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Deadly Brazil dam collapse puts spotlight on mining safety

Similar tailings dam failure took place last year at Mount Polley mine in B.C. Interior

By Gordon Hoekstra, Vancouver Sun November 12, 2015



The village of Paracatu de Baixo was buried by an avalanche of mud and mining sludge earlier this week, and the collapse of the Samarco mine tailing dam has reignited concerns about B.C. tailings dams.

Photograph by: DOUGLAS MAGNO , AFP/Getty Images

A deadly mine tailings dam collapse in Brazil has reignited concerns about safety in British Columbia where a similar collapse at Mount Polley mine last year caused environmental damage but no fatalities.

The catastrophic collapse of a dam at the Samarco iron ore mine, a joint venture of Vale SA and BHP Billiton, has left eight confirmed dead, another 21 people missing and hundreds of Brazilians displaced.

In the aftermath of the Brazil dam failure last week, both First Nations and environmentalists in B.C. are pointing to research released last summer by U.S.-based conservation groups, including the Center for Science in Public Participation, that predicted there would be more mine dam failures around the world as companies pursue lower-grade ore bodies that require bigger operations to make them economical and produce larger amounts of mine waste.

Esdilagh First Nation chief Bernie Mack said he was not surprised by the Brazil disaster given what the research says on the global pace of tailings dam failures.

The Brazil catastrophe, coupled with the Mount Polley failure, shows that British Columbia must take a precautionary approach to tailings dam safety and introduce new standards, said Mack.

He is an advocate for treating water in tailings ponds to remove metals, and then releasing it, as a way to minimize water storage and reduce the heights of dams.

“I am pro-mining, but at the same time I want it to be done using best practices,” said Mack, whose Interior community is in a region that has operating and proposed mines.

The tailings dam failure at Imperial Metal’s Mount Polley gold and copper mine last year released millions of cubic metres of mine waste called tailings into Quesnel Lake, an important salmon-spawning watershed.

A B.C. government-commissioned engineering panel recommended moving away from storing mine waste under water and behind dams, suggesting the use of dry stacking, but also calling for strengthened tailings dam design regulations.

The B.C. Ministry of Energy and Mines is reviewing how it will change regulations to implement recommendations from the engineering panel.

Sierra Club of B.C. campaigner Jens Wieting said the Brazil tailings dam collapse should be another “wake-up” call to regulators and the mining industry, including in B.C.

“What this means is that our governments absolutely have to move forward with clearer regulations, clearer standards,” said Wieting.

He said regulators and the mining industry have to seriously consider moving to technologies such as dry stacking, where water is removed from tailings, they are compressed and stacked.

B.C.'s chief inspector of mines Al Hoffman said the Brazil dam collapse was a tragedy and offered the province's condolences to those affected.

He noted the cause of the Brazil disaster is unknown.

"B.C. is currently taking a leadership role in Canada and internationally to learn from Mount Polley and will make any necessary changes to regulations and practices to make sure it doesn't happen again," Hoffman said in a written statement.

Mining Association of B.C. president Karina Brino said the industry will be paying close attention to the Brazil incident and to the findings on cause.

"The commitment to continuous improvement is there, but we also have to learn how to risk manage and mitigate in light of these two incidents that have happened," said Brino.

She acknowledged that was particularly important given companies are pursuing lower-grade ore bodies, which means larger facilities.

A research report by the U.S.-based Center for Science in Public Participation and Bowker Associates released this summer concluded the global rate of serious tailings dam failures was increasing. According to their report, 33 of 67 serious tailings dam failures in the last 70 years took place in the past 20 years.

The research was done as a result of the Mount Polley tailings dam failure.

Report co-author David Chambers said their research shows that disasters like the one in Brazil are inevitable unless mining practices change.

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