



Giant Mine Environmental Assessment IR Response

Round One: Information Request - Yellowknives Dene First Nation #16

June 17, 2011

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: YKDFN #16

Date Received

February 28, 2011

Linkage to Other IRs

Date of this Response

June 17, 2011

Request

Preamble:

The levels of contamination in Wawa actually are lower than found throughout the GIANT site. It is not clear what assumptions or variances exist between the two 'risk-assessments' especially when the market food criteria represents such a large proportion of 'intake'. YKDFN are unsure why these reports have produced such a degree of variance.

Question:

INAC should be directed to explain why the risk assessment produced much higher results in Wawa when it seems that the actual contamination in the environment was lower. This comment is related to Figure 8.9.5.

Reference to DAR (relevant DAR Sections)

S.8.9 Assessment of Ecological and Human Health Risks

Reference to the EA Terms of Reference

S.3.4.2 Health and Human Safety

S.3.5 Biophysical Environment

Summary

The maximum intakes (and risks) from Wawa are higher than the mean intakes and risks from the Giant Mine Risk Assessment (GMRA). This is partly attributable to the more conservative assumptions that were applied in the Wawa assessment.





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Response

The higher results in Wawa stem from the fact that the Wawa Risk Assessment was a Preliminary Quantitative Risk Assessment (PQRA) while the GMRA is a Tier 2 assessment. A PQRA uses very conservative assumptions while a Tier 2 assessment (such as that prepared for Giant Mine) uses more realistic assumptions of exposure. For example, 100% arsenic bioaccessibility was assumed for the calculations for Wawa, while only 17% arsenic bioaccessibility was used in the Giant Mine Tier 2 assessment. The arsenic bioaccessibility used in the GMRA was based on measured data from the site. This resulted in a lower contribution of the soil pathway to the total arsenic intake (i.e., 1%), with consumption of market food representing the largest source of exposure. Additionally, in Figure 8.9.5, the results shown for Wawa represent maximum intakes while those from the Giant Mine Tier 2 assessment represent mean intakes.

