

Hayes, Dana GCPE:EX

From: Franklin, Kimberley GCPE:EX
Sent: Thursday, August 7, 2014 6:22 PM
To: Karn, David GCPE:EX; Abbott, Rob ENV:EX; Airey, David ENV:EX; Austad, Bob ENV:EX; Bawtinheimer, Brian ENV:EX; Bell, Tom G ENV:EX; Brouwer, Shauna CSNR:EX; Canuel, Aaron ENV:EX; Caul, Doug D EAO:EX; Cotton, Brian GCPE:EX; Crebo, David GCPE:EX; Dalal, Suntanu GCPE:EX; Dale, Alec R ENV:EX; Danks, Anthony ENV:EX; Day, Kristin ENV:EX; Dhanowa, Damon ENV:EX; Doyle, Chris J ENV:EX; English, Heather ENV:EX; Forsdick, Doug O ENV:EX; Glover, Hannah GCPE:EX; Grbavac, Danielle ENV:EX; Hancock, Tom ENV:EX; Hitchcock, Gord ENV:EX; Jackson, Vickie ENV:EX; Jonker, Jennifer B ENV:EX; Kennedy, Karla EAO:EX; Kriwoken, Lynn ENV:EX; Leake, Greg EAO:EX; Lesiuk, Tim ENV:EX; Leslie, Barb ENV:EX; Lilly, Liz ENV:EX; Lord, Michael CSNR:EX; Lowe, Sonia GCPE:EX; McGuire, Jennifer ENV:EX; Melderis, Martin W ENV:EX; Mentzelopoulos, Athana JTST:EX; Mitschke, Matt ENV:EX; Murai, Launa Y ENV:EX; Murphy, Bernadette GCPE:EX; Nicoll, Sara ENV:EX; Olsen, Rod ENV:EX; Polak, Mary ENV:EX; Poss, Angie ENV:EX; Ranson, David ENV:EX; Shepard, Michael EAO:EX; Shoemaker, Wes ENV:EX; Speed, Brittney; Stainton, Beverley ENV:EX; Tsang, Diana CSNR:EX; van Marum, Karen GCPE:EX; Zacharias, Mark ENV:EX
Subject: Media Report for Thursday, August 7, 2014

Media Report for Thursday, August 7, 2014

Awaiting M.O. approval

Not Responsive

Today's calls

Business News Network (Andrew Bell) Reporter wants to know whether the ministry warned Imperial Metals about the level of wastewater in the tailings pond on five occasions?

GCPE provided bullets:

- There was only one incident related to the height of the tailings pond. On May 24, 2014, the ministry issued an advisory to the company for exceedance of the height of effluent within the tailings impoundment. The effluent level returned to authorized levels commencing June 30, 2014.
- There were four other advisories to Mt. Polley from the ministry since 2012:
 - April 18, 2014: The ministry issued an advisory to Mount Polley Mining Corporation for bypass of authorized treatment works. The site experienced high flows due to spring freshet which caused the pump system to become blocked and resulted in an overflow of effluent to the long ditch. Flow did not reach the creek and was directed into Till Borrow Pit.
 - January **and** April 2012: The ministry issued an advisory to Mount Polley Mining Corporation for not submitting monitoring data for one of the groundwater monitoring wells.
 - August 30, 2012: The ministry issued a warning to Mount Polley Mining Corporation for failure to report exceedance of the height of effluent for the perimeter pond. This perimeter pond overflowed, releasing approximately 150 cubic metres of effluent over 13 hours to ground.

The Vancouver Sun (Larry Pynn), Global BC (Miguel Ramos), Canadian Press (James Keller) Reporters looking for the action plan.

GCPE provided bullets:

- Imperial Mines met the Aug 6 deadline requirements of the pollution abatement order to submit an Action Plan for the Preliminary EIA and initiated environmental monitoring yesterday. The plan will not be available publicly until the Ministry of Environment review has been completed.

The Vancouver Sun (Larry Pynn) Reporter looking for the May 24 order.

