

## McKnight, Elaine L MEM:EX

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**From:** Robyn Allan <robyn@robynallan.com>  
**Sent:** Friday, May 20, 2016 10:02 AM  
**To:** McKnight, Elaine L MEM:EX  
**Subject:** Fwd: Mine Reclamation Estimates

First attempt to Mr. Hoffman, Mr. Bennett included Ms. McKnight, but was returned as undeliverable.

Begin forwarded message:

**From:** Robyn Allan <robyn@robynallan.com>  
**Subject:** Mine Reclamation Estimates  
**Date:** May 20, 2016 at 9:56:05 AM PDT  
**To:** [Al.Hoffman@gov.bc.ca](mailto:Al.Hoffman@gov.bc.ca)  
**Cc:** [MEM.Minister@gov.bc.ca](mailto:MEM.Minister@gov.bc.ca), [elaine.mcknight@gov.bc.ca](mailto:elaine.mcknight@gov.bc.ca)

Dear Mr. Hoffman,

Recently Gordon Hoekstra of the Vancouver Sun was provided with a list of mining companies' reclamation estimates, security provided and unfunded liability, by mine site. <http://vancouversun.com/business/local-business/b-c-list-details-underfunding-for-cleanup-after-mines-close>

These figures in aggregate are not consistent with the figures that have been publicly provided by the Ministry of Energy and Mines and in the Public Accounts. Some of the individual figures are not consistent with figures provided in reliable documentation such as court records. To this end I have a number of questions which I would appreciate you addressing.

1. The figure in your annual report for 2014 for security held with the province is \$773.27 million, while the list provided Mr. Hoekstra is \$892.15 million. Please explain why the amounts would be different.  
(page 28 of your report [http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/2014\\_ci\\_annual\\_rpt.pdf](http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/2014_ci_annual_rpt.pdf))

2. The Office of the Comptroller published figures from the MEM in its 2014 Public Accounts and stated that the net liabilities were \$1,278 million. Page 74  
[http://www.fin.gov.bc.ca/ocg/pa/13\\_14/Public%20Accounts%2013-14.pdf](http://www.fin.gov.bc.ca/ocg/pa/13_14/Public%20Accounts%2013-14.pdf)  
Could you please explain the difference between this figure and the \$1,262.8 million provided in the recently released detailed list.

3. Mr. Hoekstra's article says that: "The data is from 2014, the latest information available to the B.C. government." However, the figures provided in the Auditor General's report are from 2015. I have been informed that the Auditor General was provided a similar breakdown as of 2015 as provided to Mr. Hoekstra for 2014. Since the Auditor General's office is part of the BC government either Mr. Hoekstra is incorrect, has misinterpreted what he was told, or is being misled.

Could you please confirm that the Auditor General was provided with figures for 2015 and provide to me the 2015 figures for total bond amount, liability estimate and differential by mine site consistent with those provided to the Auditor General for use in its recent report or confirm that no figures are

available within the BC government for 2015 and the figures provided to the Auditor General were related to 2014. As you know the Auditor General released the aggregate figures for 2015 for the liability estimate of \$1.2 billion and \$0.9 billion for total bond amount. <http://www.bcauditor.com/sites/default/files/publications/reports/OAGBC%20Mining%20Report%20FINAL.pdf> Page 50.

4. The figures provided in the 2014 list for Walter Energy in 2014 are not consistent with the Affidavit filed by Walter Energy in court documents. Walter Energy as you are aware filed for protection under the CCAA in 2015 and its Willow Creek, Brule and Wolverine mines are in care and maintenance. The figures provided to the court as of October 2015 were for a reclamation liability of \$57.4 million US (which is about \$75 million CDN) and Walter Energy identified in paragraph 91 of the Affidavit that it had provided a listing of securities in support of this liability:

"91. As of October 2015, the Walter Canada Group had posted letters of credit for post-mining reclamation, as required by its *Mines Act* permits, totaling approximately \$22.6 million, consisting principally of:

- (a) \$3.35 million, pursuant to Mining Permit C-221, in relation to the Brule Mine;
- (b) \$6 million, pursuant to Mining Permit C-153, as amended on June 9, 2011, in relation to the Willow Creek Mine; and
- (c) \$11.5 million, pursuant Mining Permit C-223, as amended on April 23, 2012 in relation to the Wolverine Mine (collectively, the "Mining Permits")."

The figures for security provided are consistent with the figures provided in your Ministry's 2014 list, however, the liability estimate is far short of the liability estimate of \$57.4 million US provided in the Affidavit.

Could you please explain why the liability estimate in your 2014 list for Walter Energy aggregates to \$39,170,261 when Walter Energy calculates \$57.4 million US, which is approximately \$75 million CDN. Could you please confirm that your 2015 liability estimate includes Walter Energy at the Canadian equivalent of \$57.4 million US.

5. Please confirm that the security provided by Walter Energy as outlined above is still available exclusively for reclamation requirements and will not be compromised through the court proceedings. That is, since the security has been cash collateralized, does the Province have exclusive and unrestricted access to it to undertake necessary reclamation regardless of Walter Energy's ability to restructure as a going concern or not.

6. The total bond amount in the 2014 list includes bonding in excess of the liability estimate for some mine sites. Please confirm that the aggregate figure for the differential is therefore understated by this amount in that the province cannot rely on excess bonding from one mine site to be used by another mine site owned by a different company.

I have written to you with other questions but regrettably my emails have not been responded to. I can understand the volume of work and lack of staff support, so if my emails were overlooked, I would be happy to forward them to you again as I would appreciate a response to them.

I trust that you will have the courtesy of responding to this email. To that effect would you please indicate that you have received this email and provide an indication as to when my questions may be answered.

I look forward to your response.



Sincerely,

Robyn Allan  
Economist

1.

## Mine Security Bonds and Liability Estimates Q & A

### **1. What are you doing to address the underfunded mine security liabilities highlighted by the Auditor General and also in the new report from the Union of BC Indian Chiefs?**

- We have already started work to address this. The ministry holds more security bonds now than it did 10 years ago or even five years ago.
- It's important to recognize that liability estimates at mines are not static, the liability can increase from year to year depending on: mine operations, changes to the mine plan, progressive reclamation work, changes in technology and changes in the parameters of concern (i.e. water treatment for selenium and sulphates).
- Since 2011 the total amount of security held has more than doubled. This is largely a result of water treatment being required at several major coal operations because selenium has emerged as a contaminant of concern and that many coal operations have elevated selenium in their discharge.
- Historically, financial security at the Elk Valley mines was low as it was thought that reclamation liabilities were conventional (i.e. mainly removal of structures, re-sloping, re-vegetation) and that there was low risk of company default. As water quality concerns began to emerge, the ministry began proactively increasing financial securities in 2010, even though the water quality mitigation requirements were not well understood.
- It was not until the approval of the Elk Valley Water Quality Plan in 2014, that the extent of water treatment requirements was defined (i.e. 6 water treatment plants at 4 mines over 20 years, some with multiple phases of water treatment). These liabilities will continue to be assessed and securities reviewed and adjusted over time.
- Following the release of the Auditor General's report, I said we were going to review our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.
- Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

**2. What are the various forms of security for mines held by government?**

- The financial security accepted by MEM, as approved by the Chief Inspector of Mines, may be in the form of cash, treasury bill, Guaranteed Investment Certificates (GIC) held under a safekeeping agreement – a legal agreement that enables the ministry to access the GIC at any time, letter of credit, or Surety Bond. Other forms may be accepted such as an asset agreement but only under certain circumstances.

**3. For some mines, the form of security includes assets. How certain are you that government would be able to liquidate those assets in a timely manner and get full value for them? What are some examples of assets MEM accepts?**

- MEM strictly limits the use of asset agreements and is working with the few companies that now hold asset agreements to replace these with a more suitable form of financial security. (Johnny Mtn, QR, Mt Polley and Huckleberry).
- The majority of the existing asset agreements were established in the mid-90s when such agreements were deemed acceptable by the ministry. One of the asset agreements – Huckleberry – was established in 2014.
- Assets used as security under these agreements include heavy equipment (trucks) and milling equipment. To give you an idea of what some of this equipment is worth, a single haul truck can cost more than \$1.2 million to replace.

**4. How is the value of these assets calculated and by whom?**

- The valuation of the assets is calculated by 3rd party appraisers.

**5. How are the liability estimates for each Mines Act permit calculated and by whom?**

- The mine is required to provide the liability estimate to the ministry and MEM staff then review and evaluate the estimate.
- To protect taxpayers, MEM requires liability estimates to be developed based on what its reclamation costs would be if third-party contractors do the work, as opposed to estimates based on work being done by the mining company itself. This ensures that in the event the company is unable to fulfil its obligations, adequate funds are available to hire contractors to complete the reclamation work.

**6. Are these estimates verified by an independent third-party?**

- MEM inspectors evaluate all liability estimates for mines sites.

**7. The liability estimates for some of these mines seem quite low considering the potential that some will require on-going water treatment for decades. Are the long-term liabilities included in the overall liability estimates?**

- Costing for long term water treatment is done using a phased approach. If water treatment is required immediately and during operations the costing is generally included but for some sites where treatment will not be required for decades after the site closes MEM aims to have full costing in place at closure.

**8. Why have you collected bonds at some mines to cover the full estimated liability amount but not at others?**

- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.
- For example, Teck and Barrick are responsible for 75% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

**9. Is it fair to say that in the case of Teck, Glencore and Barrick, MEM has made judgements that they are safe risks?**

- In the past, judgements were made that large diversified companies posed less of a risk especially when considering conventional reclamation costs. However, several of the Teck, Glencore and Barrick sites now require long term water treatment. Given this, and recognizing the potential risk that these companies may not exist over hundreds of years, MEM has been increasing security bond requirements for these mines.
- In the past several years, security reviews have been focussed on Teck sites (specifically Elk Valley) as these have the largest unfunded liability and Teck has had applications for major expansions. Securities have been reviewed as part of the permitting process.

- One of Glencore's mines (the Bell mine) was reviewed in 2013 when the water treatment plant was permitted. The current security is \$5M, and the mine will have 100% security by November 2017 (\$25.1M) as a condition of its permit.
- The Ministry will review the financial security for Barrick sites in 2016 and 2017.

**10. Does MEM conduct financial liability risk assessments to determine which companies you allow to carry underfunded liabilities for their mine sites?**

- The MEM economist will provide a report to the Chief Inspector, when required, on Company health. This assessment is used primarily used to determine a schedule for bonding if required over a period of time.

**11. Tulsequah Chief Mine has a long-history of environmental concerns related to acid rock drainage. Given the liability estimate for reclamation of this mine is only \$1.2 million, why hasn't the Province simply moved in and addressed the issues?**

- The Tulsequah Chief is an historic mine and operated well before permitting or even acid-rock drainage (ARD) was recognized and understood.
- The current liability of \$1.2 million for the permit holder is based primarily on the surface disturbance at the mine.
- Once the company begins mining operations at the site, as part of the conditions of its permit it will be responsible for addressing the historic environmental issues at the site – establishing water treatment.

**12. Walter Energy filed for bankruptcy in 2015 leaving the future of its three coal mines near Tumbler Ridge in limbo. While the Province holds security for each of these mines, the combined underfunded liability for these mines – Willow Creek, Brule and Wolverine – is more than \$18.3 million. If government gets stuck paying for the reclamation of these sites, who is on the hook for that underfunded liability?**

- As the Mines Act permit holder for Wolverine, Brule and Willow Creek mines, Walter Energy is responsible for all reclamation costs at those sites and the company's chapter 11 filings do not discharge it from this responsibility.
- The company is in the process of trying to sell the three mine sites, but has funds set-aside to start addressing reclamation should it fail to secure a buyer. Progressive reclamation, which would be undertaken if the company is unable to find a buyer, would reduce the amount of underfunded reclamation liability.
- The Province holds security totaling \$20.85 M for the three mine sites. All security remains in good standing.

**13. Given the Walter Energy operations are all coal mines, won't these sites require long-term water treatment?**

- These sites do not require long term active water treatment..
- The company is in the process of trying to sell the three mine sites, but has funds set-aside to start addressing reclamation should it fail to secure a buyer.
- Once a new operator starts, the liability will be reassessed based on the new owner's mine plan and reclamation plan and appropriate bonding collected.

**14. What steps are you taking to reduce the underfunded liability amounts that currently exist for the three Walter Energy mine sites?**

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**15. Shasta Sable Resources has an underfunded liability of \$946,000 and has not posted any financial statements since 2014. This is a company that the OAG highlighted as having a track record of failing to comply with orders from the Ministry of Energy and Mines. What steps is the ministry taking to ensure the mine returns to compliance and are you taking steps to reduce the mine's underfunded liability?**

- MEM staff are working with Shasta toward bringing the site into full-compliance. There is a plan in place with set deadlines to get the site in full-compliance over the next 12 months.
- Bringing the mine site into -compliance will reduce the potential environmental liabilities at the mine.

**16. Barkerville Gold is a new company. Their \$7 million shortfall at QR must have been agreed to in the past year or to by MEM as the asset changed hands?**

- Barkerville assumed responsibility for all liability when the permit changed.
- The 2014 liability estimate included the need to put a lift on their dam, and other engineering studies. Both have been completed.

**17. Barkerville Gold also has a shortfall at Bonanza Ledge. Is this related to the QR site?**

- No, this is only the Bonanza Ledge site. This estimate as well will be significantly less once the new mine plan is finalized because the company are no longer going to store potentially acid generating rock at surface that would need to be relocated at closure.

**18. What was the rationale for the decision to allow Huckelberry to extend its shortfall in 2014?**

- At the time, the company did not have the financial means to address its shortfall. MEM's economist worked with the company to better understand its situation and the decision was made to accept assets in place of another financial bond. However, the company has committed to replace the asset securities with financial securities moving forward.

**19. Mount Milligan is owned by Thompson Creek but Terrain Metals Corp has the shortfall of \$5 million. Terrain was the previous owner. What is the explanation here?**

- Terrain, the permit holder, is a wholly-owned subsidiary of Thompson Creek. Mt Milligan has recently submitted their Mine Plan update, and MEM will review and at that time will also review the bond.

**20. At the Trend mine, Peace River Coal Ltd is listed as the owner. Is the parent company, Anglo, also legally liable?**

- Peace River, the permit holder, is a wholly-owned subsidiary of Anglo.

**21. Why doesn't MEM increase the security amounts for mines?**

- MEM reviews and updates security amounts as projects plans are reviewed and or in some cases at the discretion of the Chief Inspector of Mines.
- Changes in regulatory requirements and in particular tolerances for water quality protection have placed increased pressures on many companies. MEM seeks to keep stride with these changes and to require increases in bonding over time, however there is a need to keep a balance to ensure companies can remain in operation and implement the costly changes as needed while at the same time be able to provide for additional security.
- For some companies, this balance is easier to achieve than for others and it is reasonable that government takes some risks rather than assume responsibilities for mines that the owners abandon. Having said this, MEM continues to work with these companies to ensure the protection of the workers the public and protection of the environment.

**22. Can MEM increase the security bonds for mines that are currently closed or in care and maintenance?**

- Yes. Security bonds can be evaluated and increased at any time under the discretion of the Chief Inspector, this applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).

**23. Under current legislation, companies are able to provide liability estimates in confidence, meaning this information is not available to the public. Will government address this issue to ensure details of reclamation liabilities and security bonds are publicly available?**

- Following the release of the Auditor General's report, I said we were going to review our policy around mine security bonds and that work is underway. As part of our ongoing work, we are reviewing the confidentiality currently available under the existing legislation.



Mine Security Bonds and Liability Estimates  
Q & A

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## FACTSHEET

[Date]

Ministry of Energy and Mines

### **Mine reclamation security in British Columbia**

- In British Columbia, mining is regulated in part by the Ministry of Energy and Mines (MEM) under the Mines Act (Act) and the Health, Safety and Reclamation Code for Mines in British Columbia (Code).
- Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- MEM accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis. MEM reviews and updates security amounts as projects plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Changes in regulatory requirements and in particular water quality protection have placed increased pressures on many companies. MEM keeps stride with these changes and requires a combination of increases in bonding over time as well as ongoing financial strength from the mine owner to protect the public interest. This approach provides a balance which ensures companies can remain in operation, implementing costly capital programs as needed for permitting while at the same time being able to provide for additional security.
- More specifically, costing for long term water treatment is done using a phased approach. If water treatment is required immediately and during operations the costing is generally included. However, for some sites where treatment will not be required for decades after the site closes MEM's practice is to have full costing in place at closure.



