



Date: September 30, 2015

To: Mike Aziz, Mine Manager
Equity Mine

Cc: Diane Howe, Deputy Chief Inspector, Reclamation and Permitting, MEM
Heather Narynski, A/ Manager, Geotechnical Engineering, MEM

Re: **Review of Letter of Assurance Submission from June 30, 2015**

The Ministry of Energy and Mines (MEM) has engaged a consulting firm to evaluate the consistency and compliance of your letter of assurance in response to the Chief Inspector's orders issued on February 3, 2015. This review has determined that your submission satisfies the requirements of the order.

Below is a summary of the assessment made by your Qualified Professional Engineer (QPE) with associated plans/schedule to address the gaps identified:

Status of Foundation Condition

"The three dams forming the tailings impoundment are reported to be founded on a glacial till overlying bedrock." "There is very limited investigation data available on the actual foundation conditions for Dam No. 2 and the Diversion Dam" and "Based on historical lab testing and a screening of Dam No. 1, it is possible that a portion of the dam foundation could actually be at or near a normally consolidated state and potentially subject to contractant behavior during shear which is not accounted for in the original designs from the 1980's."

The mine has committed to:

- *"Drilling into foundations of the tailings dams to validate the previous geological models and update the stability assessments for the three dams (2016)."*

Status of Water Balance Adequacy

"Equity actively decants any additions impoundment water from direct precipitations. Surplus mine water is not stored in the tailings impoundment. The pond level is brought down below El. 1292.0 m prior to winter each year to provide storage of the environmental design flood event. Under Inflow Design Flood (IDF) conditions, the hydraulic performance of the tailings impoundment is governed by the characteristics of the closure spillway which was designed to

accommodate the flow associated with the Probable Maximum Flood (PMF) from the entire catchment upstream of the impoundment.”

Status of Filter Adequacy

“There is little construction information available” with regards to filter adequacy at the Equity Silver Mine. “The available as-constructed records for Dam No. 1 starter dam filter materials indicate that the filter was constructed in accordance with the design” and “there has been no indication of internal erosion through the foundations or abutments of any of the dams in the past 20+ years since the mine has ceased operation. The lack of filter continuity in the Diversion Dam below elevation 1274 m represents a potential gap that should be assessed further.”

The mine has committed to:

- *“Updated seepage analysis to be completed for evaluating the gradients at the till/rockfill interface of the Diversion dam starter dam given the changing water levels in the Diversion Pond (2015).”*

MEM supports the proposed plan of action. Please ensure that all work as outlined above is completed within the specified timeframe. MEM will be following-up by January 15, 2016 and 2017 to obtain a status update with respect to the work completed and commitments made.

The orders issued on February 3, 2015 have been requested to provide assurance the conditions at the Mount Polley dam do not exist in other facilities. Please ensure that you are meeting your other ongoing requirements to ensure Tailings Storage Facility safety with respect to the following:

- Satisfying any outstanding orders from previous Ministry inspection reports.
- Satisfying any outstanding recommendations from previous Dam Safety Inspections (DSI) or Dam Safety Reviews (DSR).

It is expected that you will ensure dam safety management is continuously reviewed, improved and refined throughout the life of mine.

Thank you for your submission to the orders of February 3, 2015.

Sincerely,

A handwritten signature in black ink, appearing to read 'Al Hoffman', is written over a horizontal line.

Al Hoffman, P. Eng.
Chief Inspector of Mines
Ministry of Energy and Mines