

# THE VANCOUVER SUN

## Crack in Mount Polley mine's dam noted in 2010 inspection report

Imperial Metals, B.C. government refuse to comment on report, cite ongoing investigation into dam's collapse

By Gordon Hoekstra, Vancouver Sun September 26, 2014 9:06 AM



*A aerial view shows the damage caused by a tailings pond breach near the town of Likely, B.C. Tuesday, August, 5, 2014. The pond which stores toxic waste from the Mount Polley Mine had its dam break on Monday spilling its contents into the Hazeltine Creek causing a wide water-use ban in the area. THE CANADIAN PRESS/Jonathan Hayward ORG XMIT: JOHV128*

*Photograph by: JONATHAN HAYWARD , THE CANADIAN PRESS*

**A 2010 dam safety inspection at the Mount Polley gold and copper mine identified several concerns, including the discovery of a 10 to 15-metre long “tension” crack in the earthen dam.**

The crack was discovered in the perimeter wall, the same embankment where a section failed Aug. 4 of this year, releasing millions of cubic metres of water and tailings containing potentially toxic metals into Hazeltine Creek and Quesnel Lake.

“A tension crack does not necessarily indicate a plane of weakness in fill materials but it can’t be ignored either,” Knight Piesold, the company’s geotechnical engineering firm at the time, said in its report obtained by The Vancouver Sun.

Knight Piesold recommended a stability assessment be carried out, and told the company the crack should have been reported to them immediately. It was noticed by a grader operator two months before the engineer’s inspection on Oct. 7, 2010, and had been partly covered over with dirt.

No signs of distress were identified at the tailings embankments other than the tension crack, the report said.

Other concerns identified by Knight Piesold included that 40 per cent of 92 instruments that measure water pressure in the dam were broken and needed to be replaced before the height of the dam was raised. The height of the dam is raised on an almost continual basis to contain rising levels of water and tailings.

Replacing the instruments, called piezometers, had already been identified as an issue in 2006 during a more detailed dam safety review conducted by engineering firm AMEC.

The 2010 report offers the first documented details of concerns that had been raised specifically about the tailings dam at Mount Polley mine.

Until now, concerns raised after the dam’s collapse have focused on the challenges the mine faced in dealing with too much water in the tailings storage facility.

It is unknown if the concerns raised in 2010 were addressed by Imperial Metals.

The company declined to respond to questions on if, and how, they had dealt with the issues raised by Knight Piesold.

Steve Robertson, Imperial Metals vice-president of corporate affairs, said the company would not comment during investigations of the dam collapse.

Those investigations are being carried out by the B.C. Conservation Service, B.C.’s chief inspector of mines, the company and a panel of geotechnical experts appointed by the B.C. government.

“It’s an important conversation, but the timing isn’t right. It would best take place after the investigations are complete,” Robertson said Thursday.

“It would be foolhardy to talk about it now,” he said.

Imperial Metals president Bryan Kynoch has said previously the company followed engineers’ instructions on dam design and construction.

The B.C. Ministry of Energy and Mines also declined to discuss the concerns raised in the 2010 dam inspection report or make an official available for an interview.

The provincial government also refused to provide the 2011-2013 dam and tailings facility inspection reports, which the company is required to have completed annually by a professional engineer under provincial law.

In a written statement, chief inspector of mines Al Hoffman said he has advised the ministry not to release or comment on materials related to the Mount Polley investigation. “Sharing or commenting on the information contained in these materials could impact the integrity of the ongoing investigations,” Hoffman said.

After the investigation is complete, findings and other “appropriate” documentation will be made available to the public and media, he said.

The Sun obtained the dam inspection reports for 2007-2010 from the Cariboo Regional District Library in Williams Lake, where they have been routinely filed by Imperial Metals for some years as part of comprehensive annual environmental and reclamation reports.

Other concerns raised in the 2010 inspection report include:

- A buttress for the dam meant to be constructed along its entire length was only constructed on the west side.
- The company had continuing problems with creating tailings beaches in the storage facility, formed when tailings are deposited at the embankment. Knight Piesold noted the Ministry of Energy and Mines had identified this as a “deficiency” in a 2008 geotechnical inspection. The beach is considered an important buffer between the dam’s embankment and water in the pond.
- A recommendation that the consequence of failure ranking for the dam be reviewed, specifically considering the potential damage to downstream fish and/or wildlife habitat based on a breach for the dam’s final height. Because of the extended life of the mine, the height of the dam was expected to be higher than the original design.

Few issues were raised by Knight Piesold in its 2007-2009 inspections.

The 2010 inspection was the last that Knight Piesold conducted for Mount Polley.

Knight Piesold, the firm that designed the tailings dam, issued a public statement after the dam collapse saying it warned the company and provincial officials that the structure was “getting large” and care needed to be taken to avoid problems.

B.C. Mines Minister Bill Bennett has characterized the Knight Piesold letter to the province as routine.

Knight Piesold did not respond to a request for an interview.

AMEC, the firm that conducted tailings facility inspections after 2010, also declined to comment.

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