- The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago. Since 2011, the total amount of security held has more than doubled.
- Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require full security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept. Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

Contact:      Suntanu Dalal  
Media Relations  
Ministry of Energy and Mines  
250 952-0628

**2014 Mine Reclamation Securities in BC for Metal and Coal Mines**

<b>Mine</b>	<b>Owner (2014)</b>	<b>Total Bond Amount</b>	<b>Liability Estimate</b>	<b>Differential</b>
<b>COAL MINE PERMITS</b>				
Elk Valley (Elkview, Fording, Greenhills, Coal Mtn, Greenhills)	Teck Coal Ltd.	\$384,460,000.00	\$925,358,035.00	\$540,898,035.00
Sage Creek	Sage Creek Coal Ltd.	\$1,000.00	\$1,000.00	\$0.00
Tent Mountain	Luscar	\$58,500.00	\$58,500.00	\$0.00
Sukunka Coal	Tailsman Energy Inc.	\$50,000.00	\$67,500.00	\$17,500.00
Mt Speiker	Canadian Natural Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Benson Mt.	Netherlands Pacific Mining Co. Ltd.	\$5,000.00	\$5,000.00	\$0.00
Willow Creek	Walter Energy	\$6,000,000.00	\$11,987,574.00	\$5,987,574.00
Quintette	Teck Coal Ltd.	\$20,083,200.00	\$30,070,900.00	\$9,987,700.00
Bullmoose	Teck Coal Ltd.	\$1,000,000.00	\$1,000,000.00	\$0.00
Benson Mt.	Wolf Mountain Coal Ltd.	\$20,000.00	\$20,000.00	\$0.00
Mt Klappan	Fortune Coal Ltd.	\$306,900.00	\$123,050.00	\$0.00
Quinsam Coal Mine	Hillsborough Resources Ltd.	\$7,281,000.00	\$7,281,000.00	\$0.00
Basin Coal	Coalmont Energy Corp.	\$276,547.00	\$559,500.00	\$282,953.00
Brule	Walter Energy	\$3,350,000.00	\$14,683,875.00	\$11,333,875.00
Wolverine	Walter Energy	\$11,500,000.00	\$12,498,812.00	\$998,812.00
Trend	Peace River Coal Ltd.	\$43,900,000.00	\$111,300,000.00	\$67,400,000.00
<b>METAL MINE PERMITS</b>				
Endako	Thompson Creek Mining Co.	\$15,345,700.00	\$44,560,000.00	\$29,214,300.00
Pinchi	Teck Metals Ltd.	\$2,000,000.00	\$2,000,000.00	\$0.00
Granisle	Glencore Canada Corp.	\$161,522.00	\$4,253,690.00	\$4,092,168.00
Red Mountain	Ministry of Energy and Mines	\$464,991.08	\$464,991.08	\$0.00
Island Copper	BHP Billiton	\$4,208,076.10	\$4,637,000.00	\$428,923.90
Kitsault	Avanti Kitsault Mine Ltd.	\$740,000.00	\$270,000.00	\$0.00
Highland Valley Copper	Teck Highland Valley Copper	\$18,250,000.00	\$204,395,357.00	\$186,145,357.00
Brenda	Glencore Canada Corp.	\$5,000,000.00	\$27,333,333.00	\$22,333,333.00
Cassiar	Cassiar-Jade Contracting Inc.	\$600,000.00	\$1,530,000.00	\$930,000.00
Myra Falls Operation	Nyrstar	\$78,254,733.00	\$118,760,133.00	\$40,505,400.00

Copper Mountain	Copper Mountain Mines Ltd.	\$11,500,500.00	\$12,765,873.00	\$1,265,373.00
Gallowai Bul River	R.H. Stanfield	\$491,511.19	\$498,228.00	\$6,716.81
Bell Mine	Glencore Canada Corp.	\$1,000,000.00	\$45,440,833.00	\$44,440,833.00
Taseko Mines Ltd.	Gibraltar Mines Ltd.	\$45,638,329.00	\$29,800,000.00	\$0.00
Alwin Mine	Dekaib	\$6,000.00	\$6,000.00	\$0.00
Giant Nickel	Barrick Gold Inc.	\$27,000.00	\$600,000.00	\$573,000.00
Silvan/Hickey	Slocan/Klondike Gold Corp	\$75,000.00	\$185,333.00	\$110,333.00
Craigmont	Hudra Silver Corp.	\$700,000.00	\$706,000.00	\$6,000.00
Dolly Varden Mine	Dolly Varden	\$6,000.00	\$6,000.00	\$0.00
Beaverdell	Teck Resources Ltd.	\$5,000.00	\$10,000.00	\$5,000.00
Mt Copeland	KRC Operators	\$3,484.10	\$3,484.10	\$0.00
Sullivan	Teck Metals Ltd.	\$22,500,000.00	\$22,500,000.00	\$0.00
HB Mine	Teck Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Dankoe	439813 BC Ltd.	\$10,000.00	\$10,000.00	\$0.00
Boss Mountain	Glencore Canada Corp.	\$30,000.00	\$2,434,033.00	\$2,404,033.00
Afton	KGHM Ajax Mining Inc.	\$350,000.00	\$350,000.00	\$0.00
Equity	GoldCorp	\$62,447,000.00	\$62,447,000.00	\$0.00
Cusac	Cusac Gold Mines Ltd.	\$264,444.00	\$627,762.00	\$363,318.00
Mosquito Creek	Mosquito Creek	\$5,000.00	\$437,119.00	\$432,119.00
Caroline	New Carolin Gold Corp.	\$256,250.00	\$199,564.00	\$0.00
Scottie Gold	Red Eye Resources	\$15,000.00	\$15,000.00	\$0.00
Baker	Dupont Canada Ltd.	\$15,606.00	\$165,681.00	\$150,075.00
Goldstream	Bethlehem Resources	\$200,000.00	\$1,048,056.00	\$848,056.00
Venus Mine.	United Keno Mines	\$7,000.00	\$7,000.00	\$0.00
Taurus	Cassiar Gold Corp/Inter Taurus	\$10,000.00	\$10,000.00	\$0.00
Diamc	Silence Lake	\$10,000.00	\$10,000.00	\$0.00
Baymag	Baymag Mines Co. Ltd.	\$15,101.71	\$836,048.00	\$820,946.29
Ashlu Gold	Osprey Mining and Exploration	\$10,000.00	\$10,000.00	\$0.00
Four-J/Lussier	Georgia Pacific Canada Ltd.	\$20,000.00	\$20,000.00	\$0.00
Perlite	Perlite Canada Inc.	\$0.00	\$0.00	\$0.00
Union Mine	Pearl Resources Ltd.	\$5,000.00	\$5,000.00	\$0.00
Blackdome	J- Pacific Gold Inc	\$100,000.00	\$100,000.00	\$0.00
Nickel Plate	Barrick Gold Inc.	\$1,671,754.00	\$96,500,000.00	\$94,828,246.00
Cheni/Lawyers	Cheni Gold Mines Ltd	\$15,000.00	\$15,000.00	\$0.00

Johnny Mountain	Skyline Gold Corp.	\$562,310.33	\$319,000.00	\$0.00
Premier	Boliden	\$3,000,000.00	\$15,909,000.00	\$12,909,000.00
Parson Barite	Highwood Res/Sherritt	\$10,000.00	\$53,680.00	\$43,680.00
Moberly Silica	HCA Mountain Minerals			\$0.00
Candorado	Candorado Mines	\$0.00	\$3,000,000.00	\$3,000,000.00
Samatosum	FQM Akubra Inc.	\$7,800,000.00	\$7,276,145.00	\$0.00
South Fork Silica	331670 BC Ltd.	\$1,000.00	\$1,000.00	\$0.00
Barrier Feldspar	Kanspar	\$20,000.00	\$20,000.00	\$0.00
Golden Bear	Goldcorp	\$210,000.00	\$73,200.00	\$0.00
Horse Creek Silica	HiTest Sand Inc.	\$125,000.00	\$125,000.00	\$0.00
Sable/Shasta	Int'l Shasta/Sable Resources Ltd.	\$164,000.00	\$1,110,000.00	\$946,000.00
Snip	Barrick Gold Inc.	\$1,000,000.00	\$2,940,833.00	\$1,940,833.00
CIL	Clayburn Industries	\$1,000.00	\$5,000.00	\$4,000.00
Cirque Mine	Cirque Operating Corp.	\$220,000.00	\$220,000.00	\$0.00
Gypo Pit	Pacific Silica and Rock Quarry	\$2,500.00	\$2,500.00	\$0.00
Eskay Creek	Barrick Gold Corp.	\$3,774,000.00	\$118,514,270.00	\$114,740,270.00
QR	Barkerville Gold Mines	\$2,860,000.00	\$10,250,000.00	\$7,390,000.00
Elk / Siwash	Almaden/Fairfield Minerals	\$150,000.00	\$61,816.00	\$0.00
Mount Polley	Mt Polley Mines Ltd.	\$19,050,011.00	\$29,500,000.00	\$10,449,989.00
Huckleberry	Huckleberry Mines Ltd.	\$26,000,000.00	\$59,000,000.00	\$33,000,000.00
Kemess South	AuRico	\$18,520,000.00	\$17,144,663.00	\$0.00
Bralorne	Bralorne Gold Mines Ltd.	\$115,000.00	\$1,114,607.00	\$999,607.00
Bow mines (Tailings)	Golden Dawn Minerals Inc.	\$50,000.00	\$70,000.00	\$20,000.00
Crystal Graphite	Eagle Graphite Corporation	\$0.00	\$0.00	\$0.00
Ainsworth Mill	Blue Bird Mining	\$5,000.00	\$250,000.00	\$245,000.00
Brittania	BC Government			\$0.00
Quinto Mine	Consolidated/Quinto Mining Corp.	\$70,000.00	\$5,000.00	\$0.00
Blue Bell	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
HB Tailings	Regional Distinct East Kootenay	\$0.00	\$0.00	\$0.00
Churchill Copper	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
Max Molybdenum	Forty Two Metals Inc.	\$730,000.00	\$1,313,403.00	\$583,403.00
New Afton	New Gold Inc.	\$9,500,000.00	\$9,681,190.00	\$181,190.00
Galore Creek	Teck Metals Ltd.	\$1,167,000.00	\$1,167,000.00	\$0.00
Ruby Creek	Adanac Molybdenum Corp.	\$100,000.00	\$100,000.00	\$0.00

Tulsequah	Chieftain Metals Inc.	\$1,200,000.00	\$1,200,000.00	\$0.00
Zip Mill	Huakan International Mining Inc.	\$235,000.00	\$303,558.00	\$68,558.00
Lexington-Grenoble	Huakan International Mining Inc.	\$215,000.00	\$168,232.00	\$0.00
Yellowjacket	EaglePlains	\$150,000.00	\$150,000.00	\$0.00
Mount Milligan	Terrain Metals Corp.	\$30,000,000.00	\$35,171,000.00	\$5,171,000.00
Dome Mountain	Gavin Mines Ltd.	\$579,000.00	\$1,360,000.00	\$781,000.00
Bonanza Ledge	Barkerville Gold Mines	\$960,000.00	\$4,446,000.00	\$3,486,000.00
Treasure Mountain	Huldra Silver Inc.	\$505,100.00	\$505,100.00	\$0.00
Red Chris	Red Chris Operating Corp.	\$12,000,000.00	\$9,774,073.00	\$0.00
Yellow Giant (Tel)	Banks Island Gold Ltd.	\$355,000.00	\$283,700.00	\$0.00

\$892,153,070.51	\$2,133,597,234.18	\$1,262,769,510.00
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\*bonds greater than liability have an undersecure of zero (not minus)

## Metcalfe, Megan MEM:EX

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**From:** Adams, Rick MEM:EX  
**Sent:** Thursday, April 21, 2016 5:18 PM  
**To:** Hoffman, Al MEM:EX; Robb, Peter L. MEM:EX  
**Subject:** Update: Simpcw Gravel Pit Applications x 9 - Acknowledgement Letters with Reclamation Security Amounts Sent Today

Simpcw Resources Group LLP has submitted 9 gravel pit applications, as the Simpcw First Nation (North Thompson Indian Band) seeks to position itself to benefit, as an aggregate supplier, from Kinder Morgan's proposed twinning of the Trans Mountain pipeline in the North Thompson valley. These applications have piqued the interest of Ministers Terry Lake (as MLA) and Todd Stone (as MLA and MOTI Minister).

Considerable advance work was done with the applicant, and the MFLNRO District office (which has just been newly assigned the responsibility for processing Lands applications), to ensure readiness of all parties, clear application information requirements, and coordinated bundling of Mines Act and Lands applications for advertising and First Nations consultation. Despite that, the Mines Act permit applications came in earlier, and the Lands Act applications were just received on Monday. Mines Act applications were set to Client Delay awaiting the applicant's Land Act submissions. Any delays to date are due to applicant or their agent. Ministries have gone out of their way to support this applicant.

Tom Charles sent the client acknowledgement letters today advising Simpcw Resources Group LLP of reclamation security requirements totalling \$151,000 for the 9 pits. He contacted the applicant, Simpcw Resources Group LLP, by phone in advance, and his contact there did not express any concern with the requested security amount. In the event there is any pushback from Simpcw political leadership, please be advised the reclamation security amounts are already light for this is Crown land which must be reforested (Tom set the amounts using reclamation costs of ~\$5,000/ha, while PG uses up to \$15,000/ha.), and there is no opportunity for further reductions in reclamation security amount.

Rick Adams  
A/Regional Director  
Ministry of Energy and Mines  
South Central Region  
2nd Floor, 441 Columbia Street, Kamloops, BC V2C 2T3  
Telephone: 250-828-4583

## Brody, Margo X MEM:EX

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**From:** Bellefontaine, Kim MEM:EX  
**Sent:** Friday, May 6, 2016 10:56 AM  
**To:** Amann-Blake, Nathaniel MEM:EX  
**Cc:** Howe, Diane J MEM:EX  
**Subject:** RE: Unfunded liability - Teck and Barrick

Yes we can call it unsecured liability.

It is the responsibility of mining companies to reclaim their mines, to manage any environmental issues, and to conduct monitoring and maintenance as needed.

I am not sure of all the potential ways that a company could fund their liability, but it would include things like capital, collateral, and access to credit, and that is why large, diversified mining companies have generally been considered lower risk. I am not sure that we want to go there with the answer. Teck might want to answer it for themselves.

Companies usually have insurance to cover liabilities resulting from things like the failure of a tailings dam.

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**From:** Amann-Blake, Nathaniel MEM:EX  
**Sent:** Friday, May 6, 2016 10:13 AM  
**To:** Bellefontaine, Kim MEM:EX  
**Subject:** RE: Unfunded liability - Teck and Barrick

What the best way to capture the idea that this is not the provinces responsibility. Teck may have ways to fund the liability we just don't hold security.

Should we call it unsecured?

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**From:** Bellefontaine, Kim MEM:EX  
**Sent:** Friday, May 6, 2016 9:06 AM  
**To:** Amann-Blake, Nathaniel MEM:EX  
**Cc:** Howe, Diane J MEM:EX; Demchuk, Tania MEM:EX  
**Subject:** RE: Unfunded liability - Teck and Barrick

Yes, we can release this information publicly.

---

**From:** Amann-Blake, Nathaniel MEM:EX  
**Sent:** Friday, May 6, 2016 9:04 AM  
**To:** Bellefontaine, Kim MEM:EX  
**Cc:** Howe, Diane J MEM:EX; Demchuk, Tania MEM:EX  
**Subject:** Re: Unfunded liability - Teck and Barrick

Thanks Kim. And to confirm, we can release this publicly.

On May 6, 2016, at 8:36 AM, Bellefontaine, Kim MEM:EX <[Kim.Bellefontaine@gov.bc.ca](mailto:Kim.Bellefontaine@gov.bc.ca)> wrote:

Nathaniel,

The total unfunded reclamation liability for Teck sites is approximately **\$737M** for 10 permitted mines (Fording River, Elkview, Greenhills, Line Creek, Coal Mountain, Quintette, Bullmoose, Highland Valley Copper, Sullivan, Pinchi).

