

November 26, 2010

Martin Gavin, Manager
Giant Mine Remediation Project, CARD
Indian and Northern Affairs Canada
PO Box 1500
Yellowknife, NT X1A 2R3

Dear Mr. Gavin,

Re: Developer's Assessment Report Deficiency Statement

The Review Board has completed its conformity check of the Developer's Assessment Report (DAR) submitted by INAC for the Giant Mine Remediation Project. The DAR addresses the majority of the items in the Terms of Reference. This letter serves as a deficiency statement. It identifies four Terms of Reference items that need to be addressed.

1. Risks of malfunctions or failure of the frozen block method

Section 3.3.9 of the Terms of Reference requires a description of risks and consequences of an accident or malfunction of the frozen block method, and a description of how a failure of the frozen block would impact the surrounding environment. Section 3.5.1.2 of the Terms of Reference requires a prediction of how a malfunction of the frozen block might affect contaminant levels in water both at the Giant Mine site and in the surrounding area, including Back Bay, Yellowknife Bay and Great Slave Lake.

Section 10 of the DAR provides a cursory description of specific malfunctions, but does not describe overall potential impacts of a complete failure of the frozen block method. Section 6.2.8 of the DAR provides a description of the failure conditions, and discusses their likelihoods. However, to properly assess risk, the Board requires an understanding of both likelihood and severity of a worst case scenario and other serious malfunctions. The DAR provides virtually no description of the potential severity of a failure of the frozen block method.

The response should include a description of the potential impacts on water and aquatic life in Back Bay, Yellowknife Bay and Great Slave Lake over the short, medium and long term, in the unlikely event of a complete failure of the frozen block method. The response should also describe the potential human health impacts of such an event. Section 3.1.1 of the Review Board's *Environmental Impact Assessment Guidelines* provides general guidance on what should be described in DAR impact predictions.

2. Risks and impacts of intentional thaw

Section 3.3.9 of the Terms of Reference requires a prediction of the risks and effects of related to thaw, including a discussion of the duration, risks and potential impacts if adaptive management required the frozen block to be intentionally thawed. Section 3.3.6 requires a description of any opportunity costs for future underground arsenic management and treatment options associated with the proposed development in terms of futures foregone. Section 6.2.2.4 of the DAR discusses future re-consideration of alternatives, but does not provide any details regarding risks, impacts or even feasibility of intentional thaw. DAR section 6.2.8.5 discusses intentional thawing, but also provides no details on risks, impacts or feasibility of doing so.

Considering that project design was not able to consider best available technology in the distant future, and that the project requires active management in perpetuity, the Review Board requires a response to above Terms of Reference items. Will it be possible to deliberately thaw the frozen block if adaptive management deems it desirable in the future? If so, how, and what are the risks and impacts of doing so?



3. Hazard duration vs. lifespan of containment system

Section 3.3.8(d) of the Terms of Reference requires INAC to contrast the expected duration of the hazard against the expected lifespan of each component of its containment system. The DAR section 6.2.8.3 adequately describes the longevity of thermosyphons, but not the longevity of all other components of the freezing or water treatment system. None of these are contrasted with the duration of the hazard as required.

To adequately understand the long term responsibility that INAC proposes to undertake, and assess related risks, the Review Board needs to understand the level of effort required to maintain the system. For example, how often will INAC need to replace the water treatment system? How often will INAC need to replace the diffuser in Back Bay? What is involved in doing so?

4. Discussion of funding certainty

Section 3.2.2.5 of the Terms of Reference requires INAC to describe project feasibility including financial feasibility, and requires that this include a discussion of funding certainty for the development and related monitoring. DAR section 6.13.6 identifies that the estimated cost for operations and maintenance is \$1.91 million per year. The proposed project commits Canada to this in perpetuity. The only material in the DAR regarding the certainty of funding is the statement that INAC will seek Treasury Board approvals.

In order for the Board to assess INAC's ability to actively manage the site as proposed, the Board requires a meaningful in-depth discussion of the likelihood of receiving this funding over the long term, the conditions on which this depends, and relevant underlying assumptions. For example, if government funding priorities change in the future, how does that affect project feasibility? What is INAC's confidence that it will always have secure funding for the necessary activities?

The Review Board has determined that other minor deficiencies can be dealt with in later stages of the assessment. For the above four deficiencies, please submit detailed responses by December 15th, 2010. When the Review Board receives satisfactory responses, it will deem the DAR to be in conformity. The Board anticipates issuing a revised workplan at that time. If you have any questions, please contact me in writing.

Sincerely,

Alan Ehrlich
Senior Environmental Assessment Officer