



Mackenzie Valley Land and Water Board
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Staff Report

Applicant: Indian and Northern Affairs Canada – Giant Mine Directorate	
Location: Giant Mine	Application: MV2007L8-0031/N1L2-0043
Date Prepared: July 21, 2011	Meeting Date: August 4, 2011
Subject: Update on Tailings Flood	

1. Purpose/Report Summary

To provide the Board with an update on the tailings flood at Baker Creek.

2. Background

- October 19, 2007 – Indian and Northern Affairs Canada (INAC) submitted a new type A water licence to conduct closure and reclamation activities at the Giant Mine site;
- February 21, 2008 - the Board made a preliminary screening decision not to refer the proposed project to environmental assessment;
- March 31, 2008 – the City of Yellowknife referred the project to environmental assessment;
- October 27, 2010 – INAC submitted the Developer’s Assessment Report (DAR) to the Mackenzie Valley Environmental Impact Review Board (MVEIRB);
- December 21, 2010 – MVEIRB determined that the DAR was in conformity with the Terms of Reference, and the proposed project is currently in the Information Request phase of the environmental assessment process;
- May 14, 2011 – tailings area became flooded when an ice dam formed on nearby Baker Creek;
- May 30, 2011 – Inspector issued an Inspector Direction under paragraph 37(1)(b) of the *Northwest Territories Waters Act* to permanently mitigate the historic tailings in Baker Pond;
- July 12, 2011 – Board staff attended a public presentation on the Baker Creek tailings flood; and
- August 4, 2011 – update presented to Board.

3. Discussion

On May 14, 2011, the tailings area was flooded when an ice dam formed on nearby Baker Creek. The dammed creek flooded its banks and washed over the tailings. The water flushed through the tailings and flowed back into Baker Creek, which flows into Great Slave Lake.

On May 30, 2011, the Inspector issued an Inspector Direction directing the Giant Mine Directorate to permanently mitigate the historic tailings in Baker Pond (Jo Jo Lake) to eliminate the potential adverse affects (see attached Inspector Direction).

INAC, Public Works and Services, the Department of Fisheries and Oceans, and Environment Canada have been working together to address the issue, and sampling has been conducted. The Giant Mine Project Team organized an information session on July 12, 2011 to update the public on how the event occurred, how the flooding was mitigated, and what the sampling results demonstrated. The session included a presentation (attached) by Golder Associates, who were hired to conduct fish and water sampling to monitor the effects of the event.

Water containing very high levels of TSS and metals (including arsenic) was flushed through Baker Creek into Back Bay; however, this was a short-term event. TSS and metals had returned to background levels within two weeks at Baker Pond and within about a week at the mouth of Baker Creek. The contaminated water was not acutely toxic to aquatic life, and spawning, hatching, and out-migration of fish appears to have been successful. No public health warning was issued for Back Bay.

So far, the Giant Mine Project Team has identified two options for permanent mitigation of the historic tailings – capping, or partial removal of tailings combined with capping. The mitigation plan is due August 1, 2011 for the Inspector's approval.

4. Comments

n/a

5. Review Comments

n/a

6. Security

n/a

7. Conclusion

Board staff will continue to keep the Board apprised of the activities happening at Giant Mine.

8. Recommendation

n/a

9. Attachments

- Golder Associates Presentation - July 12, 2011.

Respectfully submitted,



Lindsey Cymbalisky
Regulatory Officer