The total unfunded reclamation liability for Barrick sites is approximately **\$212M** for 4 permitted mines (Eskay, Snip, Nickel Plate, Giant Nickel).

These two companies make up 75% of the reclamation liability shortfall reported in the Auditor General Report.

***Kim Bellefontaine, M.Sc., P.Geo.***

Manager Environmental Geoscience & Permitting

B.C. Ministry of Energy and Mines

Phone: (250) 952-0489

E-mail: [Kim.Bellefontaine@gov.bc.ca](mailto:Kim.Bellefontaine@gov.bc.ca)



## Brody, Margo X MEM:EX

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**From:** Amann-Blake, Nathaniel MEM:EX  
**Sent:** Wednesday, April 27, 2016 12:39 PM  
**To:** Howe, Diane J MEM:EX  
**Subject:** Fwd: IGWG security project, draft letter to IGWG colleagues

Do you have any recommendations on who to contact to get a comparison of security policies done? We'd like a big firm that has direct experience in mines permitting in a few Canadian jurisdictions as well as international. So they're not starting from scratch.

Any recommendations or contacts?

Begin forwarded message:

**From:** "Robb, Peter L. MEM:EX" <[Peter.Robb@gov.bc.ca](mailto:Peter.Robb@gov.bc.ca)>  
**Date:** April 27, 2016 at 12:19:24 PM PDT  
**To:** "Amann-Blake, Nathaniel MEM:EX" <[Nathaniel.Amann-Blake@gov.bc.ca](mailto:Nathaniel.Amann-Blake@gov.bc.ca)>  
**Subject:** Fwd: IGWG security project, draft letter to IGWG colleagues

Begin forwarded message:

**From:** "Gensey, Guy MEM:EX" <[Guy.Gensey@gov.bc.ca](mailto:Guy.Gensey@gov.bc.ca)>  
**Date:** April 27, 2016 at 10:06:10 AM PDT  
**To:** "Robb, Peter L. MEM:EX" <[Peter.Robb@gov.bc.ca](mailto:Peter.Robb@gov.bc.ca)>  
**Subject:** RE: IGWG security project, draft letter to IGWG colleagues

The Excel spreadsheet has been sent out for updating. I'm checking with the original authors of the 2010 NOAMI report to see if they have the capacity to update that in the context of our Terms of Reference. If not, I'll need to go to the bigger firms. Would you have contacts at the bigger firms, so I'm not cold calling?  
Guy

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**From:** Robb, Peter L. MEM:EX  
**Sent:** Wednesday, April 27, 2016 9:47 AM  
**To:** Gensey, Guy MEM:EX  
**Subject:** FW: IGWG security project, draft letter to IGWG colleagues

Where are we at with respect to responses and moving forward with a contract...my assumptions is we would have them build on Ontario's information

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**From:** James, Donald [<mailto:Donald.James@novascotia.ca>]  
**Sent:** Thursday, April 7, 2016 2:26 PM  
**To:** Gensey, Guy MEM:EX  
**Cc:** Robb, Peter L. MEM:EX  
**Subject:** Re: IGWG security project, draft letter to IGWG colleagues

Guy

I've inserted comments (from my BlackBerry as i had to run to make the ferry home)

Don

---

DT James  
Department of Natural Resources  
[Donald.James@novascotia.ca](mailto:Donald.James@novascotia.ca)  
902-471-6598

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**From:** Gensey, Guy MEM:EX  
**Sent:** Thursday, April 7, 2016 6:19 PM  
**To:** James, Donald  
**Cc:** Robb, Peter L. MEM:EX  
**Subject:** RE: IGWG security project, draft letter to IGWG colleagues

Looks good and we can send this out. Thanks for drafting this Don. Did we want to reference the fact that the consultant's focus would follow along the lines of the Terms of Reference document/questions?

DJ: good idea to reference that the consultant would focus on meeting the TOR

Also, as was suggested at the last Mines IGWG, perhaps we could mention how much money we'd be seeking them to contribute (just \$5K per jurisdiction) as that's a pretty easy threshold to agree to, then follow that up with the 1-1 calls.

DJ: yes, also a good idea to indicate that the construction we're looking for is \$5 K

DJ: can you make the changes and send to colleagues?

DJ: we'll also need to have it translated before sending it to PQ.

Guy

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**From:** James, Donald [<mailto:Donald.James@novascotia.ca>]  
**Sent:** Thursday, April 7, 2016 2:10 PM  
**To:** Gensey, Guy MEM:EX

Cc: Robb, Peter L. MEM:EX  
Subject: IGWG security project, draft letter to IGWG colleagues

Guy

I've taken a stab at drafting a letter to our IGWG colleagues. I know you'll want to modify the draft and better articulate BC's thoughts on expanding the scope of the project and hiring a consultant.

Considering BC's leadership (regarding the consultant proposal), it might be best if the letter came from BC, but I am happy to sign as co-chair.

As a follow up to the letter? Rather than a teleconference with our IGWG partners to promote the consultant concept, 1-to-1 calls with our colleagues might be more effective in drumming up so co-sponsors and gaining additional support.

Thoughts?

Have a read of the draft and tell me what you think.

Regards.

Don

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Dear IGWG Colleagues,

As you know, British Columbia and Nova Scotia are co-chairs for the ***Review of Policies and Processes Regarding Requirements for Reclamation Security for Mine Sites and Environmental Liability***. As we discussed at IGWG meetings in Vancouver and Toronto this year, the project will involve our respective Directors of Mines, and their equivalents, updating the 2012 Provincial and Territorial Mine Reclamation Security review (attached).

Updating the 2012 data is an important exercise and will provide a basic although limited overview of reclamation security regimes across the country. Completing the table, with its current scope, will not adequately meet the terms of reference for the project. More importantly, an updated table will not provide significant benefit to Ministers as they examine legislative and policy options for considering issues related to reclamation security and environmental liability insurance.

To ensure this project provides the highest value to Ministers, British Columbia and Nova Scotia are proposing to subdivide the project into two components, including: i) Completing the Jurisdictional Review Table. As we've agreed, we'll task Directors of Mines to update the 2012 reclamation security review table. The project co-chairs will deliver the table and a cursory summary of the review to Ministers at EMMC 2016; and ii) Concurrently with Part i, contract an expert consultant to provide in-depth analysis of the jurisdictional review data, expand the jurisdictional review to selected countries, and prepare policy considerations for Ministers regarding reclamation security and environmental liability insurance issues. The review, to be delivered to Ministers after EMMC 2016 (at EMMC 2017?) will provide recommendations to Ministers on

establishing the best or comparable security and insurance practices in consideration of environmental and economic protection, and global competitiveness.

When we discussed the possibility of having P/T jurisdictions co-fund a consultant to carry out this project, some jurisdictions declined the opportunity to participate. We appreciate the budget challenges of most P/T jurisdictions. At the same time, the work is significantly important to British Columbia, and BC is prepared to move forward with the expansion of scope and in-depth consultant's analysis. Nova Scotia is supportive of BC's position, and NS will provide co-funding to support the work of a consultant. We hope you will consider joining and co-funding this valuable effort.

In the next several weeks, we'll be following up this e mail calling you to discuss this project, answer your questions and seek your support.

Sincerely,

**Brody, Margo X MEM:EX**

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**From:** Willms, Teresa MEM:EX  
**Sent:** Friday, April 29, 2016 2:22 PM  
**To:** Parmar, Ranbir S CSNR:EX  
**Cc:** Hoffman, Al MEM:EX; Hutchins, Julie MEM:EX; Howe, Diane J MEM:EX  
**Subject:** 2016 Fiscal year security letter  
**Attachments:** 2016 Fiscal year letter to Ranbir.pdf

Good Afternoon Ranbir:

Attached please find copy of letter dated April 29, 2016. Hard copy is forthcoming.

Teresa Willms  
Senior Reclamation Security Administrator  
Ministry of Energy and Mines  
c/o Chief Inspector of Mines  
Reclamation and Permitting  
6<sup>th</sup> Floor – 1810 Blanshard Street  
Victoria, BC  
V8W 9N3  
Phone No: 250-952-6960  
Fax No: 250-952-0491

## Brody, Margo X MEM:EX

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**From:** Parmar, Ranbir S CSNR:EX  
**Sent:** Thursday, May 5, 2016 10:13 AM  
**To:** Amann-Blake, Nathaniel MEM:EX; McCabe, Melissa FIN:EX  
**Cc:** Howe, Diane J MEM:EX; Robb, Peter L. MEM:EX  
**Subject:** RE: under secured- finance language needed

Yes, this is factually correct as well.

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**From:** Amann-Blake, Nathaniel MEM:EX  
**Sent:** Thursday, May 5, 2016 10:11 AM  
**To:** Parmar, Ranbir S CSNR:EX; McCabe, Melissa FIN:EX  
**Cc:** Howe, Diane J MEM:EX; Robb, Peter L. MEM:EX  
**Subject:** RE: under secured- finance language needed

Or this with more from Ranbir's initial response?

- Reclamation is the legal responsibility of the permittee and they hold liability. This is not a debt or responsibility of the crown.
- Security is held as an extra precaution in the event a company defaults on its responsibilities. The difference between the estimated liability for the reclamation work relative to the security could be positive or negative and this difference is not recorded by the Province.

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**From:** Amann-Blake, Nathaniel MEM:EX  
**Sent:** Thursday, May 5, 2016 10:07 AM  
**To:** Parmar, Ranbir S CSNR:EX; McCabe, Melissa FIN:EX  
**Cc:** Howe, Diane J MEM:EX; Robb, Peter L. MEM:EX  
**Subject:** RE: under secured- finance language needed

How about this:

Reclamation is the legal responsibility of the permittee and they hold liability. This is not a debt or responsibility of the crown.

---

**From:** Parmar, Ranbir S CSNR:EX  
**Sent:** Thursday, May 5, 2016 9:58 AM  
**To:** Amann-Blake, Nathaniel MEM:EX  
**Cc:** Howe, Diane J MEM:EX; McCabe, Melissa FIN:EX; Robb, Peter L. MEM:EX  
**Subject:** RE: under secured- finance language needed

Nathaniel, as discussed on the phone, under the Mines Act, to obtain a permit, a company is responsible for the reclamation costs. The company is required to post a financial security in the event of defaulting on its obligations. The difference between the estimated liability for the reclamation work relative to the security could be positive or negative and this difference is not recorded by the Province. The difference is internally tracked from a compliance monitoring and oversight perspective. thanks.

---

**From:** Howe, Diane J MEM:EX  
**Sent:** Thursday, May 5, 2016 9:46 AM  
**To:** Parmar, Ranbir S CSNR:EX  
**Cc:** Amann-Blake, Nathaniel MEM:EX; McCabe, Melissa FIN:EX; Robb, Peter L. MEM:EX  
**Subject:** Re: under secured- finance language needed

Its treated as a contingency cost, i.e. not government responsibility, but could be. (Did I get that right Ranbir)?

On May 5, 2016, at 9:42 AM, Parmar, Ranbir S CSNR:EX <[Ranbir.Parmar@gov.bc.ca](mailto:Ranbir.Parmar@gov.bc.ca)> wrote:

Hi.

Here is some general bullets for use on the topic and I will see if I can add any further. Thanks.

- To obtain a *Mines Act* permit, a company is required to develop and submit a mine plan and reclamation program to MEM for approval.
- One of the conditions of a permit is that the company (Permittee) must post financial security which can be used by government if a company defaults on its reclamation obligations.
- The province's objective in managing reclamation security is to obtain reasonable assurance that it will not have to contribute to reclamation costs, while not placing too onerous a financial burden on the industry.
- Legislation requires all mining operations to carry out a program of environmental protection and reclamation to ensure that upon termination of mining, land, watercourses and cultural heritage resources will be returned to a safe and environmentally sound state and to an acceptable end land use.
- Reclamation standards that lay the foundations for estimating liabilities are set out in Part 10 of the Health, Safety and Reclamation Code (Code).
- Every mine site has unique management requirements and operational constraints; thus, the assessment of financial security is done on a site-specific basis.
- The company will typically provide the first estimate of liability, initially at permitting and annually thereafter in their Annual Reclamation report, and in detail in their 5 year Mine Plan and Reclamation Program update.
- Estimates include conventional reclamation costs, lump sum costs and long term monitoring, maintenance and treatment costs.
- The company is solely responsible for implementing their approved plans and managing all short and long term environmental, reclamation and closure liabilities. The financial security is not used to assist the company and is only utilized by the Province in the event the company defaults on its obligations.
- 

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**From:** Amann-Blake, Nathaniel MEM:EX  
**Sent:** Thursday, May 5, 2016 8:44 AM  
**To:** Parmar, Ranbir S CSNR:EX; McCabe, Melissa FIN:EX  
**Cc:** Howe, Diane J MEM:EX  
**Subject:** under secured- finance language needed

Hi,

I need to confirm asap how our under secured reclamation security is treated by government. I know it's not a debt, it's more like a risk or future liability in the event company defaults on their responsibilities.

Can you provide the financial language for how government treats this? for our minister talking points re OAG. Thanks.

**Nathaniel Amann-Blake**

Executive Director | Policy, Legislation and Issues Resolution

Mines and Mineral Resources Division

BC Ministry of Energy and Mines



## Brody, Margo X MEM:EX

---

**From:** Howe, Diane J MEM:EX  
**Sent:** Friday, May 13, 2016 2:34 PM  
**To:** Parmar, Ranbir S CSNR:EX  
**Cc:** Dubinsky, Arlene R CSNR:EX; Amann-Blake, Nathaniel MEM:EX  
**Subject:** FW: OAG audit - Year end Request Lists  
**Attachments:** MEM and NGD Request List.docx

Hi both,

Just to let you know Peter is not ready yet to release the 2015 summary; its poised ready to go, he just needs a little more time.

**Diane Howe, M.A. Sc., P.Geo**

Deputy Chief Inspector of Mines , Reclamation and Permitting  
Ministry of Energy and Mines, Victoria  
250-952-0183  
[www.gov.bc.ca/minepermitting](http://www.gov.bc.ca/minepermitting)



---

**From:** Dubinsky, Arlene R CSNR:EX  
**Sent:** Friday, April 22, 2016 9:37 AM  
**To:** Howe, Diane J MEM:EX; Fischer, Debbie MNGD:EX; Barber, Alan MEM:EX  
**Subject:** FW: OAG audit - Year end Request Lists

Good morning,

We have received the Office of the Auditor General (OAG) fiscal year-end audit requests for FY 15/16, which I have attached above, for your review.

As subject matter experts, and as Ranbir has instructed, could you please prepare responses to OAG's requests outlined in the document, as follows:

**Diane Howe – 2) Contingent Mine Liability Disclosure; and, 5) Contaminated Site Liability (MEM);**

**Debbie Fischer – 3) Permits Revenue/Deferred Revenue (NGD);**

**Alan Barber – 6) Downstream Benefits.**

Once you have prepared this information, you could send it back to me. I have access to the NRS folder which OAG is using, so I am able to upload your information, if you wish. Our due date is Friday, May 13<sup>th</sup>, so if you could send it to me by the 12<sup>th</sup>, that would allow time to meet this deadline.

Please let Ranbir or myself know if you have any questions or concerns.

Thanks,

Arlene

---

**From:** Parmar, Ranbir S CSNR:EX  
**Sent:** Wednesday, April 20, 2016 1:53 PM  
**To:** Dubinsky, Arlene R CSNR:EX; Winter, Sandra CSNR:EX  
**Subject:** RE: OAG audit - Year end Request Lists

Thanks Arlene for this summary.

Yes please forward the info to the people you have noted and if there are any concerns or questions from anyone they can connect with me.

For the Columbia Downstream benefits please go ahead and contact the folks noted and I may also have some of the info depending on what is needed.

---

**From:** Dubinsky, Arlene R CSNR:EX  
**Sent:** Wednesday, April 20, 2016 12:22 PM  
**To:** Parmar, Ranbir S CSNR:EX; Winter, Sandra CSNR:EX  
**Subject:** FW: OAG audit - Year end Request Lists

Hi Ranbir and Sandra,

We have received the attached audit requests from Laura Lemon at OAG.

