fish and fish habitat pursuant to the responsibilities of DFO under the habitat protection provisions of the *Fisheries Act*.

DFO offers the following comments on various components of the Terms of Reference.

Marian River Crossing

On August 11th, 2009 Fortune Minerals Ltd. provided additional details and maps to the Review Board regarding the NICO access road alignment connecting the mine site to the potential GNWT road. As part of that submission, Fortune is proposing a 15m crossing located at the Marian River. DFO would like to ask that the Review Board include the construction of the Marian River crossing within *Section 2.1* and also ensure that any potential impacts to fish and fish habitat, including riparian zones, arising from the construction, operation, maintenance and decommissioning of this crossing be included in the Terms of Reference.

Airstrip

Appendix E, Part 2(d) should be amended to include the assessment of the potential for increased sedimentation that may impact Burke Lake, resulting from

the airstrip, and proposed mitigation measures. This would include construction, operation, maintenance and closure activities.

Hislop Lake

Hislop Lake is not mentioned within *Section 2.2.1* under *Geographic Scope* but is included elsewhere in the document including under *Water Quality* within a *Key Line of Inquiry*. Given the public concern related to Hislop Lake, we recommend that it is specified within the *Geographic Scope*. Similarly, as Hislop Lake water quality is a “key line of inquiry”, the specific parameters associated with Hislop Lake should be incorporated into *Appendix C: Water Quality*. Finally, *Part 5* of *Appendix E: Fish and Fish Habitat* requests information on the affects to fish and fish habitat in Hislop Lake to be included, but there is no requirement for information on fish and aquatic habitat in Hislop Lake required under *Part 1* of *Appendix E*. We recommend that Hislop Lake be added to the waterbodies listed under *Part 1*.

Water Sources

The proponent has identified several water intake options in their project description. DFO asks that the proponent include all final water intake locations related to the Nico project in the Developer’s Assessment Report including exact locations, construction specifications and potential impacts to fish and fish habitat in the water bodies and/or water courses indicated. Mitigation measures should be included.

Riparian Vegetation

Riparian areas have a direct influence on aquatic habitat and directly contribute to fish habitat by providing shade, cover, food and nutrients for fish, as well as help to maintain water quality and moderate flows and temperatures that are critical for healthy fish habitat. DFO recommends that riparian areas be specifically identified in *Section 3.3.5 Fish and Aquatic Habitat* as well as *Appendix E, Item 2a* to ensure that potential impacts to these zones are assessed, and appropriate mitigation measures are provided in the Developer’s Assessment Report.

Closure and Reclamation

Appendix D: Closure and Reclamation, Item 6 requires a description of closure and reclamation activities that “ensure long-term suitability of Peanut and Burke lakes for fish and fish habitat”. DFO recommends modifying the sentence in the Terms of Reference to “Describe how closure and reclamation activities and monitoring will ensure long-term suitability of all fish-bearing waters potentially affected by the project for fish and fish habitat.”

In addition, DFO recommends that the proponent use a reference lake that has been impacted by the forest fire, instead of using the pre-fire background conditions, in closure and reclamation monitoring. These reference lakes would provide a more accurate indicator of changes that are specific to the forest fire and those that may be a result of the project.

Aquatic Effects Monitoring Plan

DFO recommends that the proponent develop a conceptual framework for an Aquatic Effects Monitoring Plan (AEMP) in conjunction with the requirements under the Metal Mining Effluent Regulations (MMER) for an Environmental Effects Monitoring program (EEM) along with other required water quality monitoring programs (i.e Surveillance Network Program under a Water Licence).

DFO also recommends that the proponent focus on small bodied benthic feeding fish species as a means of identifying and predicting potential impacts before they reach higher trophic level fish communities, where possible. We encourage the proponent to discuss the monitoring program with Environment Canada and ourselves, as it is being developed. The framework for this program, should be included in the Developer's Assessment Report.

Please note, any harmful alteration, disruption or destruction of fish habitat and/or the deposition of deleterious substances into fish bearing waters occurring as a result of a change in plans or failing to implement the necessary mitigation measures may result in contravention of the *Fisheries Act*.

DFO looks forward to providing more specific recommendations throughout the review of the project, as well as through its participation in the Aquatic Effects Monitoring Program and Interim Closure and Reclamation Plan Working Groups for this development. A determination as to the likelihood of harm to fish or fish habitat still cannot be completed until all materials have been submitted and reviewed. If you have any questions, please contact me at (867) 669-4926.



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Department of Fisheries and Oceans - Western Arctic Area

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