



Date: September 30, 2015

To: Shannon Campbell, General Manager
Nyrstar Myra Falls

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 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

"Glaciolacustrine materials, including materials classified as silt and clay, were encountered in boreholes drilled by Knight Piésold Limited (KPL) in 1982 during the preliminary and detailed design phases of the Old Tailings Disposal Facility (TDF). The site investigations completed during the design phases of the Old TDF have identified the presence of glaciolacustrine silt and clay but are considered by Amec Foster Wheeler to be not sufficient to determine with confidence the lateral and vertical extents of the glaciolacustrine sediments." In addition, "Based on Amec Foster Wheeler's review of the available geotechnical reports, undrained shear failure of the glaciolacustrine materials specifically was not taken into account in the stability analyses conducted during the design of the Old TDF or the seismic upgrade."

The QPE has recommended to:

- *"As previously noted, additional investigation is currently in process in the Old TDF area to further delineate the lateral and vertical extents of the glaciolacustrine materials encountered in boreholes drilled by KPL and KCL. The first phase of the investigation includes sonic borehole drilling and sampling, in situ vane shear testing and cone penetration testing. A second phase of investigation is planned to take place immediately following the first phase, if the results from the first phase indicate more information is required. The first phase of the investigation is currently underway. The associated undrained stability analysis is planned for completion before the end of 2015."*

Status of Water Balance Adequacy

“Surplus water is not stored in either tailings facility. With respect to dam safety, the dams have an excess of drainage capacity as compared to total water inputs, and no further water balance work is required for dam safety.”

Status of Filter Adequacy

“The filter zone in the Lynx TDF dam was constructed to the design intent, as confirmed by construction inspections and laboratory gradation testing. In the Old TDF there are indications of potential piping erosion at locations on both the Paste Berm and the Outer Embankment Berm.” For the Outer Embankment Berm, “water management practices have been established that minimize the amount of water and/or water pressure available to cause piping erosion. With respect to the Paste Berm, two interim actions were taken to reduce the risk of piping erosion ... areas of known piping were covered with a non-woven geotextile filter fabric and free draining crushed rock and water levels in the adjacent area of the Amalgamated Paste Area were reduced by installation of a diesel pump. Current proposed upgrades to water management include addition of a decant in that area, which will maintain lower pond levels passively.”

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 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', written over a horizontal line.

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