The MEM and NGD documents are due by May 13<sup>th</sup> and the MARR requests are due by May 30<sup>th</sup>.

For the **MEM and NGD** requests, I can take the following:

- 1) **Accounts Payable/Accrued Liabilities for MEM and NGD**, and
- 4) **Prepaid Expenses-NGD**.

But will need someone to take:

- 2) **Contingent Mine Liability Disclosure** (Diane Howe?)
- 3) **Permits Revenue/Deferred Revenue(NGD)** (Debbie Fischer?)
- 5) **Contaminated Site Liability (MEM)** (Diane Howe?)
- 6) **Downstream Benefits** (Alan Barber for the first part?) I will try and find out who does the Columbia DSB monthly invoices.

**Do you want me to forward these to Diane, Debbie and Alan, or do you want to speak to them directly?**

For the **MARR** working paper requests, I am not sure I can help with this one. **Do you want me to send it to Michelle Roland/Valerie Nelson?**

Just let me know how you would like this handled. I have access to the NRS folder which OAG is using, so can upload the information, if you wish.

I am working on the Public Accounts and some other auditor requests (random samples) at the moment but should be able to start on this early next week.

Thanks,

Arlene

---

**From:** D'Archangelo, Tina L CSNR:EX  
**Sent:** Tuesday, April 19, 2016 5:11 PM  
**To:** Lemon, Laura OAG:EX  
**Cc:** Searle, Barb J CSNR:EX  
**Subject:** RE: OAG audit - Year end Request Lists

Thank you Laura.

I am happy to have you send these to me and we can coordinate here. Separating them by Ministry, as you've done here, is helpful.

We'll get started right away. ☺

**Tina D'Archangelo**  
A/Manager, Accounting, Operations & Reporting  
Corporate Services for the Natural Resource Sector  
(250) 356-9522

---

**From:** Lemon, Laura [<mailto:LLemon@bcauditor.com>]  
**Sent:** Monday, April 18, 2016 4:34 PM  
**To:** D'Archangelo, Tina L CSNR:EX  
**Cc:** Searle, Barb J CSNR:EX  
**Subject:** OAG audit - Year end Request Lists

Hello Tina,

I have attached three different year end request lists, similar to how we requested them last year. I am sending everything to you, but if there are any groups of requests that you would prefer we go to our contact for, please let me know and I will do that instead.

If it is better for you, I am happy to add them together on to one list. Where possible, I have added the contact person who provided the document last year for your reference.

Thank you and please let me know if you have any questions.  
Laura

**Laura Lemon****Manager**

Office of the Auditor General of British Columbia

623 Fort Street Victoria, BC V8W 1G1

P: 250.419.6147 | F: 250.387.1230

[llemon@bcauditor.com](mailto:llemon@bcauditor.com) | [www.bcauditor.com](http://www.bcauditor.com)

[Twitter](#) | [Facebook](#) | [YouTube](#)

Attention: This message is intended only for the use of the individual(s) to which it is addressed and may contain confidential information. If you have received this message in error, please contact the sender immediately and delete the material from your computer. Thank you.

## Brody, Margo X MEM:EX

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**From:** Howe, Diane J MEM:EX  
**Sent:** Monday, May 16, 2016 10:46 AM  
**To:** Mawhinney, Darren  
**Subject:** RE: Permission for MEM to release 2014 Mine Liability Information

Thank you Darren, much appreciated. This is all we plan to release with emphasis this work is ongoing.

Mine	Owner	Total Bond Amount (in hand)	Liability Estimate	Underfunded
Trend	Peace River Coal Ltd.	\$43,900,000.00	\$111,300,000.00	\$67,400,000.00

Regards, Diane

Diane Howe, M.A. Sc., P.Geo  
Deputy Chief Inspector of Mines , Reclamation and Permitting Ministry of Energy and Mines, Victoria  
250-952-0183  
[www.gov.bc.ca/minepermitting](http://www.gov.bc.ca/minepermitting)

-----Original Message-----

From: Mawhinney, Darren [<mailto:Darren.Mawhinney@angloamerican.com>]  
Sent: Monday, May 16, 2016 10:28 AM  
To: Howe, Diane J MEM:EX  
Subject: RE: Permission for MEM to release 2014 Mine Liability Information

Good morning Diane,

Thank you for consulting with us. You have our permission for the release of the liability estimate for the year ending 2014. Furthermore, we have no issue with being identified.

We request MEM to ensure that whenever the liability estimate is shared, it always makes reference to PRC's permit requirements relevant to liability ending in 2014.

Cheers,

Darren

Darren Mawhinney  
Mine Manager

E [Darren.Mawhinney@angloamerican.com](mailto:Darren.Mawhinney@angloamerican.com)  
D +1 604-699-6795  
M +1 250-257-0791

COAL

Trend Mine Operations  
Mine Operations Department  
PO Box 919  
Tumbler Ridge, B.C.  
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T +1 604-699-6700  
[www.angloamerican.com.au](http://www.angloamerican.com.au)  
A member of the Anglo American plc group

-----Original Message-----

From: Howe, Diane J MEM:EX [<mailto:Diane.Howe@gov.bc.ca>]  
Sent: Saturday, May 14, 2016 8:28 PM  
To: Howe, Diane J MEM:EX <[Diane.Howe@gov.bc.ca](mailto:Diane.Howe@gov.bc.ca)>  
Subject: Permission for MEM to release 2014 Mine Liability Information

I apologize for this weekend email but the request is required to be complete by Monday noon.

For background, The Ministry reports yearly to the Ministry of Finance, a contingent liability for which under secured mine reclamation funding is reported. The table provided to finance lists the individual mine, Permittee, bond amount currently held, reported total liability and the difference or under secure amount. The reported value for total liability comes from a number of sources, primary being the Annual Reclamation Report, but also recent permit amendments if applicable. The recent release of the Auditor Generals report has published this value at 1.2 Billion for the year ending 2014. Typical with these sorts of public releases, there are follow-up media inquiries and one of these is to release the data that supports the under secure liability estimation.

We are contacting every mine who filed their 2014 information confidentially, to seek their permission for release of the liability estimate for the year ending 2014 (just the total cost for each mine - no details are provided).

For mines that do not wish to be identified, the intent is that the mine and Permittee will be blacked out on the table, but the data will be released as anonymous as this is considered in the public interest. It would likely be easy for people to determine which sites are not identified, so we are encouraging full disclosure.

I would appreciate an email response from you by Monday noon, otherwise I will assume it is ok to provide the data related to your mine. A simple yes or no email would be fine. If you have questions, please give me on my cell (250-812-0457), or I will be in my office Monday (250-952-0183).

Thank you in advance.

Diane Howe  
Deputy Chief Inspector of Mines  
Ministry of Energy and Mines

Office: 250-952-0183



## Brody, Margo X MEM:EX

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**From:** Brouwer Greg HVC <Greg.Brouwer@teck.com>  
**Sent:** Monday, May 16, 2016 1:09 PM  
**To:** Howe, Diane J MEM:EX  
**Subject:** Re: Permission for MEM to release 2014 Mine Liability Information

Thanks.

Greg

---

Greg Brouwer  
General Manager  
Teck Highland Valley Copper  
Tel: 250.523.3201  
eMail: [Greg.Brouwer@teck.com](mailto:Greg.Brouwer@teck.com)  
[www.teck.com](http://www.teck.com) <<http://www.teck.com/>>

"Everyone Going Home Safe and Healthy Every Day"

On 2016-05-16, 12:19 PM, "Howe, Diane J MEM:EX" <[Diane.Howe@gov.bc.ca](mailto:Diane.Howe@gov.bc.ca)> wrote:

>Hi Greg,

>

>Further to my email Saturday, I've done some additional checking of files and note the HVC did report their liability summary in the 2014 ARR. I've been told that this is not protected by the confidentiality clause under the Code as it has been included in a public document. This is a summary of what is being released for HVC for 2014 ONLY.

>

>Mine	Owner (2014)	Total Bond Amount	Liability Estimate
Underfunded			
>Highland Valley Copper	Teck Highland Valley Copper	\$18,250,000.00	
\$204,395,357.00	\$186,145,357.00		

>

>Regards, Diane

>

>Diane Howe, M.A. Sc., P.Ge

>Deputy Chief Inspector of Mines , Reclamation and Permitting Ministry

>of Energy and Mines, Victoria

>250-952-0183

>[www.gov.bc.ca/minepermitting](http://www.gov.bc.ca/minepermitting)

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>-----Original Message-----



>From: Brouwer Greg HVC [mailto:Greg.Brouwer@teck.com]  
>Sent: Monday, May 16, 2016 12:01 PM  
>To: Howe, Diane J MEM:EX  
>Subject: Re: Permission for MEM to release 2014 Mine Liability  
>Information

>

>Hi Diane,

>

>My understanding is that there has been a discussion with Teck more broadly on this topic, and that permission has been granted with the understanding that there would be discussion on release format and appropriate context.

>

>Regards,

>Greg

>

>

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>

>

>Greg Brouwer

>General Manager

>Teck Highland Valley Copper

>Tel: 250.523.3201

>eMail: [Greg.Brouwer@teck.com](mailto:Greg.Brouwer@teck.com)

>[www.teck.com](http://www.teck.com) <<http://www.teck.com/>>

>

>"Everyone Going Home Safe and Healthy Every Day"

>

>On 2016-05-14, 8:27 PM, "Howe, Diane J MEM:EX" <[Diane.Howe@gov.bc.ca](mailto:Diane.Howe@gov.bc.ca)> wrote:

>

>>

>>

>>I apologize for this weekend email but the request is required to be complete by Monday noon.

>>

>>For background, The Ministry reports yearly to the Ministry of Finance, a contingent liability for which under secured mine reclamation funding is reported. The table provided to finance lists the individual mine, Permittee, bond amount currently held, reported total liability and the difference or under secure amount. The reported value for total liability comes from a number of sources, primary being the Annual Reclamation Report, but also recent permit amendments if applicable. The recent release of the Auditor General's report has published this value at 1.2 Billion for the year ending 2014. Typical with these sorts of public releases, there are follow-up media inquiries and one of these is to release the data that supports the under secure liability estimation.

>>

>>We are contacting every mine who filed their 2014 information confidentially, to seek their permission for release of the liability estimate for the year ending 2014 (just the total cost for each mine – no details are provided).

>>

>>For mines that do not wish to be identified, the intent is that the mine and Permittee will be blacked out on the table, but the data will be released as anonymous as this is considered in the public interest. It would likely be easy for people to determine which sites are not identified, so we are encouraging full disclosure.

>>

>>I would appreciate an email response from you by Monday noon, otherwise I will assume it is ok to provide the data related to your mine. A simple yes or no email would be fine. If you have questions, please give me on my cell (250-812-0457), or I will be in my office Monday (250-952-0183).

>>

>>Thank you in advance.  
>>  
>>Diane Howe  
>>Deputy Chief Inspector of Mines  
>>Ministry of Energy and Mines  
>>  
>>Office: 250-952-0183  
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## Brody, Margo X MEM:EX

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**From:** Brouwer Greg HVC <Greg.Brouwer@teck.com>  
**Sent:** Monday, May 16, 2016 12:01 PM  
**To:** Howe, Diane J MEM:EX  
**Subject:** Re: Permission for MEM to release 2014 Mine Liability Information

Hi Diane,

My understanding is that there has been a discussion with Teck more broadly on this topic, and that permission has been granted with the understanding that there would be discussion on release format and appropriate context.

Regards,  
Greg

---

Greg Brouwer  
General Manager  
Teck Highland Valley Copper  
Tel: 250.523.3201  
eMail: [Greg.Brouwer@teck.com](mailto:Greg.Brouwer@teck.com)  
[www.teck.com](http://www.teck.com) <<http://www.teck.com/>>

"Everyone Going Home Safe and Healthy Every Day"

On 2016-05-14, 8:27 PM, "Howe, Diane J MEM:EX" <[Diane.Howe@gov.bc.ca](mailto:Diane.Howe@gov.bc.ca)> wrote:

>  
>  
>I apologize for this weekend email but the request is required to be complete by Monday noon.  
>  
>For background, The Ministry reports yearly to the Ministry of Finance, a contingent liability for which under secured mine reclamation funding is reported. The table provided to finance lists the individual mine, Permittee, bond amount currently held, reported total liability and the difference or under secure amount. The reported value for total liability comes from a number of sources, primary being the Annual Reclamation Report, but also recent permit amendments if applicable. The recent release of the Auditor Generals report has published this value at 1.2 Billion for the year ending 2014. Typical with these sorts of public releases, there are follow-up media inquiries and one of these is to release the data that supports the under secure liability estimation.  
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>I would appreciate an email response from you by Monday noon, otherwise I will assume it is ok to provide the data related to your mine. A simple yes or no email would be fine. If you have questions, please give me on my cell (250-812-0457), or I will be in my office Monday (250-952-0183).

>

>Thank you in advance.

>

>Diane Howe

>Deputy Chief Inspector of Mines

>Ministry of Energy and Mines

>

>Office: 250-952-0183

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## Brody, Margo X MEM:EX

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**From:** Amann-Blake, Nathaniel MEM:EX  
**Sent:** Monday, May 16, 2016 6:14 PM  
**To:** Robb, Peter L. MEM:EX  
**Cc:** Howe, Diane J MEM:EX  
**Subject:** Re: Copy of 2014 Mine Security-Liability Summary.xlsx

Yes, and Diane, Kim and I are meeting tomorrow as well re overall approach.

On May 16, 2016, at 5:46 PM, Robb, Peter L. MEM:EX <[Peter.Robb@gov.bc.ca](mailto:Peter.Robb@gov.bc.ca)> wrote:

So I can send this on to the DM and Ministers office...Nate will follow up on a conversation we had about how we can best explain what this document means and its actual implications for the province. MBB has also committed to have an interview with Gord H after we send it out later in the week.

Given the UBC report this all becomes more complex and under scrutiny which is not a bad thing but we should have some context developed to explain as we will be getting many more requests.

---

**From:** Howe, Diane J MEM:EX  
**Sent:** Monday, May 16, 2016 3:49 PM  
**To:** Amann-Blake, Nathaniel MEM:EX; Robb, Peter L. MEM:EX  
**Subject:** Copy of 2014 Mine Security-Liability Summary.xlsx

Good to go!

D

## **Brody, Margo X MEM:EX**

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**From:** Howe, Diane J MEM:EX  
**Sent:** Monday, May 16, 2016 8:17 AM  
**To:** Plummer, Glen GCPE:EX  
**Subject:** QA\_Mine Security and liability estimates\_May 13\_931am  
**Attachments:** QA\_Mine Security and liability estimates\_May 13\_931am.docx

Mine Security Bonds and Liability Estimates  
Q & A

**1. What are the various forms of security for mines held by government?**

- ~~The Ministry of Energy and Mines (MEM) requires financial security on all Mines Act permits.~~
- The financial security accepted by MEM as approved by the Chief Inspector may be in the form of cash, treasury bill, Guaranteed Investment Certificates (GIC) held under a Safekeeping agreement, letter of credit, treasury bill, Guaranteed Investment Certificates (GIC), asset security or Surety Bond. Other forms may be accepted such as an asset agreement but only under certain circumstances.

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**2. ~~For~~ For some mines, the form of security includes assets. How certain are you that government would be able to liquidate those assets in a timely manner and get full value for them? What are some examples of assets MEM accepts?**

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~~2.3.~~ MEM limits the use of asset agreements for this reason and are working with the companies that now hold asset agreements to replace with a more suitable form of security. (Johnny Mtn, QR, Mt Polley and Huckleberry). An asset agreement was deemed suitable in the mid 90s and all but one agreement stems from that time.

**4. How is the value of these assets calculated and by whom?**

~~3.~~ The value is done by 3<sup>rd</sup> party appraisers.

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**5. How are the liability estimates for each Mines Act permit calculated and by whom?**

~~4.~~ Typically the mine provide the first cut and MEM reviewers will then review and work with the company when revisions edits are required. Some key differences between the two is that MEM requires 3<sup>rd</sup> party costs using blue book costs and generally a much greater contingency than what the mines will use. Mines generally will risk manage more with their liability estimates for which MEM is not so tolerant (i.e. managing PAG rock for long term).

