



Giant Mine Environmental Assessment

IR Response

Round One: Information Request - North Slave Métis Alliance IR #09

May 31

INFORMATION REQUEST RESPONSE

EA No: 0809-001

Information Request No: NSMA IR #09

Date Received:

February 28, 2011

Linkage to Other IRs

City of Yellowknife IR#4

Date of this Response:

May 31, 2011

Request

Water treatment and sludge disposal are not discussed in sufficient detail. Please explain how people will be kept away from tailings and sludge, and whether biotreatment is an option for the treatment method.

Reference to DAR (relevant DAR Sections):

- S. 6.6 Tailings and Sludge
- S. 6.8.5 Water Treatment and Sludge Disposal

Reference to the EA Terms of Reference

- S. 3.2.4.9
- S. 3.2.4.11

Summary

The preliminary design of the water treatment process is currently underway. Precipitation of arsenic with iron is the Best Available Proven Technology treatment process for this application and it is widely used in the industry. Biotreatment is not considered the preferred treatment option for this application.

The tailings ponds and sludge pond will be covered to eliminate tailings dust and isolate the tailings and sludge from the environment.





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As described in Section 6.8.5 of the Developer's Assessment Report (DAR) and further clarified in the response to the City of Yellowknife IR#4.1, the new water treatment plant will consist of precipitation of arsenic with iron and separation and dewatering of the sludge by thickening and filtration. The response to the City of Yellowknife IR#4.2 describes the wide array of technologies that can be applied to treating effluents. It also underscores that processes subject to chemical or biological upset and failure (such as biotreatment) are not considered to be the Best Available Proven Technology for this application. Background information on the selection of the preferred treatment option is presented in the Remediation Plan Supporting Document L1 (provided in Appendix B of the DAR). The Project Team is in the preliminary design phase of the Remediation Project, which will include refinements to some of the technical details associated with the preferred treatment option. The existing water treatment plant will be kept in service until the new water treatment plant is successfully commissioned.

Section 6.6 of the DAR provides the measures proposed to keep people away from the existing tailings and sludge deposits. The tailings ponds and sludge pond will be covered to eliminate tailings dust and isolate the tailings and sludge from the environment. Long-term monitoring and maintenance is required to ensure no erosion exposes the tailings. Restricting human access to the covered areas will be considered if excessive recreational vehicle damage is observed upon routine inspection as outlined in Table 14.2.1 of the DAR and Remediation Plan Supporting Document K1, Table 16.

In Section 6.8.5 of the DAR, the plans for future sludge disposal are provided. In the short-term, the sludge from the water treatment plant may be disposed of underground. An engineered landfill would be constructed to dispose of the sludge in the long-term. It would consist of a series of cells and each cell would be covered when filled. Public access to the active cell of the landfill would be restricted by fencing.

References

SENES Consultants Limited, 2005. *Water Treatment Update, Giant Mine Remediation Plan*. Prepared for SRK Consulting. August. (Giant Mine Remediation Plan Supporting Document L1).

