In accordance with the Terms of Reference, which instructed the developer to provide a comprehensive analysis of the key line inquiry, Tyhee should put more emphasis on the questions related to the key line of inquiry. To facilitate this, the information requests in part one contain short descriptions of the information gaps that the Review Board identified in the DAR.

IR Number: 1-1-5

Source: Mackenzie Valley Review Board

Ta Tyhee

Water Quality Issues Related to Existing Impacts from

Discovery Mine (Cumulative Effects)

Background

Tyhee proposes to use the tailings cap at Discovery Mine as an airstrip for mine construction and operation on a long term basis. Tyhee also proposes to use Round Lake, which currently receives runoff water from Discovery mine, as a settling pond.

To properly assess the likelihood of significant cumulative impacts on water quality the Review Board requires additional information on the existing contaminants load in Round Lake and how Tyhee's development plans may add to it, as well as impacts that may result from damage to the tailings cap due to continued use as an airstrip.

Request

- 1. Please provide a discussion and analysis of potential impacts from a tailings cap failure.
- 2. Provide more information on Tyhee's plans for Round Lake. With respect to water quality, please account for Round Lake inputs to the tailings facility. Also indicate how Tyhee may add to contaminant load in Round Lake.

Tyhee NWT Corp Response (Revised May 31, 2012)

Request

1. Please provide a discussion and analysis of potential impacts from a tailings cap failure.

Tyhee wishes to advise the MVEIRB that subsequent to the submission of our IR responses in March 2012, further discussions with AANDC's Contaminate and Remediation Directorate have been underway with Tyhee's proposal to utilize a larger portion of the Discovery Tailings cap and now, based on recent Feasibility Study findings, concludes that the use of the Discovery Tailings cap area as a waste rock storage facility is an advantage to Tyhee and could enhance the long term performance of the Discovery Tailings Cap for AANDC- CARD.

Discussions with AANDC CARD are ongoing and once an agreement is in place, it is assumed that both Tyhee and AANDC CARD would provide the MVEIRB with details on the YGP's intended use of the Discovery Mine tailings cap.

Associated with the extended activities on the Discovery Mine tailings cap is the relocation of the current airstrip to the waste rock storage facility between Narrow and Winter Lakes, estimated to be after year two of operations.

The attached figure provides the current plans for the Discovery Mine tailings cap.

Request

2. Provide more information on Tyhee's plans for Round Lake. With respect to water quality, please account for Round Lake inputs to the tailings facility. Also, indicate how Tyhee may add to contaminant load in Round Lake."

Revised Plans for Round Lake

In conjunction with the increased use of the Discovery Mine tailings cap and as mentioned in our submission in March 2012, Round Lake will be drained and that area will be incorporated into the waste rock storage facility that will now cover an extended area of the discovery mine tailings cap. As mentioned in our March 2012 IR response, this revision was proposed for two main reasons, first it would reduce the haulage costs for waste rock and second it would place the waste rock facility in a brownfield site that is already impacted by Discovery Mine tailings. The run-off and seepage from this waste rock storage facility will be directed to one of two areas depending on the quality, 1) the mill, 2) the TCA. Because of the location of this waste rock storage area no water would reach the receiving environment without being treated in the TCA.

Water Quality

Since Round Lake will be drained prior to waste rock deposition, it is expected that this water may be directed to the TCA or discharged directly to the downstream environment. Historical water quality data, reported by Tyhee in its annual water license report confirms that Round Lake could be discharged directly downstream with no adverse effects. Constituent load to Round Lake will not be an issue based on the revised mine plan.



Knight Piésold

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