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**6. Are these estimates verified by an independent third-party?**

~~5.7.~~ No

**8. The liability estimates for some of these mines seem quite low considering the potential that some will require on-going water treatment for decades. Are the long-term liabilities included in the overall liability estimates?**

~~6.9.~~ Costing for long term water treatment is done using a phased approach. If water treatment is required immediately and during operations the costing is generally included ( not sure which mines you're looking at) but for some sites where treatment will not be

required for decades after the site closes MEM aims to have full costing in place at closure.

**7.10. Why have you collected bonds at some mines to cover the full estimated liability amount but not at others?**

- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.

**11. Does MEM conduct financial liability risk assessments to determine which companies you allow to carry underfunded liabilities for their mine sites?**

**8.12. Yes, MEM has an economist who will provide information to the Chief Inspector.**

**13. Tulsequah Chief Mine has a long-history of environmental concerns related to acid rock drainage. Given the liability estimate for reclamation of this mine is only \$1.2 million, why hasn't the Province simply moved in and addressed the issues?**

**9. Tulsequah Chief is an historic mine and operated well before permitting or even ARD was recognized. The current mine holder is not responsible for the historic operations, not yet anyway, but will be once they start working in the old mine again. The current liability is based primarily on the surface disturbance at the mine, as the current operator is not permitted to mine therefore had not intended to start treating the water until they were in operation.**

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**10.14. Walter Energy filed for bankruptcy in 2015 leaving the future of its three coal mines near Tumbler Ridge in limbo. While the Province holds security for each of these mines, the combined underfunded liability for these mines – Willow Creek, Brule and Wolverine – is more than \$18.3 million. If government gets stuck paying for the reclamation of these sites, who is on the hook for that underfunded liability?**

- As the Mines Act permit holder for Wolverine, Brule and Willow Creek mines, Walter Energy is responsible for all reclamation costs at those sites and the company's chapter 11 filings do not discharge it from this responsibility.
- The company is in the process of trying to sell the three mine sites, but has funds set-aside to start addressing reclamation should it fail to secure a buyer.



- The Province holds security totaling \$20.85 M for the three mine sites. All security remains in good standing.

**15.** Given the Walter Energy operations are all coal mines, won't these sites require long-term water treatment?

**11,16.** Under assessment still, but management today of waste rock is significantly different than it is in the SE. ie the company is using old pits to backfill.

**17.** What steps are you taking to reduce the underfunded liability amounts that currently exist for the three Walter Energy mine sites?

**12,18.** Nothing at the moment. If a new operator starts, the liability will be reassessed and appropriate bonding collected

**19.** Shasta Sable Resources has an underfunded liability of \$946,000 and has not posted any financial statements since 2014. This is a company that the OAG highlighted as having a track record of failing to comply with orders from the Ministry of Energy and Mines. What steps is the ministry taking to ensure the mine returns to compliance and are you taking steps to reduce the mine's underfunded liability?

**13,20.** Under progress.

## Brody, Margo X MEM:EX

---

**From:** Amann-Blake, Nathaniel MEM:EX  
**Sent:** Tuesday, May 17, 2016 8:05 AM  
**To:** Howe, Diane J MEM:EX  
**Subject:** Re: Reclamation Security and Environmental Liability

Good idea. We're doing this analysis because the IGWG table doesn't actually answer the questions we need answered in order to refine our own policy.

On May 17, 2016, at 8:02 AM, Howe, Diane J MEM:EX <[Diane.Howe@gov.bc.ca](mailto:Diane.Howe@gov.bc.ca)> wrote:

Can we get Guy to join us , received a notice today from IGWG regarding the security update table from 2012, so not too sure what it is exactly we are doing here other than getting our own policy in order.

**Diane Howe, M.A. Sc., P.Geo**  
Deputy Chief Inspector of Mines , Reclamation and Permitting  
Ministry of Energy and Mines, Victoria  
250-952-0183  
[www.gov.bc.ca/minepermitting](http://www.gov.bc.ca/minepermitting)

<image001.png>

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**From:** Amann-Blake, Nathaniel MEM:EX  
**Sent:** Monday, May 16, 2016 10:25 PM  
**To:** Howe, Diane J MEM:EX; Bellefontaine, Kim MEM:EX  
**Subject:** Fwd: Reclamation Security and Environmental Liability

Let's discuss tomorrow

Begin forwarded message:

**From:** "Gensey, Guy MEM:EX" <[Guy.Gensey@gov.bc.ca](mailto:Guy.Gensey@gov.bc.ca)>  
**Date:** May 16, 2016 at 10:16:48 PM PDT  
**To:** "Robb, Peter L. MEM:EX" <[Peter.Robb@gov.bc.ca](mailto:Peter.Robb@gov.bc.ca)>  
**Cc:** "Amann-Blake, Nathaniel MEM:EX" <[Nathaniel.Amann-Blake@gov.bc.ca](mailto:Nathaniel.Amann-Blake@gov.bc.ca)>  
**Subject:** Fwd: Reclamation Security and Environmental Liability

Here's the proposal if you haven't seen it.

Regards,  
Guy

Begin forwarded message:

**From:** "Johnston, Craig" <[craig.johnston@stantec.com](mailto:craig.johnston@stantec.com)>  
**Date:** May 13, 2016 at 12:50:15 PM PDT  
**To:** "[Guy.Gensey@gov.bc.ca](mailto:Guy.Gensey@gov.bc.ca)" <[Guy.Gensey@gov.bc.ca](mailto:Guy.Gensey@gov.bc.ca)>  
**Cc:** "Tashe, Natalie" <[Natalie.Tashe@stantec.com](mailto:Natalie.Tashe@stantec.com)>, "DiMarchi,

Jack" <[Jack.DiMarchi@stantec.com](mailto:Jack.DiMarchi@stantec.com)>, "Buck, Brian"

<[Brian.Buck@stantec.com](mailto:Brian.Buck@stantec.com)>

**Subject: Reclamation Security and Environmental Liability**

Guy,

Further to your request and our discussions on May 3, 2016, we have developed a scope of work that we feel could be completed for the budget amounts indicated relate to the review of reclamation security practices in various jurisdictions. We felt that completing an extensive review and survey of all Canadian and a number of US and International jurisdictions would likely require a budget in excess of the amount indicated. As a result we have focused the efforts on several of the jurisdictions that we feel are leaders in both Canada and the United States and that would provide a good indication of industry practices within some of the most active mining jurisdictions in these countries.

We would be more than happy to discuss our thoughts and help you move forward with this exciting project.

Thanks for thinking of us and we will follow-up next week.

All the best. Enjoy the weekend.

**Craig Johnston, M.Sc., P.Geo.**

Mining Sector Leader, Environmental Services Canada

Stantec

Phone: (519) 585-7375

Cell: (519) 242-8556

Fax: (519) 579-4239

[craig.johnston@stantec.com](mailto:craig.johnston@stantec.com)

[Visit Our Environmental Services for Mining Website by clicking here](#)

[Visit Our Engineering and Technical Services for Mining Website by clicking here](#)



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 Please consider the environment before printing this email.

## Metcalfe, Megan MEM:EX

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**From:** Bellefontaine, Kim MEM:EX  
**Sent:** Tuesday, May 24, 2016 1:08 PM  
**To:** Haslam, David GCPE:EX; Robb, Peter L. MEM:EX; Amann-Blake, Nathaniel MEM:EX; Howe, Diane J MEM:EX; Hoffman, Al MEM:EX  
**Cc:** Plummer, Glen GCPE:EX; Dalal, Suntanu GCPE:EX; Gilmore, Dan GCPE:EX; Hynes, Michelle MEM:EX; Bose, Sara MEM:EX  
**Subject:** RE: Media Request\_Kamloops Infonews\_Mine Reclamation Security

Responses have gone to Al and Peter for approval.

---

**From:** Haslam, David GCPE:EX  
**Sent:** Tuesday, May 24, 2016 12:36 PM  
**To:** Robb, Peter L. MEM:EX; Amann-Blake, Nathaniel MEM:EX; Howe, Diane J MEM:EX; Bellefontaine, Kim MEM:EX; Hoffman, Al MEM:EX  
**Cc:** Plummer, Glen GCPE:EX; Dalal, Suntanu GCPE:EX; Gilmore, Dan GCPE:EX; Hynes, Michelle MEM:EX; Bose, Sara MEM:EX  
**Subject:** FW: Media Request\_Kamloops Infonews\_Mine Reclamation Security

Hi all – see request below. The reporter is taking a local approach in covering the OAG report. Note the info I sent to him on Friday (list of mines and fact sheet). Thanks

**Reporter:** Brendan Kergin - 250.819.6089 – Kamloops infonews.ca

**Deadline:** 3 pm

**Request:** Following up on information sent last week (see attached list and summary below). I'm looking for a bit more information on the nuts and bolts of how this works in laymens' terms. How is the money held? Who is holding it? Also, is it used for insurance purposes in case of disasters or smaller incidents (like Mount Polly)? What about financially unstable mines that may go out of business before reaching the end of the mine's expected life For Highland Valley Copper, why such a discrepancy? Is there any sort of estimate for a fund for Ajax Mine? If not, when might one be made?

**Recommendation:** GCPE email reporter.

**Response:** Approved by ?.

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Security bonding is not the only method by which government manages risk. Of even greater importance is the regulatory practice of requiring mining companies to manage and reduce their environmental liabilities through the development of detailed environmental protection and reclamation plans prior to mining, annual monitoring and reporting, and progressive reclamation through the life of mine.

**Is it used for insurance purposes in case of disasters or smaller incidents (like Mount Polly)?**

Please provide recommended response.

**What about financially unstable mines that may go out of business before reaching the end of the mine's expected life.**

Security bonds can be evaluated and increased at any time under the discretion of the Chief Inspector, this applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

**For Highland Valley Copper, why such a discrepancy?**

It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.

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For example, Teck (which owns Highland Valley Copper) and Barrick are responsible for 69% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

**Is there any sort of estimate for a fund for Ajax Mine? If not, when might one be made?**

Please provide recommended response.

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**From:** Haslam, David GCPE:EX  
**Sent:** Friday, May 20, 2016 12:19 PM  
**To:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX  
**Cc:** Gilmore, Dan GCPE:EX; Plummer, Glen GCPE:EX; Suric, Michelle J GCPE:EX  
**Subject:** Media Request\_Kamloops Infonews\_Mine Reclamation Security

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- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- Minister of Energy and Mines Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

## Brody, Margo X MEM:EX

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**From:** Bellefontaine, Kim MEM:EX  
**Sent:** Tuesday, May 24, 2016 1:08 PM  
**To:** Hoffman, Al MEM:EX; Robb, Peter L. MEM:EX  
**Cc:** Howe, Diane J MEM:EX  
**Subject:** FW: Media Request\_Kamloops Infonews\_Mine Reclamation Security  
**Attachments:** Mine Reclamation Security-Summary\_FINAL\_May 18\_2016.pdf

These responses are for your review and approval. Deadline is 3pm.  
Diane has reviewed and is fine with them.

---

**From:** Haslam, David GCPE:EX  
**Sent:** Tuesday, May 24, 2016 12:36 PM  
**To:** Robb, Peter L. MEM:EX; Amann-Blake, Nathaniel MEM:EX; Howe, Diane J MEM:EX; Bellefontaine, Kim MEM:EX; Hoffman, Al MEM:EX  
**Cc:** Plummer, Glen GCPE:EX; Dalal, Suntanu GCPE:EX; Gilmore, Dan GCPE:EX; Hynes, Michelle MEM:EX; Bose, Sara MEM:EX  
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**From:** Haslam, David GCPE:EX

**Sent:** Friday, May 20, 2016 12:19 PM

**To:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX

**Cc:** Gilmore, Dan GCPE:EX; Plummer, Glen GCPE:EX; Suric, Michelle J GCPE:EX

**Subject:** Media Request\_Kamloops Infonews\_Mine Reclamation Security

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## Metcalfe, Megan MEM:EX

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**From:** Robb, Peter L. MEM:EX  
**Sent:** Tuesday, May 24, 2016 1:26 PM  
**To:** Bellefontaine, Kim MEM:EX; Hoffman, Al MEM:EX  
**Cc:** Howe, Diane J MEM:EX  
**Subject:** RE: Media Request\_Kamloops Infonews\_Mine Reclamation Security

approved

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**Sent:** Tuesday, May 24, 2016 1:08 PM  
**To:** Hoffman, Al MEM:EX; Robb, Peter L. MEM:EX  
**Cc:** Howe, Diane J MEM:EX  
**Subject:** FW: Media Request\_Kamloops Infonews\_Mine Reclamation Security

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**Sent:** Friday, May 20, 2016 12:19 PM

**To:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX

**Cc:** Gilmore, Dan GCPE:EX; Plummer, Glen GCPE:EX; Suric, Michelle J GCPE:EX

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**Sent:** Tuesday, May 24, 2016 1:41 PM  
**To:** Wallace-Deering, Eric MEM:EX; Denniston, Tristan M MEM:EX; Lewis, Ted MEM:EX  
**Cc:** Dalal, Suntanu GCPE:EX; Plummer, Glen GCPE:EX; Robb, Peter L. MEM:EX; Hoffman, Al MEM:EX; Gordon, Matt GCPE:EX  
**Subject:** FW: Media Request\_Kamloops Infonews\_Mine Reclamation Security  
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**Cc:** Gilmore, Dan GCPE:EX; Plummer, Glen GCPE:EX; Suric, Michelle J GCPE:EX

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- Statutory decision-makers, not the minister, determine the amount of the security bonds required for each mine. The Ministry of Energy and Mines reviews and updates security amounts as project plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
- The Ministry of Energy and Mines accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis.
- Following the release of the Auditor General's report, government committed to reviewing its policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- Minister of Energy and Mines Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

**2014 Mine Reclamation Securities in BC for Metal and Coal Mines**

Mine	Owner (2014)	Total Bond Amount	Liability Estimate	Differential
<b>COAL MINE PERMITS</b>				
Elk Valley (Elkview, Fording, Greenhills, Coal Mtn, Greenhills)	Teck Coal Ltd.	\$384,460,000.00	\$925,358,035.00	\$540,898,035.00
Sage Creek	Sage Creek Coal Ltd.	\$1,000.00	\$1,000.00	\$0.00
Tent Mountain	Luscar	\$58,500.00	\$58,500.00	\$0.00
Sukunka Coal	Tailsman Energy Inc.	\$50,000.00	\$67,500.00	\$17,500.00
Mt Speiker	Canadian Natural Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Benson Mt.	Netherlands Pacific Mining Co. Ltd.	\$5,000.00	\$5,000.00	\$0.00
Willow Creek	Walter Energy	\$6,000,000.00	\$11,987,574.00	\$5,987,574.00
Quintette	Teck Coal Ltd.	\$20,083,200.00	\$30,070,900.00	\$9,987,700.00
Bullmoose	Teck Coal Ltd.	\$1,000,000.00	\$1,000,000.00	\$0.00
Benson Mt.	Wolf Mountain Coal Ltd.	\$20,000.00	\$20,000.00	\$0.00
Mt Klappan	Fortune Coal Ltd.	\$306,900.00	\$123,050.00	\$0.00
Quinsam Coal Mine	Hillsborough Resouces Ltd.	\$7,281,000.00	\$7,281,000.00	\$0.00
Basin Coal	Coalmont Energy Corp.	\$276,547.00	\$559,500.00	\$282,953.00
Brule	Walter Energy	\$3,350,000.00	\$14,683,875.00	\$11,333,875.00
Wolverine	Walter Energy	\$11,500,000.00	\$12,498,812.00	\$998,812.00
Trend	Peace River Coal Ltd.	\$43,900,000.00	\$111,300,000.00	\$67,400,000.00
<b>METAL MINE PERMITS</b>				
Endako	Thompson Creek Mining Co.	\$15,345,700.00	\$44,560,000.00	\$29,214,300.00
Pinchi	Teck Metals Ltd.	\$2,000,000.00	\$2,000,000.00	\$0.00
Granisle	Glencore Canada Corp.	\$161,522.00	\$4,253,690.00	\$4,092,168.00
Red Mountain	Ministry of Energy and Mines	\$464,991.08	\$464,991.08	\$0.00
Island Copper	BHP Billiton	\$4,208,076.10	\$4,637,000.00	\$428,923.90
Kitsault	Avanti Kitsault Mine Ltd.	\$740,000.00	\$270,000.00	\$0.00
Highland Valley Copper	Teck Highland Valley Copper	\$18,250,000.00	\$204,395,357.00	\$186,145,357.00
Brenda	Glencore Canada Corp.	\$5,000,000.00	\$27,333,333.00	\$22,333,333.00
Cassiar	Cassiar-Jade Contracting Inc.	\$600,000.00	\$1,530,000.00	\$930,000.00
Myra Falls Operation	Nyrstar	\$78,254,733.00	\$118,760,133.00	\$40,505,400.00



