

ENVIRONMENTAL JOURNEYS:

BRITANNIA 1918 TO NEW PROSPERITY 2014

With this lesson plan your students will develop an understanding of how environmental protection has gone from non-existent to an essential part of mining in Canada.

Environmental standards over the past 100 years have changed considerably. Consider the following statement from the 1918 Minister of Mines Report on how Britannia was handling its waste.

The tailings from the jigs [machinery for crushing rock] are transferred to the tube-mills [machinery for crushing rock], crushed fine, and sent to the flotation cells [machines for separating mineral from waste rock] and the concentrates [mineral bearing minerals extracted from the processed rock] are shipped to the smelter [a building where the mineral is heated and melted to separate metal from mineral], while the tailings [waste rock], after being carried through launders [a tool for recovering residual minerals from waste rock], are deposited on the beach by means of a short tunnel driven from under the side of the mill to low-tide mark, so that when the tide floods the material is carried out to sea.

In other words, the waste rock from the Mill was dumped into the ocean at the low tide shoreline.



Does it sound as if government or the Mine had any concern for the impact of the waste?

Ask your class if they have any concerns about dumping waste in the ocean to be 'carried out to sea'.

Ask your class to identify reasons for their views on dumping waste in the ocean.

Ask your class to consider how they might feel about ocean dumping if they did not think this action had a negative impact.

The reason for ocean dumping lies in part in the fact we did not understand what impact our industrial activities were having at that time.

As the awareness of the impacts of mining and other activities grew, our waste management standards became more stringent. In 1973, the year before the Britannia Mine closed, government recommended tailings dumped in the ocean to be deposited past the intertidal zone at a depth of 150 feet. (For more on this topic, see 'Environmental Journeys – The Missing Years' in the BCMM Teacher Resource section of our website.)

In the long run, depositing of the mill tailings (waste rock) in the ocean proved to be the best option for tailings disposal at Britannia. Trapped away from oxygen, the pyrite in the waste cannot react to form Acid Mine Drainage. Had the materials been disposed of on land, the environmental impact of the Mine could potentially have been much greater.

Compare this approach to the standards of today. Before a mine opens today, it must plan for its environmental protection during operation and post closure.

A good example of how our attitudes have changed on disposing of mine waste in natural bodies of water can be seen in the environmental review process for the proposed New Prosperity Mine.

Note: Canada does not ban all waterway disposals. What is required now is an assessment of the impact. The impact must be low enough as to not cause permanent damage in order to be approved.

New Prosperity in the news:

<http://www.vancouversun.com/news/energy+mines+minister+backs+proposed+Prosperity+mine+Ottawa+meeting/9385516/story.html>

<http://www.mining.com/opponents-of-new-prosperity-mine-rally-in-front-of-taseko-headquarters-34866/>

<http://www.vancouversun.com/business/resources/Vancouver+Taseko+Mines+requests+judicial+review/9236937/story.html>

The verdict on the second application for New Prosperity, as of Feb 2014:

<http://ceaa.gc.ca/050/document-eng.cfm?document=98459>

As of March 2014, the story is not over. Search for news on Taseko New Prosperity Mine, and visit the site <http://www.newprosperityproject.ca>.



Discuss with your class the different opinions on the proposal and why it is so contested.

Have your students compare and contrast the attitudes on tailings disposal from 1918 to now.

Discuss with your students: Are we doing enough to protect the environment?

Discuss with your students the Government's verdict on New Prosperity.