



Date: September 30, 2015

To: Kevin McMurren, Mine Manager
Barkerville Gold Mines Ltd., Goldstream Mine

Cc: Diane Howe, Deputy Chief Inspector, Reclamation and Permitting, MEM
Heather Narynski, Sr. Geotechnical Inspector, 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 available information from the site investigations (primarily drillholes and test pits) indicate the majority of the foundations are predominantly sand and gravel with little clay and silt and are, therefore, not similar to the problematic soils at Mount Polley. The amount of site investigation conducted is insufficient to confirm the interpreted geological conditions beneath the North Dam."

The mine has committed to:

- *"A more complete stability analysis to be performed in order to verify that the dams have the minimum factors of safety required by the CDA Guidelines under the dams' current configuration, consequence classification, and site conditions, to be performed in 2015. Depending upon the results of the analyses, consideration should be given to installation of additional piezometers in the dam fill and foundations."*

Status of Water Balance Adequacy

"There is no surplus mine water in the Goldstream TSF. In the event of a 'wet year,' assumed to be a 100-year return period event, excess inflows to the TSF will be discharged via the spillway".

The mine has committed to:

- *“Discharge capacity of Emergency Spillway, to be confirmed in Q3 2015.”*
- *“Management of Inflow Design Flood (IDF) by the diversion structures, will be evaluated in Q3 2015.”*

Status of Filter Adequacy

“Information gaps in the construction record are present. In addition, the design and the as-built gradations of the filters do not meet modern standards for filter design. Despite these shortcomings... No documentation of observations of local deformations / washouts, voids, or piping in the construction, operations and closure records”. Nevertheless, “The nature of the discolored ponded water at the North Dam downstream toe should be further investigated and the seepage from both the North and West Dams should be monitored on a weekly basis for the seepage rates and for the presence of any suspended solids.”

The mine has committed to:

- *“Ongoing monitoring of North and West Dam to be carried out on a weekly basis.”*
- *“Weirs to be re-established by July 15, 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 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,



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