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Your file *Votre référence*
EA0809-001

Our file *Notre référence*
07-HCAA-CA6-00126

November 30, 2011

Mackenzie Valley Environmental Impact Review Board
#200 Scotia Centre
5102-50th Avenue
Yellowknife, NT
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Via e-mail to:
aehrlich@reviewboard.ca

RE: Fisheries and Oceans Canada - Second Round Information Request for Giant Mine Remediation Project

Fisheries and Oceans Canada (DFO) would like to provide the following submission to the Mackenzie Valley Environmental Impact Review Board (Review Board) for the second round of Information Requests for the Giant Mine Remediation Project.

During the Giant Mine Technical Sessions held from October 17-21, 2011, the Giant Mine Remediation Team (Giant) introduced a contingency plan to divert Baker Creek off-site should the creek pose an unacceptable risk to the underground mine. Giant stated that the evaluation of the North Diversion was strictly being done for a contingency. DFO has reviewed and provided comments to Giant on a preliminary feasibility report as well as requested additional clarification during the technical session on the use of the North Diversion of Baker Creek as a contingency measure (Undertaking #5 provided by Giant on Nov.14, 2011). Until a conceptual design is provided with an effects assessment, both for the new channel as well as for the permanent or temporary loss of Baker Creek, DFO does not have enough information to assess the potential impacts of the construction and operation of the North Diversion on fish and fish habitat.

DFO looks forward to working with the Review Board, the Giant Team and other parties in reviewing the project and this new contingency plan. If you have any questions, please do not hesitate to contact Sarah Olivier at (867) 669-4919, by fax (867) 669-4940, or email at Sarah.Olivier@dfo-mpo.gc.ca.

Sincerely,

On behalf of
Larry Dow
Area Director
Western Arctic Area
Fisheries and Oceans Canada

cc Morag McPherson, Fisheries and Oceans Canada
Rick Walbourne, Fisheries and Oceans Canada
Corrie Gibson, Fisheries and Oceans Canada
Julie Dahl, Fisheries and Oceans Canada
Bev Ross, Fisheries and Oceans Canada

Canada

IR Number: DFO_01
Source: Fisheries and Oceans Canada
To: Giant Mine Team
Subject: Failure Modes Risk Analysis
DAR Section: N/A
ToR Section: N/A

Preamble:

During the first round of information requests, the Giant Mine Remediation Team (Giant) provided a Failure Modes Effects Critical Analysis (FMECA) in response to Information Request #12 from the Review Board. While DFO attempted to clarify various aspects of this report during Day 4 of the technical sessions, certain aspects of the report remain unclear.

Based on DFO's review and current understanding of the FMECA, the majority of initiating events/causes that result in Baker Creek infiltrating the underground are related to failure of systems and components on the site itself, such as channel blockage from construction activity, crown pillar collapse, loss of ground support and subsidence, all related to stability of the surface and underground. The only initiating event directly related to Baker Creek itself, as outlined in FMECA, is a high flow event.

It is also our understanding that the systems and components of the site related to stability and the potential initiating events, as outlined above, are proposed to be addressed in the Remediation Plan submitted in 2007. Furthermore, it's our understanding that the flooding risk associated with Baker Creek is also proposed to be addressed in this plan through realignments of the creek itself.

During the technical sessions questions were raised by the Review Board staff on whether Giant would consider relocating Baker Creek off-site as a result of "*unacceptable long-term risk*". DFO believes it is crucial to clarify the initiating events that could lead to the infiltration of Baker Creek into the underground, and the reduction of risk outlined in the FMECA, as these points are imperative in making decisions regarding unacceptable risk and the causation.

Additionally, there was a lengthy discussion during the technical sessions between the Review Board's experts and Giant on what a "worst case scenario" would entail and the risks from Giant Mine associated with such an event. It is DFO's understanding that the potential effects from a worst-case scenario situation are at their peak prior to remediation. The proposed remediation project should immediately lower the risk of such a scenario as the remediation commences. It is unclear if this "worst-case scenario" discussion is related to present conditions on site or the remediation project itself.

Request:

1. Given the results of the FMECA, would Giant consider that the risks related to Baker Creek (from initiating events from Baker Creek itself or the stability of site) are *short-term* and will be significantly reduced once the remediation project is implemented? Can Giant describe their current understanding of residual risks related to Baker Creek following the implementation of the remediation project?
2. Does Giant anticipate that any works proposed in the Giant Mine Remediation Plan will exacerbate any effects of a worst-case scenario related to Baker Creek? For further clarification, will any future works proposed by Giant result in a more severe worst-case scenario as compared to current present-day conditions?

IR Number: DFO_02
Source: Fisheries and Oceans Canada
To: Giant Mine Team
Subject: Baker Creek North Diversion Contingency
DAR Section: N/A
ToR Section: N/A

Preamble:

During the Giant Mine EA Technical Sessions held from October 17-21, 2011, the Giant Mine Remediation Team (Giant) introduced the concept of a contingency plan that involves a diversion of Baker Creek off-site should the creek pose an unacceptable risk to the underground.

On Day 3 of the Technical Sessions, DFO recommended that additional information related to the North Diversion be submitted to parties to assist them in reviewing the contingency plan as part of the EA process (*Giant Mine Technical Session Transcript, Day 3, October 19, 2011, p.19-20.*). This included but was not limited to:

- Definition of emergency and emergency scenarios on site that would initiate consideration/requirement for a North Diversion;
- Criteria that would be used for decision making related to the use of the north diversion;
- A hierarchy or outline of contingency measures, monitoring and mitigative actions that would be conducted on site to avoid an emergency/worst-case scenario from developing, including such things as a water management strategy for Baker Creek;
- Conceptual aquatic effects assessment of the potential north diversion, including effects to Baker Creek and other potential water bodies from the:
 - o Construction of the north diversion
 - o Short-term or temporary operation of the diversion
 - o Long-term or permanent operation of the diversion

Giant provided some additional information on the North Diversion in the response to Undertaking #5 regarding the feasibility work performed to date, potential regulatory requirements related to implementation of a diversion, as well as potential interactions between the diverted Baker Creek water and the Yellowknife River. The response also indicated that a workshop is planned in 2012 to conduct further analysis and evaluation of risks, mitigation approaches and thresholds. While DFO realizes that work in this area is ongoing, we feel that the information outlined and requested during the technical sessions is necessary to fully evaluate this contingency.

Request:

1. DFO requests that Giant provide a status on the feasibility studies, baseline information and effects assessment of the North Diversion. This should also include a timeline for the submittal of this information to the Review Board as part of this environmental assessment. DFO also recommends that the information outlined during the technical session and subsequently sent to Giant in a letter, should be submitted as part of the contingency plan. In particular the plan should include an effects assessment related to the construction, and the short-term and long-term operation of the diversion.