



# Giant Mine Environmental Assessment IR Response Template

Round One: Information Request - Environment Canada #05

May 31, 2011

## INFORMATION REQUEST RESPONSE

**EA No: 0809-001**

**Information Request No: Environment Canada #05**

**Date Received**

February 28, 2011

**Linkage to Other IRs**

Alternatives North IR #21

**Date of this Response**

May 31, 2011

**Request**

***Preamble:***

Geochemical testing of tailings samples was performed and yielded valuable information about the redox buffering capacity of the backfill. However, tests aimed at simulating mildly reducing conditions were not successful.

***Question:***

Please provide information on if there has been additional testing and attempts at this testing aimed at simulating mildly reducing conditions.

**Reference to DAR:**

DAR, s.5.2.2 Other Underground Arsenic Sources

**Reference to the EA Terms of Reference**

TOR, s. 3.2.3 Description of the Existing Environment

**Summary**

Impact of the backfilled stopes on mine water chemistry during the reflooding of lower levels of the mine was to be monitored using a Multilevel (MP) system installed in the shaft. However, these attempts to test the reducing conditions of the backfill have been unsuccessful.





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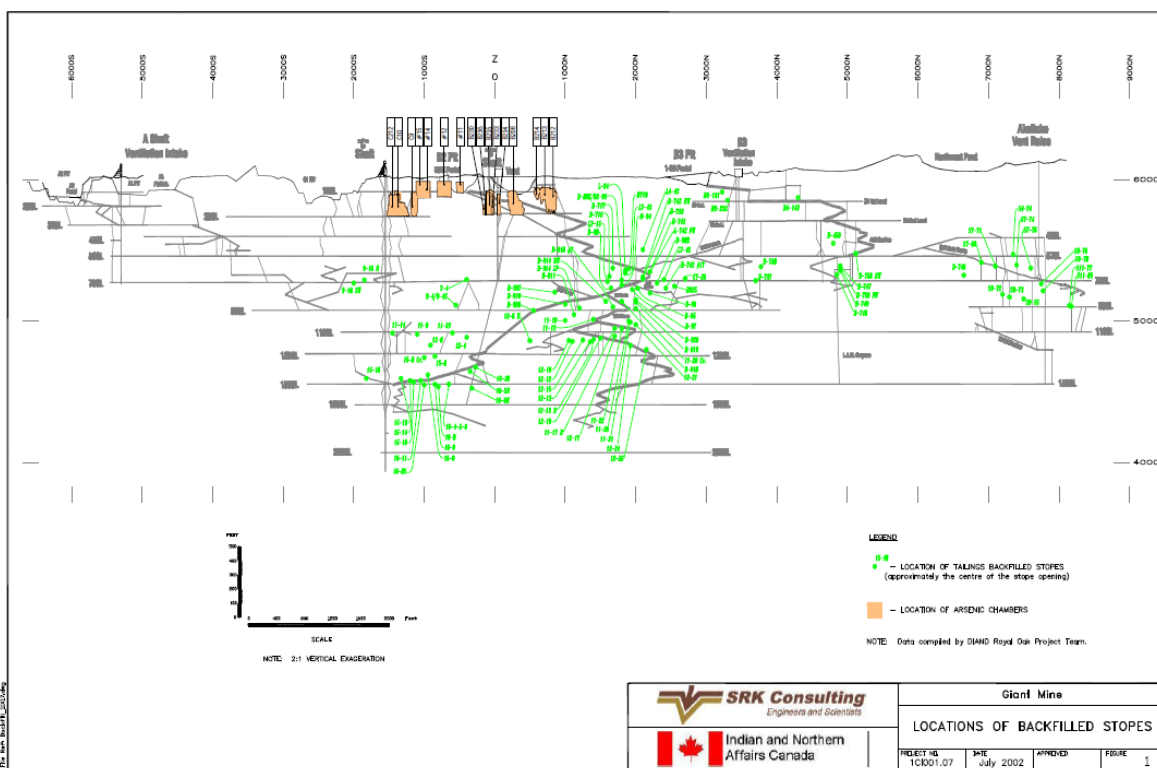
May 31, 2011

## Response

Impact of the backfilled stopes on mine water chemistry during the reflooding of lower levels of the mine was to be monitored using a Multilevel (MP) system installed in the shaft. The monitoring system was designed upon the assumption that water from the mine would be pumped out via a drill hole based pumping system located just south of the C-Shaft. The flow of mine water past the backfilled stopes and the C-Shaft to the pump inlet(s) would allow for sampling of water that had interacted with the backfilled stopes, as shown in the figure below from SRK, 2002.

However, changes in the mine water pumping system design led to it being located at the Akaitcho Shaft area. Therefore, water sampled by the C-Shaft MP system was not representative of water impacted by interaction with backfilled tailings, but rather more likely to represent water cascading down C-Shaft, or from the southern part of the mine (A-Shaft region).

As a result, the Remediation Plan continues to assume that contact with the backfilled tailings will cause the minewater to be sufficiently high in arsenic that it will need to be managed and treated indefinitely.



## References:

SRK Consulting Inc., 2002, *Giant Mine Tailings Backfill*. Prepared for Indian and Northern Affairs Canada. (Giant Mine Arsenic Trioxide Management Alternatives – Final Report, Supporting Document 4b)





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