Copper Mountain	Copper Mountain Mines Ltd.	\$11,500,500.00	\$12,765,873.00	\$1,265,373.00
Gallowai Bul River	R.H. Stanfield	\$491,511.19	\$498,228.00	\$6,716.81
Bell Mine	Glencore Canada Corp.	\$1,000,000.00	\$45,440,833.00	\$44,440,833.00
Taseko Mines Ltd.	Gibraltar Mines Ltd.	\$45,638,329.00	\$29,800,000.00	\$0.00
Alwin Mine	Dekalb	\$6,000.00	\$6,000.00	\$0.00
Giant Nickel	Barrick Gold Inc.	\$27,000.00	\$600,000.00	\$573,000.00
Silvan/Hickey	Slocan/Klondike Gold Corp	\$75,000.00	\$185,333.00	\$110,333.00
Craigmont	Huldra Silver Corp.	\$700,000.00	\$706,000.00	\$6,000.00
Dolly Varden Mine	Dolly Varden	\$6,000.00	\$6,000.00	\$0.00
Beaverdell	Teck Resources Ltd.	\$5,000.00	\$10,000.00	\$5,000.00
Mt Copeland	KRC Operators	\$3,484.10	\$3,484.10	\$0.00
Sullivan	Teck Metals Ltd.	\$22,500,000.00	\$22,500,000.00	\$0.00
HB Mine	Teck Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Dankoe	439813 BC Ltd.	\$10,000.00	\$10,000.00	\$0.00
Boss Mountain	Glencore Canada Corp.	\$30,000.00	\$2,434,033.00	\$2,404,033.00
Afton	KGHM Ajax Mining Inc.	\$350,000.00	\$350,000.00	\$0.00
Equity	GoldCorp	\$62,447,000.00	\$62,447,000.00	\$0.00
Cusac	Cusac Gold Mines Ltd.	\$264,444.00	\$627,762.00	\$363,318.00
Mosquito Creek	Mosquito Creek	\$5,000.00	\$437,119.00	\$432,119.00
Caroline	New Carolin Gold Corp.	\$256,250.00	\$199,564.00	\$0.00
Scottie Gold	Red Eye Resources	\$15,000.00	\$15,000.00	\$0.00
Baker	Dupont Canada Ltd.	\$15,606.00	\$165,681.00	\$150,075.00
Goldstream	Bethlehem Resources	\$200,000.00	\$1,048,056.00	\$848,056.00
Venus Mine	United Keno Mines	\$7,000.00	\$7,000.00	\$0.00
Taurus	Cassiar Gold Corp/Inter Taurus	\$10,000.00	\$10,000.00	\$0.00
Diamc	Silence Lake	\$10,000.00	\$10,000.00	\$0.00
Baymag	Baymag Mines Co. Ltd.	\$15,101.71	\$836,048.00	\$820,946.29
Ashlu Gold	Osprey Mining and Exploration	\$10,000.00	\$10,000.00	\$0.00
Four-J/Lussier	Georgia Pacific Canada Ltd.	\$20,000.00	\$20,000.00	\$0.00
Perlite	Perlite Canada Inc.	\$0.00	\$0.00	\$0.00
Union Mine	Pearl Resources Ltd.	\$5,000.00	\$5,000.00	\$0.00
Blackdome	J- Pacific Gold Inc	\$100,000.00	\$100,000.00	\$0.00
Nickel Plate	Barrick Gold Inc.	\$1,671,754.00	\$96,500,000.00	\$94,828,246.00
Cheni/Lawyers	Cheni Gold Mines Ltd	\$15,000.00	\$15,000.00	\$0.00

Johnny Mountain	Skyline Gold Corp.	\$562,310.33	\$319,000.00	\$0.00
Premier	Boliden	\$3,000,000.00	\$15,909,000.00	\$12,909,000.00
Parson Barite	Highwood Res/Sherritt	\$10,000.00	\$53,680.00	\$43,680.00
Moberly Silica	HCA Mountain Minerals			\$0.00
Candorado	Candorado Mines	\$0.00	\$3,000,000.00	\$3,000,000.00
Samatosum	FQM Akubra Inc.	\$7,800,000.00	\$7,276,145.00	\$0.00
South Fork Silica	331670 BC Ltd.	\$1,000.00	\$1,000.00	\$0.00
Barrier Feldspar	Kanspar	\$20,000.00	\$20,000.00	\$0.00
Golden Bear	Goldcorp	\$210,000.00	\$73,200.00	\$0.00
Horse Creek Silca	HiTest Sand Inc.	\$125,000.00	\$125,000.00	\$0.00
Sable/Shasta	Int'l Shasta/Sable Resources Ltd.	\$164,000.00	\$1,110,000.00	\$946,000.00
Snip	Barrick Gold Inc.	\$1,000,000.00	\$2,940,833.00	\$1,940,833.00
CIL	Clayburn Industries	\$1,000.00	\$5,000.00	\$4,000.00
Cirque Mine	Cirque Operating Corp.	\$220,000.00	\$220,000.00	\$0.00
Gypo Pit	Pacific Silica and Rock Quarry	\$2,500.00	\$2,500.00	\$0.00
Eskay Creek	Barrick Gold Corp.	\$3,774,000.00	\$118,514,270.00	\$114,740,270.00
QR	Barkerville Gold Mines	\$2,860,000.00	\$10,250,000.00	\$7,390,000.00
Elk / Siwash	Almaden/Fairfield Minerals	\$150,000.00	\$61,816.00	\$0.00
Mount Polley	Mt Polley Mines Ltd.	\$19,050,011.00	\$29,500,000.00	\$10,449,989.00
Huckleberry	Huckleberry Mines Ltd.	\$26,000,000.00	\$59,000,000.00	\$33,000,000.00
Kemess South	AuRico	\$18,520,000.00	\$17,144,663.00	\$0.00
Bralorne	Bralorne Gold Mines Ltd.	\$115,000.00	\$1,114,607.00	\$999,607.00
Bow mines (Tailings)	Golden Dawn Minerals Inc.	\$50,000.00	\$70,000.00	\$20,000.00
Crystal Graphite	Eagle Graphite Corporation	\$0.00	\$0.00	\$0.00
Ainsworth Mill	Blue Bird Mining	\$5,000.00	\$250,000.00	\$245,000.00
Brittania	BC Government			\$0.00
Quinto Mine	Consolidated/Quinto Mining Corp.	\$70,000.00	\$5,000.00	\$0.00
Blue Bell	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
HB Tailings	Regional Distirct East Kootenay	\$0.00	\$0.00	\$0.00
Churchill Copper	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
Max Molybdenum	Forty Two Metals Inc.	\$730,000.00	\$1,313,403.00	\$583,403.00
New Afton	New Gold Inc.	\$9,500,000.00	\$9,681,190.00	\$181,190.00
Galore Creek	Teck Metals Ltd.	\$1,167,000.00	\$1,167,000.00	\$0.00
Ruby Creek	Adanac Molybdenum Corp.	\$100,000.00	\$100,000.00	\$0.00

Tulsequah	Chieftain Metals Inc.	\$1,200,000.00	\$1,200,000.00	\$0.00
Zip Mill	Huakan International Mining Inc.	\$235,000.00	\$303,558.00	\$68,558.00
Lexington-Grenoble	Huakan International Mining Inc.	\$215,000.00	\$168,232.00	\$0.00
Yellowjacket	EaglePlains	\$150,000.00	\$150,000.00	\$0.00
Mount Milligan	Terrain Metals Corp.	\$30,000,000.00	\$35,171,000.00	\$5,171,000.00
Dome Mountain	Gavin Mines Ltd.	\$579,000.00	\$1,360,000.00	\$781,000.00
Bonanza Ledge	Barkerville Gold Mines	\$960,000.00	\$4,446,000.00	\$3,486,000.00
Treasure Mountain	Huldra Silver Inc.	\$505,100.00	\$505,100.00	\$0.00
Red Chris	Red Chris Operating Corp.	\$12,000,000.00	\$9,774,073.00	\$0.00
Yellow Giant (Tel)	Banks Island Gold Ltd.	\$355,000.00	\$283,700.00	\$0.00

\$892,153,070.51	\$2,133,597,234.18	\$1,262,769,510.00
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\*bonds greater than liability have an undersecure of zero (not minus)

## Metcalfe, Megan MEM:EX

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**From:** James, Donald <Donald.James@novascotia.ca>  
**Sent:** Wednesday, May 25, 2016 8:03 AM  
**To:** 'Micheal Moroskat'; 'Hughes, Cory ECON'; 'chris.beaumont-smith@gov.mb.ca'; Whiteway, Patrick; 'MacKay, Gordon (MNDM)'; Hoffman, Al MEM:EX; 'Smith, Alex O.'; 'Matthew Senkow'; 'Andrea.Kenward@gov.yk.ca'; 'Neumann, Cory (ERD/DER)'; 'Lorraine Seale'  
**Cc:** Gensey, Guy MEM:EX; 'Bowes, Jennifer (NRCan/RNCan) (jennifer.bowes@canada.ca)'  
**Subject:** Mines IGWG - Reclamation Security for Mines Sites and Environmental Liability  
**Attachments:** Mine Reclamation Security 2016 template.xls

Dear Colleagues,

Sincere thanks to Alberta, Manitoba, Quebec, New Brunswick, Nova Scotia, Newfoundland and Labrador, Yukon and Nunavut for providing input to the reclamation security jurisdictional review table (please refer to e mail of April 23, 2016).

We're looking forward to receiving the remaining data by the end of this week.

Thank you.

Donald James

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**From:** James, Donald  
**Sent:** Saturday, April 23, 2016 10:19 AM  
**To:** 'robert.holmes@gov.yk.ca'; 'lorranie\_seale@gov.nt.ca'; al.hoffman@gov.bc.ca; 'diane.howe@gov.bc.ca'; (AB) Micheal Moroskat; 'Hughes, Cory ECON'; 'chris.beaumont-smith@gov.mb.ca'; 'MacKay, Gordon (MNDM)'; 'Griggs, John (DEM/MEM)'; 'Patrcik.Whiteway@novascotia.ca'; 'Smith, Alex O.'; 'magdi.habib@nrcan-rncan.gc.ca'; 'Karen

Costello'

Cc: 'Gensey, Guy MEM:EX' ; Bowes, Jennifer (NRCan/RNCan) (jennifer.bowes@canada.ca)

**Subject:** Mines IGWG - Reclamation Security for Mines Sites and Environmental Liability / Les exigences liées à la garantie de remise en état des sites miniers et à la responsabilité environnementale

Dear Colleagues,

Attached, please find the template for the 2016 IGWG mine reclamation survey (Mine Reclamation Security 2016 template).

Please submit the information for your jurisdiction and return to Nova Scotia by **Friday May 20, 2016**. Nova Scotia and British Columbia will compile the information and prepare a summary of the data to be delivered to Ministers at EMMC 2016 in Winnipeg. This jurisdictional review forms the first part of the IGWG mine reclamation and environmental liability project (see appended e mail and attached terms of reference; le français suit)

For reference, I've also attached the 2012 data and a contact list for your Directors of Mines Committee colleagues.

Thank you for taking the time to complete the survey.

Sincerely.

Donald James Nova Scotia  
Guy Gensey British Columbia

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Dear Colleagues,

As you know, British Columbia and Nova Scotia are co-chairs for the ***Review of Policies and Processes Regarding Requirements for Reclamation Security for Mine Sites and Environmental Liability***. As we discussed at IGWG meetings in Vancouver and Toronto this year, the project will involve our respective Directors of Mines, and their equivalents, updating the 2012 Provincial and Territorial Mine Reclamation Security review (attached).

Updating the 2012 data is an important exercise and will provide a basic, although limited, overview of reclamation security regimes across the country. Completing the table, with its current scope, will not adequately meet the terms of reference for the project. More importantly, an updated table will not provide significant benefit to Ministers as they examine legislative and policy options for considering issues related to reclamation security and environmental liability insurance.

To ensure this project provides the highest value to Ministers, British Columbia and Nova Scotia are proposing to subdivide the project into two components, including:

- i) Completing the Jurisdictional Review Table. As we've agreed, we'll task Directors of Mines to update the 2012 reclamation security review table. The project co-chairs will deliver the table and a cursory summary of the review to Ministers at EMMC 2016;
- ii) Concurrent with Part i), contract an expert consultant to provide in-depth analysis of the provincial/territorial jurisdictional review data along the lines of the draft Terms of Reference document (attached), and expand the jurisdictional review to selected other major mining countries, and prepare policy considerations for Ministers regarding reclamation security and environmental liability insurance issues. The review, to be delivered to Ministers after EMMC 2016 (at EMMC 2017?) will provide

recommendations to Ministers on establishing the best or comparable security and insurance practices in consideration of environmental and economic protection, and global competitiveness.

When we discussed the possibility of having P/T jurisdictions co-fund a consultant to carry out this project, some jurisdictions declined the opportunity to participate. We appreciate the budget challenges of most P/T jurisdictions. At the same time, the work is significantly important to British Columbia, and BC is prepared to move forward with the expansion of scope and in-depth consultant's analysis. Nova Scotia is supportive of BC's position, and NS will provide co-funding to support the work of a consultant. We hope you will consider joining and co-funding this valuable effort with a modest \$5,000 contribution.

In the next several weeks, we'll be following up this e-mail calling you to discuss this project, answer your questions and seek your support.

Sincerely,

Guy Gensey, British Columbia  
Donald James, Nova Scotia

\*\*\*\*\*

Chers collègues,

Comme vous le savez, les représentants de la Colombie-Britannique et de la Nouvelle-Écosse coprésideront la préparation de l'**Examen des politiques et des processus concernant les exigences liées à la garantie de remise en état des sites miniers et à la responsabilité environnementale**. Comme nous en avons discuté cette année lors des réunions du Groupe de travail intergouvernemental sur les mines (GTIM) à Vancouver et à Toronto, nos directeurs des mines respectifs et leurs homologues prendront part au projet qui consiste à mettre à jour l'examen provincial et territorial des garanties de remise en état des sites miniers de 2012 (en annexe).

La mise à jour des données de 2012 s'avère un exercice important qui fournira un aperçu général, quoique limité, des régimes concernant les garanties de remise en état des sites miniers pour l'ensemble du pays. Le fait de dresser ce document d'examen dans le cadre de sa portée actuelle ne permettra pas de remplir le mandat du projet. Plus important encore, la réalisation d'une mise à jour du document d'examen ne procurera pas d'avantages économiques importants aux ministres dans le cadre de leur examen des options législatives et stratégiques relativement à la prise en considération des enjeux liés aux garanties de remise en état des sites miniers et à l'assurance-responsabilité environnementale.

Pour assurer la plus grande valeur possible aux ministères, la Colombie-Britannique et la Nouvelle-Écosse proposent de diviser la portée du projet en deux volets, y compris :

- i) l'achèvement du document d'examen juridictionnel. Comme convenu, nous chargerons les directeurs des mines de mettre à jour le document d'examen des garanties de remise en état des sites miniers de 2012. Les coprésidents du projet produiront le document d'examen, ainsi qu'un sommaire de l'examen aux ministres lors de la Conférence des ministres de l'Énergie et des Mines (CMEM) de 2016;
- ii) parallèlement au volet i), retenir les services d'un expert-conseil afin que ce dernier effectue une analyse approfondie des données de l'examen juridictionnel par les provinces et les territoires comme proposé dans le document préliminaire sur le mandat (en annexe), étendre la portée de l'examen juridictionnel à certains des principaux pays miniers choisis et élaborer des considérations politiques en ce qui a trait aux enjeux liés aux garanties de remise en état des sites miniers et à l'assurance-responsabilité environnementale pour examen par les ministres. L'examen qui doit être présenté aux

ministres après la tenue de la CMEM de 2016 (lors de la CMEM de 2017?) fournira des recommandations aux ministres concernant la mise en œuvre des meilleures pratiques ou de pratiques comparables en matière de garanties de remise en état et d'assurance-responsabilité en tenant compte de la protection de l'environnement et de l'économie, et de la compétitivité à l'échelle mondiale.