GCPE provided inspection record

Not Responsive

Not Responsive

Previous calls completed

The Globe and Mail (Andrea Woo) & The Tyee (David Ball) Looking for more information re: Mount Polley
GCPE provided bullets:

Recent permit history:

- Mount Polley has had an effluent permit (#11678) with the Ministry of Environment since 1997.
- Mount Polley mine operates with an annual water surplus, and had 6.5 million cubic metres of water stored in the tailings storage facility.
- In 2009, Mount Polley applied for an permit amendment to discharge up to 1,400,000 m³/year of dam seepage effluent from the tailings storage facility to nearby Hazeltine Creek. The amended permit limits discharge to 35% of that creek's daily flow rate, with contaminant limits, and requires an annual discharge plan.
 - Prior to this permit being granted, concerns were raised about the proposal, prompting an independent report by a third party. (Brian Olding - attached)
 - This report was commissioned to provide a review of the application submitted, requesting authority to discharge water from the mine to Hazeltine Creek.
 - The scope of the third-party review included consideration of the environmental impacts on the receiving environment, monitoring of the discharge and management conditions pertaining to the discharge. These recommendations were considered carefully in the amendment process and provided a basis for some of the conditions in the amended permit, which was approved in 2012.
- Mount Polley has since submitted a further permit amendment request to discharge up to 3,000,000 m³/year of treated effluent (ditch water) to Polley Lake, which overflows to Hazeltine Creek.
- This application was received by the ministry this summer and is being considered.

Effluent Discharge Compliance:

The Ministry of Environment is not responsible for inspecting the geotechnical integrity of the tailings pond structure; this is the responsibility of the Ministry of Energy and Mines. The Ministry of Environment is responsible to ensure no unauthorized effluent discharge from the tailings pond structure. With that respect, the ministry conducted 14 inspections (office review and on-site) on the Mt. Polley Mine since 2012.

There was only one incident related to the height of the tailings pond. On May 24, 2014, the ministry issued an advisory to the company for exceedance of the height of effluent within the tailings impoundment. The effluent level returned to authorized levels commencing June 30, 2014.

There were four other advisories to Mt. Polley from the ministry since 2012:

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- January **and** April 2012: The ministry issued an advisory to Mount Polley Mining Corporation for not submitting monitoring data for one of the groundwater monitoring wells.
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Drinking water standard:

The following information relates to drinking water standard of water quality guidelines:

- Just to be clear, wastewater stored in a Tailings Storage Facility (commonly referred to as a tailings pond) is not required to meet drinking water standard of water quality guidelines.
- The purpose of including the drinking water standard of Water Quality Guidelines below was to describe the relative toxicity of the effluent released from the Mount Polley Tailings pond during this weekend's breach.
- The water quality guidelines are also considered when *Environmental Management Act* statutory decision makers determine the authorized effluent discharge quality from a Tailings Storage Facility into a water body. The authorized limit is situation specific and allows for an initial dilution zone in the water body. The authorized effluent discharge may not be the same as the drinking water standard of respective water quality guideline. If the company discharges effluent that does not meet the requirements of the permit or discharges without a permit, compliance measures will be taken as per the *Environmental Management Act*.

Tailings supernatant:

- B.C. Water Quality Guidelines are levels at which the potential exists for impacts on various water uses. Environmental Protection Division staff reviewed the tailings supernatant (i.e., the liquid in the tailings pond) data sent by Mount Polley Mining Corporation on Aug. 4, 2014 and found that for the impounded tailings supernatant:
 - The selenium concentration exceeded the drinking water guideline of 10 ug/L by a factor 2.8 times.
 - Sulphate did not exceed the drinking water guideline of 500 mg/L in May 2014. However, there have been frequent small exceedances of this guideline over the last few years.
 - Molybdenum concentrations were well below drinking water guidelines over the last two years. However, recent molybdenum concentrations in the supernatant exceeded livestock watering and irrigation guidelines of 0.05 mg/L.
 - Organic carbon concentrations exceed the 4 mg/L guidelines for chlorination (water treated with chlorine that contains >4 mg/L of organic carbon can result in toxic chlorination by-products).
- In addition, the concentration of several parameters in the supernatant exceed aquatic life guidelines, such as nitrate, cadmium, copper, iron and selenium; some of these only sporadically in the last few years.

Not Responsive

Not Responsive

Previous calls not resolved

Not Responsive

Q&A – Mount Polley Tailings Pond Breach

General:

Has it been stopped? If no, when can we expect it to?

- The tailings flow from the dam has slowed considerably
- The ground around the breach, Polley Lake, the Hazeltine Creek is still stabilizing
- The public has been asked to stay away from this area and boaters on Quesnel Lake should stay away from Hazeltine Creek Lake and Quesnel Lake

What are the next steps in the process?

- Inspectors of Mines and other agencies will undertake a comprehensive investigation of the failure to determine root causes if possible
- Lessons learned will apply to other mines in the province

How long will the process take?

- The investigation determining what caused the breach will take several months

Has the mine been shut down? For how long?

- The mine cannot operate without a location to store tailings
- Imperial Metals announced that the mine is now in care and maintenance

When was the last time there was a major tailings pond breach like this in BC?

- In the last 40 years, there have been no major tailings dam breaches of this magnitude in BC

How does BC compare to other jurisdictions on tailing pond breaches?

- BC has experienced a very positive record. This is the first significant tailings dam failure in recent history.

Mt. Polley Mine & Imperial Metals

What is the Mt Polley dam's track record? Have there been any deficiencies noted?

- Mount Polley is up to date with geotechnical reporting requirements, including the annual dam safety inspection requirements. The Ministry of Energy and Mines conducted a geotechnical inspection at the mine in September 2013, which resulted in no inspection orders related to the tailings facility.
- The Mount Polley mine has a valid Mines Act permit. The company has been generally compliant with the Health, Safety and Reclamation Code and their Mines Act permit conditions.

What is Imperial Metal's track record? Have they had similar incidents?

- In general, Imperial Metals has been compliant with the Health, Safety and Reclamation Code and their Mines Act permit conditions
- BC has some of the highest safety standards when it comes to permitting and operating mines and Imperial Metals would not have received any approvals to operate in BC if they had not measured up to those standards

How was the dam at Mt Polley being operated?

- Mount Polley Mining Corporation (the Permittee) is currently authorized by the Ministry of Environment to discharge 1.4 million cubic metres of water per year into Hazeltine Creek
- The company recently submitted an application in July 2014 to increase the volume of treated water to be discharged from the site to 3 million cubic metres per year

Is imperial required to ensure contents of pond within these guidelines at all times, how is this monitored / ensured, what action is taken when guidelines not met?

- Wastewater stored in a Tailings Storage Facility (commonly referred to as a tailings pond) is not required to meet drinking water standard of water quality guidelines
- The purpose of including the drinking water standard of Water Quality Guidelines was to describe the relative toxicity of the effluent released from the Mount Polley Tailings pond during this weekend's breach.
- The water quality guidelines are also considered when Environmental Management Act statutory decision makers determine the authorized effluent discharge quality from a Tailings Storage Facility into a water body.
- The authorized limit is situation specific and allows for an initial dilution zone in the water body. The authorized effluent discharge may not be the same as the drinking water standard of respective water quality guideline.
- If the company discharges effluent that does not meet the requirements of the permit or discharges without a permit, compliance measures will be taken as per the Environmental Management Act.

How many other mines does Imperial Metals operate in BC?

- Imperial Metals has a half interest in Huckleberry Mine near Houston, BC and Red Chris Mine is under construction and nearing operation status in Northwest BC

Cleanup and Environmental Impacts

Who is responsible for the cleanup? Does the situation change if Imperial Metals goes bankrupt?

- Clean up from this accident is the responsibility of the company
- The ministry holds \$14.5 million in security bonding for the Mt Polley mine in the event that the company defaults on its responsibilities

What actions does the Pollution Abatement Order instruct Mt Polley to carry out?

- The Ministry of Environment has issued a Pollution Abatement Order to Mount Polley Mining Corp. This order requires immediate action to stop the further release of mine tailings into nearby waterways and to submit environmental impact assessments and clean-up action plans to the ministry.
- It also requires the company to submit a written summary of actions taken to stop the release of mine tailings and to undertake preliminary environmental impact assessment and submit an action plan by today. The company must also submit a detailed action plan by Aug 15, and it is required to report weekly on the implementation of action plan measures.

The 2011 Gary Olding report implies the dam was overbuilt because a water discharge permit was delayed – is this true?

- The cause of the breach is under investigation and I can't speculate on the findings.
- Mount Polley is up to date with geotechnical reporting requirements, including the annual dam safety inspection requirements.
- The Ministry of Energy and Mines conducted a geotechnical inspection at the mine in September 2013, which resulted in no inspection orders related to the tailings facility.

Further background on the Olding Report & Recent permit history:

- Mt Polley has had an effluent permit (#11678) with the Ministry of Environment since 1997.
- Mount Polley mine operates with an annual water surplus, and had 6.5 Mm³ (million cubic metres) of water stored in the Tailings Storage Facility.
- In 2009 Mt Polley applied for an permit amendment to discharge up to 1,400,000 m³/y of dam seepage effluent from the tailings storage facility to nearby Hazelton Creek. The amended permit limits discharge to 35% of that creek's daily flowrate, with contaminant limits, and requires an annual discharge plan.
- Prior to this permit being granted concerns were raised about the proposal, prompting an independent report by a third party.
- This report was commissioned to provide a review of the application submitted, requesting authority to discharge water from the mine to Hazelton Creek.
- The scope of the third party review included consideration of the environmental impacts on the receiving environment, monitoring of the discharge, and management conditions pertaining to the discharge. These recommendations were considered carefully in the amendment process and provided a basis for some of the conditions in the amended permit, which was approved in 2012.
- Mt Polley has since submitted a further permit amendment request to discharge up to 3,000,000 m³/y of treated effluent (ditch water) to Polley Lake, which overflows to Hazelton Creek.
- This application was received by the ministry this summer, and is being considered.

Regional Issues

The Caribbo Regional District has declared a State of Emergency – what does that mean/involve?

- The Cariboo Regional District (CRD) declared a state of local emergency (SOLE) allowing it the exceptional powers to suspend certain rights and freedoms in the interest of ensuring public safety.
- In this case, the CRD required the ability to gain access to private property in order to provide heavy equipment support to the West Fraser Mills forest company that is deploying tub boats for collection/control of woody debris from Lake Quesnel.

- Additionally, the declaration allows the CRD better enable a fair distribution of potable water to the residents of Likely.

Is the Likely Bridge in danger with all the floating debris?

- At this point, there is no imminent threat to the structure
- Good progress is being made by West Fraser to boom the debris in Quesnel Lake and prevent it from reaching the bridge
- The Ministry of Transportation has two excavators stationed at the Likely Bridge to respond should any significant accumulations of debris threaten the bridge

Broader Mining in BC Issues

How does this impact the economic health of the mining industry?

- This is difficult to assess at this time. It will certainly bring more scrutiny to mine permitting processes
- Having said that, mining has a significant history and a promising future in BC
- Not only has the mining industry helped shape British Columbia over the last 150 years, it will play an important role in creating a strong and stable economic future

What are the potential penalties if it has been determined regulations were not followed?

- It's too early to determine whether Imperial Metals did not follow regulations
- Prosecution is possible pursuant to Section 37 of the BC Mines Act. This can be applied to a person who contravenes a provision of the Act, Code or the regulation or who impedes an investigation
- The decision to prosecute is made by Crown Counsel based on evidence that we collect

Given the incident at Mt. Polley, will you be inspecting all mines with tailings ponds....and when?

- If the investigations shows early on that the breach was a result of a design failure or practise at Mt. Polley then directions will be given to other applicable mine sites and inspections will be undertaken at other applicable mines in BC
- Any and all lessons learned once the investigation is completed will apply to other mines in the province

What follow up actions does the ministry take and does it trigger a review of other province wide mining operations?

- Inspectors of Mines and other agencies will undertake a comprehensive investigation of the failure to determine root causes if possible
- Lessons learned will applied to other mines in the province as appropriate

How many active metal mines are there in BC?

Active metal Mines – as of Aug 2014

Mine Name	Company	Commodity	Location	Production Start
Bralorne	Bralorne Gold Mines Ltd	Gold	Near Whistler/Pemberton	May 2011
Copper Mountain	Copper Mtn Mining Corp	Copper, gold, silver	Near Princeton	June 2011
Endako	Thompson Creek Minerals	Molybdenum	Near Fraser Lake	1965
Gibraltar	Taseko Mines Ltd	Copper, molybdenum	Near Williams Lake	Re-opened by Taseko in 2004 (previously operated 1972–1998)
Highland Valley Copper	Teck Resources Ltd	Copper, molybdenum	Near Ashcroft	1986 (this is when the Lornex and Valley Copper mines merged)
Huckleberry	Imperial Metals Corp	Copper, molybdenum	Near Houston	1997
Mount Polley	Imperial Metals Corp	Copper, gold, silver	Near Williams Lake	Re-opened 2005 (previously operated 1997 to 2001)
Mt. Milligan	Thompson Creek Metals Company	Copper, gold, silver	156 km northwest of Prince George	August 2013
Myra Falls	Nyrstar Inc	Copper, gold, silver, lead, zinc	Near Campbell River	circa 1966
New Afton	New Gold Inc	Gold	Near Kamloops	June 2012
Bonanza Ledge	Barkerville Gold	Gold		July 2014

Note* Bonanza Ledge does not have a tailings impoundment

Hayes, Dana GCPE:EX

From: Haslam, David GCPE:EX
Sent: Wednesday, August 6, 2014 11:00 AM
To: Shotton, Ryan GCPE:EX
Subject: FW: Olding Report
Attachments: PE11678 June 2013.pdf; 2012 version PE11678.pdf

Importance: High

From: Crebo, David GCPE:EX
Sent: Wednesday, August 6, 2014 10:53 AM
To: Sandve, Chris MEM:EX; Hancock, Tom ENV:EX; Hoffman, AI MEM:EX
Cc: Haslam, David GCPE:EX; Gordon, Matt GCPE:EX; GCPE Communications - Environment; Halls, Lori D ENV:EX
Subject: FW: Olding Report
Importance: High

Gents – answers to Chris’s Qs around Golding recommendations

From: Hill, Douglas J FLNR:EX
Sent: Wednesday, August 6, 2014 10:44 AM
To: Standen, Jim ENV:EX; Crebo, David GCPE:EX; McGuire, Jennifer ENV:EX
Cc: Hancock, Tom ENV:EX
Subject: RE: Olding Report

Jennifer, here are some general bullets regarding the Olding report.

- The focus of the Olding report was to review the effluent discharge application and supporting consultant documents submitted by the mine, and provide a third party review on behalf of First Nations
- The scope of the Olding report did NOT include assessment of geotechnical stability
- In making the permit amendment decision the recommendations provided by the report were considered carefully and in consultation with First Nations. Where practical the recommendations were adopted directly, and otherwise the intent of the recommendation was adopted, in consultation with First Nations (WLIB and Xatsul).

Specific comments related to points below:

1. The mine installed real time monitoring equipment just downstream of the discharge point to measure field parameter. The data from these instruments was sent to the mill control room so the information could be provided real time. The mine installed an elaborate pumping system to control the flows for the discharge remotely. This system was augmented by regular field sampling and checks by the mine.
2. The authorised works includes a settling pond. A trout live tank that operated year round was not considered practical and in consultation with First Nations a comprehensive monitoring plan was required, including biological monitoring in the receiving environment.
3. The amended permit requires development of an emergency response plan, including notification of First Nations. The permit also has requirements for comprehensive monitoring around the entire mine site (sec 3 of permit).

djh

From: Standen, Jim ENV:EX
Sent: Wednesday, August 6, 2014 8:22 AM
To: Crebo, David GCPE:EX; Hill, Douglas J FLNR:EX; McGuire, Jennifer ENV:EX
Cc: Hancock, Tom ENV:EX
Subject: RE: Olding Report

That is best answered by Doug.

From: Crebo, David GCPE:EX
Sent: Wednesday, August 6, 2014 7:37 AM
To: Hill, Douglas J FLNR:EX; Standen, Jim ENV:EX; McGuire, Jennifer ENV:EX
Cc: Hancock, Tom ENV:EX
Subject: Fwd: Olding Report

Folks - can someone have an answer to MEM MO's question re: Olding report recommendations?

Begin forwarded message:

From: "Sandve, Chris MEM:EX" <Chris.Sandve@gov.bc.ca>
To: "Crebo, David GCPE:EX" <David.Crebo@gov.bc.ca>, "Hoffman, Al MEM:EX" <Al.Hoffman@gov.bc.ca>
Cc: "Haslam, David GCPE:EX" <David.Haslam@gov.bc.ca>, "Hancock, Tom ENV:EX" <Tom.Hancock@gov.bc.ca>, "Shotton, Ryan GCPE:EX" <Ryan.Shotton@gov.bc.ca>
Subject: Olding Report

From a quick scan of the Olding report, these 3 stick out as the key recommendations to me –
can you confirm

s.13

s.13

Chris Sandve
Chief of Staff to the Hon. Bill Bennett
Minister of Energy and Mines and Minister Responsible for Core Review
Office: 250-356-9944 | Cell: s 17 | E-mail:
chris.sandve@gov.bc.ca <<mailto:chris.sandve@gov.bc.ca>>