



# Giant Mine Environmental Assessment

## IR Response

Round One: Information Request: - North Slave Métis Alliance #08

May 31, 2011

### INFORMATION REQUEST RESPONSE

**EA No: 0809-001**

**Information Request No: NSMA #08**

**Date Received:**

February 28, 2011

**Linkage to Other IRs:**

City of Yellowknife IR #04  
Review Board IR #12  
Alternatives North IR #14

**Date of this Response:**

May 31, 2011

**Request**

The relationship between the diffuser and the drinking water intake for the City of Yellowknife is not clear. Is there a proposal to relocate the current drinking water intake or repair it? Either way, should this not be considered a related (very likely) project to be considered in the cumulative effects assessment? Much more information is needed on this topic.

**Reference to DAR (relevant DAR Sections):**

S.6.8.3 Underground Water Management

**Reference to the EA Terms of Reference:**

S.3.7 Cumulative Effects

**Summary:**

Although the replacement of the drinking water intake is not included in the scope of the Giant Mine Remediation Project, any adverse effects during the construction of the intake would likely be similar to those for the construction of the outfall / diffuser. If necessary, the two construction projects could be scheduled such that any potential cumulative effects are avoided. Once the outfall / diffuser and intake have been constructed, there are no circumstances under which cumulative effects would occur.





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### Response:

The replacement of the drinking water intake is not included in the scope of the Project. However, the City of Yellowknife is evaluating options to replace the current drinking water intake. It is the Project Team understanding that the existing location (i.e., Yellowknife River) and Great Slave Lake are both being evaluated as potential sources.

As described in Table 8.4.5 of the DAR, the construction of the outfall/diffuser in Great Slave Lake could result in disturbances of sediments. A variety of mitigative measures will be implemented which will result in residual effects that are not significant (refer to Table 12.3.1). In the event a new drinking water intake is constructed by the City of Yellowknife, it is reasonable to assume that potential effects and mitigation measures would be similar to those identified for the outfall/diffuser. By extension any residual effects would not be significant.

**Cumulative Effects During Construction** - Although improbable, it is theoretically possible that the residual adverse effects from the construction of the outfall/diffuser and drinking water intake would have spatial overlap. If such effects were to occur at the same time, there is also a possibility that cumulative effects would occur. To avoid the possibility of this occurring, INAC commits to working with City of Yellowknife regarding the construction of the outfall/diffuser to avoid any periods in which the City of Yellowknife would also be constructing a new drinking water intake. This would allow any short-lived residual effects from the individual projects to dissipate prior to commencing the second project, thereby avoiding any cumulative effects during construction.

**Cumulative Effects During Operation** - As indicated in Table 12.3.1, the outfall/diffuser will have minor and localized residual effects on surface water (i.e., non-significant effects). Any new drinking water intakes constructed by the City of Yellowknife will not result in a discharge to the environment. As a consequence, there is no potential for cumulative effects (i.e. there would not be any additive effects from operation of the outfall and intake on arsenic levels in Yellowknife Bay nor on aquatic biota) during operation.

Besides the question of cumulative effects, there is potential for direct interaction between the outfall discharge and the water supply intake. The location selected for the outfall diffuser could affect the location selected for the intake if the City decides to withdraw water directly from Yellowknife Bay. INAC will consult with the City of Yellowknife to ensure that the two structures are suitably located to minimize the chance of the outfall discharge affecting the quality of the City water supply.