Lors des discussions que nous avons eues sur la possibilité que l'ensemble des provinces et des territoires financent conjointement l'embauche d'un expert-conseil chargé de mener à bien le projet, certains de ces provinces et territoires ont refusé de participer. Nous sommes conscients des défis budgétaires auxquels sont confrontés la plupart des provinces et des territoires. Toutefois, ce projet est d'une grande importance pour la Colombie-Britannique, et la C.-B. est prête à aller de l'avant en vue d'étendre la portée du projet et de l'analyse approfondie de l'expert-conseil, dont les services auront été retenus. La Nouvelle-Écosse appuie la position de la C.-B., et la N.-É. fournira un financement conjoint en vue de soutenir le travail d'un expert-conseil. Nous espérons que vous envisagerez la possibilité d'adhérer au projet, et que vous participerez au financement conjoint de ce précieux effort en acceptant de verser une modeste contribution de 5 000 \$.

Au cours des prochaines semaines, nous ferons suite au présent courriel, et nous vous appellerons pour discuter du projet, répondre à vos questions et solliciter votre soutien.

Cordialement,

Guy Gensey, Colombie-Britannique  
Donald James, Nouvelle-Écosse

---

Guy Gensey, Ph.D.  
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Corporate Policy and External Relations  
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# IGWG: Mine Reclamation and Security Survey, 2016

## Province/Territory

Legislation and Policy governing mine reclamation security	Legislation		
	Regulations		
	Government policies developed for mine reclamation security		
Identify the stage of exploration and mining at which reclamation security is required	Exploration	Line cutting	
		Non-destructive surveys (geophysics, geochemistry, etc.)	
		Rock / soil sampling	
		Drilling	
		Trenching	
	Advanced Exploration	Underground	
		Surface excavation	
	Bulk Sample (tonne limit ?)	Underground	
		Surface excavation	
	Development & Operation	Underground	
		Surface excavation	
	The reclamation plan	Who prepares the reclamation plan	Mining company +/- the company's consultants
Government staff			
Independent 3 <sup>rd</sup> party company / agency			
Other			
When are reclamation plan updates required by legislation, policy or practice		When is the first reclamation plan filed with government	
		Is there a schedule for reclamation plan updates	
		Is a final reclamation plan required	



# IGWG: Mine Reclamation and Security Survey, 2016

## Province/Territory

		Is an 'as-built' reclamation plan required?		
	Plan Approvals	Are reclamation plans required to be signed / stamped by a P.Eng.?		
		Does a Company official/director have to sign off on the plan?		
		Government		
		Land owner, if not the company		
		Other		
	Basis for Costing Reclamation Security	Based on area disturbed (\$/ha of disturbed area)		
		Unit costs based on a detailed reclamation plan. <i>Include reference to any standards, cost reference guidelines.</i>		
	Who calculates the security value?	Mining company +/- company consultant determines security estimate		
		Government	Accept company est.	
			Audit company est.	
			Recalculate company est.	
			Originate security estimate	
		Independent 3 <sup>rd</sup> party prepares security and reports to company & government		
	Other			
		Remove buildings/structures		
		Remove/ bury foundations		
		Secure shafts / raises / adits		
		Backfill shallow (30 m.) u/g stopes/access tunnels/etc.		
		Stabilize, contour pit slopes to protect against fall-over or walk-off (water filled) issues.		
		Barricade pit edge, restrict access (humans / wildlife)		
		Stabilize tailings dam / drainage structures		
		Tailing dam capping		

# IGWG: Mine Reclamation and Security Survey, 2016

Province/Territory

Security Valuation	Items included in security valuation	Long term ARD treatment		
		Waste Rock Dump(s)	Contour, slope	
			Cap (ARD)	
			Topsoil cover	
		Remove access roads		
		Site drainage & water control system		
		Vegetate reclaimed areas	Plant site	
			Tailings	
			Waste Rock Dumps	
			Access roads	
			Other	
		Post reclamation monitoring Program – How many years?		
		Contingency - % of security		
		Other (e.g.: public safety fencing, isolation barriers, etc.)		
	Time value of money used In security calculation	Current cost		
		Future value (date when planned reclamation conducted)		
		Present value of future costs		
		Other (describe)		
Can the value of the security be reassessed during operation of the mine?	Is there a security review provided under legislation?			
	Is the security reviewed when there is a significant change to mine operations?			
	Other (describe)			
	Fully secured before project development starts?			

# IGWG: Mine Reclamation and Security Survey, 2016

# Province/Territory

When are security payments required?	Incremental security at defined stages of the project		
	Payment deferred until commercial production		
	Other (describe)		
What forms of security are acceptable?	Cash		
	Negotiable security (bonds, etc.)		
	Letter of Credit from financial institution		
	Surety bond from bonding company		
	Performance bond		
	Self assurance by company		
	Company stock		
	Third party reclamation company		
	Reclamation insurance company		
	Qualifying Environmental Trust		
When is reclamation security refunded?	Other (describe)		
	After final reclamation is completed		
	At pre-established stages of reclamation set out in the final reclamation plan		
	Prior to reclamation project; company use the bond to reclaim site.		
	Is a hold back required following reclamation to ensure performance is satisfactory over time (# of years?)		
What circumstances would trigger Government to claim the reclamation security?	Other (describe)		
	Company refuses to reclaim		
	Company does not satisfy reclamation plan		
	Company goes into receivership		
	Company bankruptcy		
	Who conducts reclamation work	Government department	
		Government tendered contract	

# IGWG: Mine Reclamation and Security Survey, 2016

## Province/Territory

Reclamation work where Government 'Seizes' Reclamation Bond	using security money?	Mining Company	
		Other (describe)	
	What reclamation plan is used if reclamation is conducted using the reclamation security?	Current Final Reclamation Plan	
		New Reclamation Plan developed	
		Other (describe)	
Have there been other claims or encumbrances that have limited Government's ability to claim reclamation security?	CCAA protection restrictions?		
	Creditors ranking (taxes, employee wages, etc.)		
	WCB claims against company assets		
	Bankruptcy / insolvency claims on company assets		
	Other (describe)		
Government 'seized' security: What is the disposition of unused reclamation funds after reclamation work is completed?	Unused \$ retained by government		
	Unused \$ returned to provider (company, bank, etc.)		
	Other (describe)		
If the reclamation security is insufficient, who pays the additional money for reclamation work?	Government		
	Company (if in existence)		
	Other (describe)		
Current value of mine reclamation security	Number of Mine Reclamation Bonds Held by Government	< \$5K	
		\$5K - \$100K	
		\$101K - \$500K	
		\$501K - \$1M	
		\$1M - \$10M	
		> \$10M	
	Reclamation Bond through Company Self-assurance	Number of self-assured companies	
		Value of self-assurance	
	Percent of security held in cash forms (cash, letter of credit)		
	Other (describe)		
	Number of operating mine sites	Number of Surface Mines	

# IGWG: Mine Reclamation and Security Survey, 2016

## Province/Territory

Total Number of Mines	Number of operating mine sites	Number of Underground Mines	
	Number of Mine Sites Closed and In Active Reclamation	Number of Surface Mines	
		Number of Underground Mines	
	Number of mine sites reclaimed and in long-term monitoring	Number of Surface Mines	
		Number of Underground Mines	
	Number of mine Sites reclaimed and in long-term monitoring and water treatment	Number of Surface Mines	
		Number of Underground Mines	
	Number of orphaned and abandoned mine sites on Crown land	Number of Surface Mines	
Number of Underground Mines			
Current estimated value of mine reclamation liabilities for active and closed mines and "Abandoned and Orphaned Mines"	Current estimated value of mine reclamation liabilities for active and recently closed mines having corporate responsibility.		
	Current estimated value of "abandoned and orphaned mine" reclamation liabilities		
Are mines that were in operation before reclamation security legislation was implemented now required to post a security?	Year first reclamation security legislation proclaimed?		
	Are mines in operation before proclamation of reclamation security legislation required to provide reclamation security?		
	Are operating mines that pre-date reclamation security legislation required to provide security valued in the same manner as a new mining project? If not, describe?		
	Period allowed for pre-existing mines to post the required reclamation security		
Is there public disclosure of reclamation security information?	Company specific security information		
	Summary of security information		
	Reclamation Liability information		
	Comments?		
Is there any tax relief for security payment(s)?			
Do you require a proponent to submit a bankable feasibility study to government prior to issuing a development or mining license/lease?			

## **Metcalf, Megan MEM:EX**

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**From:** Bellefontaine, Kim MEM:EX  
**Sent:** Tuesday, May 24, 2016 1:29 PM  
**To:** Haslam, David GCPE:EX  
**Cc:** Robb, Peter L. MEM:EX; Amann-Blake, Nathaniel MEM:EX; Howe, Diane J MEM:EX; Hoffman, Al MEM:EX; Plummer, Glen GCPE:EX; Dalal, Suntanu GCPE:EX; Gilmore, Dan GCPE:EX; Hynes, Michelle MEM:EX; Bose, Sara MEM:EX  
**Subject:** FW: Media Request\_Kamloops Infonews\_Mine Reclamation Security

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**From:** Robb, Peter L. MEM:EX  
**Sent:** Tuesday, May 24, 2016 1:26 PM  
**To:** Bellefontaine, Kim MEM:EX; Hoffman, Al MEM:EX  
**Cc:** Howe, Diane J MEM:EX  
**Subject:** RE: Media Request\_Kamloops Infonews\_Mine Reclamation Security

approved

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**From:** Bellefontaine, Kim MEM:EX  
**Sent:** Tuesday, May 24, 2016 1:08 PM  
**To:** Hoffman, Al MEM:EX; Robb, Peter L. MEM:EX  
**Cc:** Howe, Diane J MEM:EX  
**Subject:** FW: Media Request\_Kamloops Infonews\_Mine Reclamation Security

These responses are for your review and approval. Deadline is 3pm.  
Diane has reviewed and is fine with them.

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**From:** Haslam, David GCPE:EX  
**Sent:** Tuesday, May 24, 2016 12:36 PM  
**To:** Robb, Peter L. MEM:EX; Amann-Blake, Nathaniel MEM:EX; Howe, Diane J MEM:EX; Bellefontaine, Kim MEM:EX; Hoffman, Al MEM:EX  
**Cc:** Plummer, Glen GCPE:EX; Dalal, Suntanu GCPE:EX; Gilmore, Dan GCPE:EX; Hynes, Michelle MEM:EX; Bose, Sara MEM:EX  
**Subject:** FW: Media Request\_Kamloops Infonews\_Mine Reclamation Security

Hi all – see request below. The reporter is taking a local approach in covering the OAG report. Note the info I sent to him on Friday (list of mines and fact sheet). Thanks

**Reporter:** Brendan Kergin - 250.819.6089 – Kamloops infonews.ca

**Deadline:** 3 pm

**Request:** Following up on information sent last week (see attached list and summary below). I'm looking for a bit more information on the nuts and bolts of how this works in laymens' terms. How is the money held? Who is holding it? Also, is it used for insurance purposes in case of disasters or smaller incidents (like Mount Polly)? What about financially unstable mines that may go out of business before reaching the end of the mine's expected life For Highland Valley Copper, why such a discrepancy? Is there any sort of estimate for a fund for Ajax Mine? If not, when might one be made?

**Recommendation:** GCPE email reporter.

**Response:** Approved by ?.

### **How is the money held and who is holding it?**

The funding is held by the Ministry of Finance on behalf of the Ministry of Energy and Mines (MEM). The total reclamation security held by MEM is published each year in the Chief Inspector of Mines Annual Report. The Province currently holds \$1.07 billion in securities (March 2016).

Security bonding is not the only method by which government manages risk. Of even greater importance is the regulatory practice of requiring mining companies to manage and reduce their environmental liabilities through the development of detailed environmental protection and reclamation plans prior to mining, annual monitoring and reporting, and progressive reclamation through the life of mine.

### **Is it used for insurance purposes in case of disasters or smaller incidents (like Mount Polly)?**

Financial security is meant to cover the costs of reclamation, closure and ongoing monitoring and management requirements for a mine, in the event that a company defaulted on its obligations.

The security does not cover the costs of failure or clean-up of disasters. Mine companies remain responsible for these costs.

### **What about financially unstable mines that may go out of business before reaching the end of the mine's expected life.**

Security bonds can be evaluated and increased at any time ~~under the discretion of~~ by the Chief Inspector, this applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

### **For Highland Valley Copper, why such a discrepancy?**

It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.

Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.

For example, Teck (which owns Highland Valley Copper) and Barrick are responsible for 69% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

### **Is there any sort of estimate for a fund for Ajax Mine? If not, when might one be made?**

The Ajax Mine is currently in the Environmental Assessment process. A liability cost estimate is required at the Mines Act permitting stage. The application for a Mines Act permit has not yet been submitted. Financial security requirements are established by the Chief Inspector of Mines as a condition of a Mines Act permit.

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**From:** Haslam, David GCPE:EX  
**Sent:** Friday, May 20, 2016 12:19 PM  
**To:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX  
**Cc:** Gilmore, Dan GCPE:EX; Plummer, Glen GCPE:EX; Suric, Michelle J GCPE:EX  
**Subject:** Media Request\_Kamloops Infonews\_Mine Reclamation Security

Hi all – Kamloops Infonews reporter Brendan Kergin requested the list. No questions at this time. Provided attached and info below.

- Mining companies in British Columbia are liable for reclamation costs of mine sites.
- As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.
- It is important for our government to build greater public confidence in mining so that if a company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unreasonable amount of these costs.
- The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- Statutory decision-makers, not the minister, determine the amount of the security bonds required for each mine. The Ministry of Energy and Mines reviews and updates security amounts as project plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
- The Ministry of Energy and Mines accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis.
- Following the release of the Auditor General's report, government committed to reviewing its policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.



- Minister of Energy and Mines Bill Bennett has directed staff to have a “concrete” plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

## Frankl, Dave MEM:EX

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**From:** Bennett, Bill MEM:EX  
**Sent:** Tuesday, May 24, 2016 3:00 PM  
**To:** Denniston, Tristan M MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** Re: 1 of 4 FOR APPROVAL - Media Request: Justine Hunter\_Security Bonds

Tristan, make sure Justine knows when the first legislation was passed that created obligations for mining companies to pay financial security and do reclamation. Many of the sites Gov't repairs are orphan sites that were abandoned long before the legislation was passed. Ok?

Sent from Bill Bennett,  
Minister of Energy & Mines  
British Columbia

On May 24, 2016, at 3:51 PM, Denniston, Tristan M MEM:EX <[Tristan.Denniston@gov.bc.ca](mailto:Tristan.Denniston@gov.bc.ca)> wrote:

Good Afternoon Minister,

Please see below from Justine, David is looking into additional information with regards to mine defaults.

Justine interviewed MBB in the halls last week and is working on a story today. She has asked if other mines have defaulted and how much has it cost the tax payer. The information on Britannia is from FLNRO.

**Reporter:** Justine Hunter – Globe & Mail

**Deadline:** ASAP Today.

**Request:** Have other mines defaulted – Britannia comes to mind. And if so how much has it cost the taxpayer to remediate mines to date.

**Recommendation:** Have GCPE provide information be email.

**Response:**

- 1. How many mines permitted in B.C. since 1969 have British Columbians had to cover the remediation costs for?**

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

MEM generally works on the historic sites with health and safety concerns (ie filling in/caving open holes) and FLNRO or MOE (contaminated sites) works on historic mines with contamination issues (ie Britannia).

The Province began its environmental remediation work at Britannia Mine in 2001 after a financial settlement was reached with the former mine operators. The former operators contributed \$30 million toward the cleanup cost and provincial funding provided an additional \$45.9 million. To date, the Province has spent in excess of \$61.15 million on remediation at Britannia.

Britannia Mine, was once the largest copper producer in the British Commonwealth covering about 9,000 acres. Britannia Mine began production of copper ore over 100 years ago and closed for good in 1974.

## Frankl, Dave MEM:EX

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**From:** Bennett, Bill MEM:EX  
**Sent:** Wednesday, May 11, 2016 1:50 PM  
**To:** Wallace-Deering, Eric MEM:EX  
**Cc:** Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX; Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX  
**Subject:** Re: Copper Mountain Information

Do I have this in the binder? If not can I plz get it. Thanks

Sent from my BlackBerry 10 smartphone on the TELUS network.

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**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Wednesday, May 11, 2016 12:25 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX; Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX  
**Subject:** Copper Mountain Information

Hi Minister,

Ahead of the visit to Copper Mountain this week, GCPE have put together some information in case questions arise about either the OAG Report's concerns about reclamation bonding, or concerns raised by First Nations about activities at the mine over the last few years.

Please let me know if you have any questions, concerns or edits before we forward this information.

Thanks,

Eric

### **AUDITOR GENERAL'S REPORT: CONCERNS RAISED ON RECLAMATION BONDING**

The Auditor-General criticized government for failing to publicly disclose that it has not collected enough security deposits from the industry to cover potential mining accidents. The OAG said the shortfall amounts to \$1.2-billion. Minister Bennett promised to take action to ensure that those deposits are collected.

### **KEY MESSAGES**

- The liability the Office of the Auditor General report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- The Ministry of Energy and Mines requires financial security on all Mines Act permits. The security is reviewed and updated as required, generally every five years or when there is a major change in the approved mine plan or reclamation program. This is done so that should, for whatever reason, a mine not be able to fully fund all reclamation costs, British Columbians will not be the ones covering the costs.
- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The Ministry of Energy and Mines collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.

- Under some circumstances, the Ministry of Energy and Mines has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default.
- The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time. Teck and Barrick Gold Inc. are two such examples. The ministry has made decisions in the past that those companies aren't going anywhere. They've got a huge asset base, and it is not essential to have as much money in the bank with those particular companies.

## **PREVIOUSLY RAISED CONCERNS BY FIRST NATIONS WITH COPPER MOUNTAIN**

Over the past few years, First Nations have raised a few different concerns about operations at the mine. Government continues to work with First Nations, the community and the company to address these concerns in a timely manner.

### **Key Messages**

- Staff with MEM, MOE and MARR continue to work with the company and local First Nations to ensure all concerns are addressed appropriately and in a timely manner.
- This government recognizes the importance of working with First Nations in British Columbia to develop a shared vision for land and resource use.
- Acting in partnership is the best way to provide a meaningful role in land and resource management for First Nations, and to provide for benefit-sharing and new economic opportunities.

### **Background**

#### **December 2014 Tailings Spill**

- At approximately 10:20 p.m. on December 10, 2014, the Chief Inspector of Mines was notified of a tailings spill at Copper Mtn. Mine near Princeton.
- The company did not advise Lower and Upper Similkameen FNs of the spill the night it occurred, but contacted both the next day. The chief and council of both bands were on site the next day.
- Staff with the ministries of Environment, and Energy and Mines were immediately deployed onsite to respond to the spill.
- In response to the spill, the province signed a Letter of Understanding (LOU) with the Upper and Lower Similkameen First Nations outlining the initiatives the province would undertake to determine what caused the spill, what its potential impacts were and what steps could be taken to prevent a similar event in the future.
- An independent contractor, AECOM, was hired to investigate the incident and submitted its report to government and the Upper and Lower Similkameen First Nations in the fall of 2015.
- On March 24, 2016 the Lower Similkameen First Nations, in a letter to Minister of Aboriginal Relations and Reconciliation John Rustad rejecting the report from AECOM and requesting funding to hire a new contractor to review the AECOM report.

#### **January 2016 Waste Rock Dump failure**

- On January 31, 2016, a waste rock dump on the mine site slumped blocking Copper Mountain road.
- The waste rock slump resulted in a deposit of natural overburden materials (soil, glacial till sediments, and organic debris) in a small non-fish bearing portion of Wolfe Creek which flows into the Similkameen River.
- On February 9, 2016 the Ministry of Environment (MOE) issued a Pollution Abatement Order to Copper Mountain Mine.
- On February 12, 2016 Copper Mountain Mine submitted an Action Plan to MOE proposing measures to recover and manage the landslide overburden materials, and to mitigate and monitor residual risks to the environment.
- Work to remove overburden materials from Wolf Creek was completed on February 26, 2016.

- Re-vegetation of disturbed areas and soil stockpiles are scheduled to be completed over the months of April and May 2016.
- The company continues to undertake water sampling at Wolf Creek.

#### Lower Similkameen Economic Benefits Agreement

- The Lower Similkameen have raised concerns with the province regarding the band's economic benefits agreement.

## Frankl, Dave MEM:EX

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**From:** Bennett, Bill MEM:EX  
**Sent:** Tuesday, May 24, 2016 3:03 PM  
**To:** Denniston, Tristan M MEM:EX  
**Cc:** XT:Bennett, B LP:IN; Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** Re: 3 of 4 FOR APPROVAL - Media Request\_Kamloops Infonews\_Mine Reclamation Security

This is ok with me

Sent from Bill Bennett,  
Minister of Energy & Mines  
British Columbia

On May 24, 2016, at 3:55 PM, Denniston, Tristan M MEM:EX <[Tristan.Denniston@gov.bc.ca](mailto:Tristan.Denniston@gov.bc.ca)> wrote:

Good Afternoon Minister,

The reporter is writing Kamloops angle on the OAG report. Note the info below that GCPE sent to him on Friday (list of mines and fact sheet).

**Reporter:** Brendan Kergin - 250.819.6089 – Kamloops [infonews.ca](http://infonews.ca)

**Request:** Following up on information sent last week (see attached list and fact sheet below). I'm looking for a bit more information on the nuts and bolts of how this works in laymens' terms. How is the money held? Who is holding it? Also, is it used for insurance purposes in case of disasters or smaller incidents (like Mount Polly)? What about financially unstable mines that may go out of business before reaching the end of the mine's expected life For Highland Valley Copper, why such a discrepancy? Is there any sort of estimate for a fund for Ajax Mine? If not, when might one be made?

**Recommendation:** GCPE email reporter.

**Response:**

**How is the money held and who is holding it?**

The funding is held by the Ministry of Finance on behalf of the Ministry of Energy and Mines (MEM). The total reclamation security held is published each year in the Chief Inspector of Mines Annual Report. The Province currently holds \$1.07 billion in securities (March 2016).

Security bonding is not the only method by which government manages risk. Of even greater importance is the regulatory practice of requiring mining companies to manage and reduce their environmental liabilities through the development of detailed environmental protection and reclamation plans prior to mining, annual monitoring and reporting, and progressive reclamation through the life of mine.

**Is it used for insurance purposes in case of disasters or smaller incidents (like Mount Polly)?**

Financial security is meant to cover the costs of reclamation, closure and ongoing monitoring and management requirements for a mine, in the event that a company defaulted on its obligations.

The security does not cover the costs of failure or clean-up of disasters. Mine companies remain responsible for these costs.

**What about financially unstable mines that may go out of business before reaching the end of the mine's expected life.**

Security bonds can be evaluated and increased at any time by the Chief Inspector of Mines. This applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

**For Highland Valley Copper, why such a discrepancy?**

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For example, Teck (which owns Highland Valley Copper) and Barrick are responsible for 69% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

**Is there any sort of estimate for a fund for Ajax Mine? If not, when might one be made?**

The Ajax Mine is currently in the Environmental Assessment process. A liability cost estimate is required at the Mines Act permitting stage. The application for a Mines Act permit has not yet been submitted. Financial security requirements are established by the Chief Inspector of Mines as a condition of a Mines Act permit.

---

**From:** Haslam, David GCPE:EX

**Sent:** Friday, May 20, 2016 12:19 PM

**To:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX

**Cc:** Gilmore, Dan GCPE:EX; Plummer, Glen GCPE:EX; Suric, Michelle J GCPE:EX

**Subject:** Media Request\_Kamloops Infonews\_Mine Reclamation Security

Hi all – Kamloops Infonews reporter Brendan Kergin requested the list. No questions at this time. Provided attached and info below.

- ? Mining companies in British Columbia are liable for reclamation costs of mine sites.
- ? As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.
- ? It is important for our government to build greater public confidence in mining so that if a company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unreasonable amount of these costs.



- ? The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- ? Statutory decision-makers, not the minister, determine the amount of the security bonds required for each mine. The Ministry of Energy and Mines reviews and updates security amounts as project plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- ? Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
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- ? Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- ? Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- ? Minister of Energy and Mines Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

## Frankl, Dave MEM:EX

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**From:** Bennett, Bill MEM:EX  
**Sent:** Wednesday, May 11, 2016 2:04 PM  
**To:** Denniston, Tristan M MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX  
**Subject:** Re: Copper Mountain Information

So "hidden" in the Binder where I would never see it!!!

Sent from my BlackBerry 10 smartphone on the TELUS network.

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Wednesday, May 11, 2016 1:50 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX  
**Subject:** Re: Copper Mountain Information

Yes Minister, it's in the front flap

Sent from my iPhone

On May 11, 2016, at 1:49 PM, Bennett, Bill MEM:EX <[Bill.Bennett@gov.bc.ca](mailto:Bill.Bennett@gov.bc.ca)> wrote:

Do I have this in the binder? If not can I plz get it. Thanks

Sent from my BlackBerry 10 smartphone on the TELUS network.

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**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Wednesday, May 11, 2016 12:25 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX; Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX  
**Subject:** Copper Mountain Information

Hi Minister,

Ahead of the visit to Copper Mountain this week, GCPE have put together some information in case questions arise about either the OAG Report's concerns about reclamation bonding, or concerns raised by First Nations about activities at the mine over the last few years.

Please let me know if you have any questions, concerns or edits before we forward this information.

Thanks,

Eric

### **AUDITOR GENERAL'S REPORT: CONCERNS RAISED ON RECLAMATION BONDING**

The Auditor-General criticized government for failing to publicly disclose that it has not collected enough security deposits from the industry to cover potential mining accidents. The

OAG said the shortfall amounts to \$1.2-billion. Minister Bennett promised to take action to ensure that those deposits are collected.

### **KEY MESSAGES**

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- The Ministry of Energy and Mines requires financial security on all Mines Act permits. The security is reviewed and updated as required, generally every five years or when there is a major change in the approved mine plan or reclamation program. This is done so that should, for whatever reason, a mine not be able to fully fund all reclamation costs, British Columbians will not be the ones covering the costs.
- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The Ministry of Energy and Mines collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances, the Ministry of Energy and Mines has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default.
- The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time. Teck and Barrick Gold Inc. are two such examples. The ministry has made decisions in the past that those companies aren't going anywhere. They've got a huge asset base, and it is not essential to have as much money in the bank with those particular companies.

### **PREVIOUSLY RAISED CONCERNS BY FIRST NATIONS WITH COPPER MOUNTAIN**

Over the past few years, First Nations have raised a few different concerns about operations at the mine. Government continues to work with First Nations, the community and the company to address these concerns in a timely manner.

#### **Key Messages**

- Staff with MEM, MOE and MARR continue to work with the company and local First Nations to ensure all concerns are addressed appropriately and in a timely manner.
- This government recognizes the importance of working with First Nations in British Columbia to develop a shared vision for land and resource use.
- Acting in partnership is the best way to provide a meaningful role in land and resource management for First Nations, and to provide for benefit-sharing and new economic opportunities.

#### **Background**

##### **December 2014 Tailings Spill**

- At approximately 10:20 p.m. on December 10, 2014, the Chief Inspector of Mines was notified of a tailings spill at Copper Mtn. Mine near Princeton.

- The company did not advise Lower and Upper Similkameen FNs of the spill the night it occurred, but contacted both the next day. The chief and council of both bands were on site the next day.
- Staff with the ministries of Environment, and Energy and Mines were immediately deployed onsite to respond to the spill.
- In response to the spill, the province signed a Letter of Understanding (LOU) with the Upper and Lower Similkameen First Nations outlining the initiatives the province would undertake to determine what caused the spill, what its potential impacts were and what steps could be taken to prevent a similar event in the future.
- An independent contractor, AECOM, was hired to investigate the incident and submitted its report to government and the Upper and Lower Similkameen First Nations in the fall of 2015.
- On March 24, 2016 the Lower Similkameen First Nations, in a letter to Minister of Aboriginal Relations and Reconciliation John Rustad rejecting the report from AECOM and requesting funding to hire a new contractor to review the AECOM report.

#### January 2016 Waste Rock Dump failure

- On January 31, 2016, a waste rock dump on the mine site slumped blocking Copper Mountain road.
- The waste rock slump resulted in a deposit of natural overburden materials (soil, glacial till sediments, and organic debris) in a small non-fish bearing portion of Wolfe Creek which flows into the Similkameen River.
- On February 9, 2016 the Ministry of Environment (MOE) issued a Pollution Abatement Order to Copper Mountain Mine.
- On February 12, 2016 Copper Mountain Mine submitted an Action Plan to MOE proposing measures to recover and manage the landslide overburden materials, and to mitigate and monitor residual risks to the environment.
- Work to remove overburden materials from Wolf Creek was completed on February 26, 2016.
- Re-vegetation of disturbed areas and soil stockpiles are scheduled to be completed over the months of April and May 2016.
- The company continues to undertake water sampling at Wolf Creek.

#### Lower Similkameen Economic Benefits Agreement

- The Lower Similkameen have raised concerns with the province regarding the band's economic benefits agreement.

## Frankl, Dave MEM:EX

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**From:** Bennett, Bill MEM:EX  
**Sent:** Monday, May 16, 2016 9:43 PM  
**To:** Denniston, Tristan M MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Haslam, David GCPE:EX; Lewis, Ted MEM:EX  
**Subject:** Re: FOR APPROVAL - Media Request: CBC PG on UBCIC report...

Ok with me

Sent from my BlackBerry 10 smartphone on the TELUS network.

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Monday, May 16, 2016 9:25 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Haslam, David GCPE:EX; Lewis, Ted MEM:EX  
**Subject:** FOR APPROVAL - Media Request: CBC PG on UBCIC report...

Good Evening Minister,

Please see below for response to George Baker on the UBCIC Report. It is similar to the APTN one which you approved earlier. Your edits are part of the answer to question one. Question two however, deals with the polluter pays principle and remarks that securities and liabilities go unfounded by the Ministry.

Please let me know your thoughts.

Regards,  
Tristan

**Reporter:** George Baker – CBC Radio Prince George

**Deadline:** ASAP today.

**Request:** Does MEM have a response to the UBCIC report regarding the OAG report? Note the report's author, Robyn Allan, will be on Daybreak North Tuesday morning.

1). What does the ministry make of the claim in the report that "as at March 31, 2014, the Ministry of Energy and Mines had an unfunded liability for site reclamation of \$1.3 billion"?

2). What does the ministry make of this remark "There is no requirement in BC that mining companies undertake an environmental risk assessment that examines the risk and related environmental cost of possible accidents at their mine sites. Neither is there a requirement that companies provide proof to regulators that access to sufficient financial resources, including insurance, exists to meet obligations if an environmental harm event occurs."?

**Recommendation:** Have GCPE provide information by email.

**Response:**

1). *What does the ministry make of the claim in the report that "as at March 31, 2014, the Ministry of Energy and Mines had an unfunded liability for site reclamation of \$1.3 billion"?*

- The liability the Office of the Auditor General and UBCIC reports refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
  - We have already started work to address this. The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago.
- Since 2011, the total amount of security held has more than doubled. Bottom line – Minister Bennett has said we can do better and government will keep that commitment.
- Financial security is determined by assessing costs of reclamation in the context of a company's ability to pay and financial track record. Much of the shortfall in financial security is due to MEM's determination that total reclamation costs can be borne by a particular company
- Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.
  - Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
  - There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.
  - Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

2). *What does the ministry make of this remark "There is no requirement in BC that mining companies undertake an environmental risk assessment that examines the risk and related environmental cost of possible accidents at their mine sites. Neither is there a requirement that companies provide proof to regulators that access to sufficient financial resources, including insurance, exists to meet obligations if an environmental harm event occurs."?*

- