



February 24th, 2009

Paul Mercredi
Mackenzie Valley Environmental Impact Review Board
200 Scotia Centre
5102-50th Avenue
Yellowknife, NT
X1A 2N7

Dear Mr. Mercredi:

**RE: DFO Comments on the Draft Terms of Reference and Work plan for
Yellowknife Gold Project**

Fisheries and Oceans Canada is pleased to provide the Mackenzie Valley Environmental Impact Review Board (MVEIRB) with the following comments on the draft Terms of Reference (ToR) and Work Plan for the Environmental Assessment of the Tyhee NWT Corp's Yellowknife Gold Project.

Section 4.1 Scope of Development (Table 1)

DFO recommends all project components associated with the development at the Nicholas Lake deposit be clearly articulated in the Developer's Assessment Report and be incorporated into the scope of the environmental assessment.

The second bullet under the Milling Process should include the "withdrawal and consumption of fresh water from Giauque Lake".

Section 4.2 Scope of the Assessment – Geographic Scope

DFO agrees with the Review Board that the geographic scope of this environmental assessment should include at a minimum the limits of the mineral leases, mining claims and local study area as defined by Map 1 in Appendix 1, and should also consider an expanded scope based on the impacts to individual Valued Ecosystem Component (VEC). As such, DFO believes that the proponent needs to consider the maximum area potentially affected by the project and any alternatives, including the pathways of effects and any direct, indirect or cumulative effects of the project on a particular VEC. For instance, in the case of impacts to fish and fish habitat, it is DFO's opinion that the geographic scope of the assessment should include all watershed(s) potentially impacted by the project, most notably the inclusion of all waterbodies and watercourses within the Yellowknife River Basin.

DFO recommends that the proponent use tools such as baseline data, traditional knowledge, consultations and expert knowledge to determine the appropriate local and regional study areas for each VEC and VSEC.

Section 5.5 Significance Determination

In order to determine the significance of effects of the project on the environment, the proponent will have to undertake a detailed effects assessment. The proponent should provide a clear outline of the methodology for determining significance including details on the ranking system used for each of the criteria set out in this section.

In addition to the criteria proposed, DFO suggests the effects assessment also include the following:

- Reversibility – the ability for the VEC to return to an equal or improved condition at the end of the project life. Effects that are reversible might be less significant than effects that are irreversible.

It is DFO's opinion that the proponent should assess the significance of the residual effect, after considering the implementation of mitigation measures, when determining the overall significance of each effect on the environment. Methods to determine residual effect should be clearly articulated; the use of summary tables is highly recommended.

Section 6 (A) Description of the Existing Environment and Baseline Conditions Assessment

Under bullet 4, please add "Surface and sub-surface full spectrum water quality analysis for any water bodies or watercourses near proposed mine-related structures *associated with both Ormsby and Nicholas deposits*".

Under bullet 5, please add "A thorough prediction for water balance inflows to the mine sties, with particular emphasis on *the Winter Lake System (including Round Lake, Winter Lake and Narrow Lake)* or other tailings facility alternatives."

Under bullet 7, please add "*Thorough aquatic organisms and aquatic habitat analyses for all water bodies and watercourses that may be impacted by the development and appropriate reference water bodies and watercourses. Methods and reasons for selecting certain water bodies and watercourses should be clearly articulated.*"

Section 6 (B) Development Description

Under bullet 1) please make the following changes "As part of the *process for the possible designation of Winter Lake as a Tailings Impoundment Area under Schedule 2 of the Metal Mining Effluent Regulations (MMER)*..."

Section 6 (C) Consideration of Alternatives

DFO recommends the following changes be made to the first sentence of the second paragraph "...with particular focus on the *information required for the possible amendment to Schedule 2 of the MMER for designating Winter Lake as a Tailings Impoundment Area*".

In the second sentence of the second paragraph, we suggest the following changes "The process of *adding a fish bearing water body to Schedule 2 of the Metal Mining Effluent Regulations (MMER)* requires any proponent to conduct and publish a

thorough assessment of alternatives *that identifies the preferred disposal option for improved pollution prevention and reduction of long-term environmental risks*"

In the fifth paragraph of this section, DFO asks that the word "re-classifying" be changed to "the possible designation".

Section 6 (E) Water Resources

Under bullet 7a) DFO strongly recommends that a monitoring framework for all aquatic data collection, from baseline to long term monitoring in the post closure and reclamation phase of the development, be designed so that the data is comparable and effects (acute and chronic) are detectable. The framework should be over-arching and consider how all monitoring programs and data gathering will be harmonized (ie, AEMP, SNP, Fisheries Act Authorization, etc.) Such a framework should be designed early in the process. This is to ensure that all aquatic monitoring programs and baseline data are designed in such a way to limit and detect aquatic effects and ensure timely adaptive management, should it be required.

Under bullet 14, DFO recommends the following be added, "An assessment of the effects of YGP operations on promoting erosion and sedimentation, *mitigation measures to be implemented and contingency plans*"

Section 6 (F) Fish and Aquatic Habitat

DFO suggests that the final sentence in the preamble be changed or that additional lines be added to clarify that information listed in the "Key Lines of Inquiry", "Subject of Notes" and "Other" do not only relate to Winter Lake, but also outline information requirements for all activities that might impact fish and aquatic habitat.

DFO recommends the bullet 1 of the Key Lines of Inquiry read as follows:

"The proponent is required to submit a compensation plan, along with an irrevocable letter of credit to cover the plan's implementation, to offset for the loss of fish habitat resulting from the deposit of tailings into a fish bearing water body. The compensation plan shall contain the following elements, as required under Section 27.1 (3) of MMER:

- a) a description of the location of the TIA and the fish habitat affected by the deposit;*
- b) a quantitative impact assessment of the deposit on the fish habitat;*
- c) a description of the measures to be taken to offset the loss of fish habitat caused by the deposit;*
- d) a description of the measures to be taken during the planning and implementation of the compensation plan to mitigate any potential adverse effect on the fish habitat that could result from the plan's implementation;*
- e) a description of measures to be taken to monitor the plan's implementation;*
- f) a description of the measures to be taken to verify the extent to which the plan's purpose has been achieved;*
- g) a description of the time schedule for the plan's implementation, which time schedule shall provide for achievement of the plan's purpose within a reasonable time; and*
- h) an estimate of the cost of implementing each element of the plan.*

In additional to the compensation plan described above, DFO also requires the proponent to adhere to DFO's Principles of No Net Loss and provide separate

compensation plan(s) for all other project components or activities that would require an authorization for the harmful alteration, disruption or destruction of fish habitat.

If the proponent expects to use any of DFO's Operational Statements (<http://www.dfo-mpo.gc.ca/regions/central/habitat/os-ao/provinces-territoires-territoires/nt/index-eng.htm>), it must be clearly identified in the Developer's Assessment Report including how the requirements have been respected.

The proponent's analysis of potential impacts on fish and aquatic habitat should also include information related to:

- a) productive capacity of aquatic ecosystems, with particular reference to species of fish that are important for recreational or subsistence purposes;
- b) rare and/or sensitive aquatic organisms and habitats;
- c) impacts from blasting (refer to http://www.dfo-mpo.gc.ca/oceans-habitat/habitat/water-eau/explosives-explosifs/page03_e.asp)

DFO further suggests that bullet 9 from Subjects of Note be moved to the section on Key Lines of Inquiry, and modified to read as follows:

- 8) The effects of road development, including water crossings, *on any potentially impacted water bodies or watercourses*, aquatic organisms and habitat, with thorough *mitigation measures and plans* for minimizing adverse impacts.

DFO also would like bullets 8 and 13 to be moved up to the Key Lines of Inquiry section.

Section 6 (M) Cumulative Effects

DFO would like to add that the proponent must examine cumulative effects on fish and aquatic organisms in their assessment.

DFO appreciates the opportunity to review and provide comments on the draft Terms of Reference. If you have any questions, please feel free to contact Sarah Olivier at (867) 669-4919, by fax (867)669-4940, or email Sarah.Olivier@dfo-mpo.gc.ca.

Sincerely,



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Regional Manager, Environmental Assessment for Major Projects
Central and Arctic Region
Fisheries and Oceans Canada

cc Julie Dahl, Fisheries and Oceans Canada
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Marc Lange, Fisheries and Oceans Canada
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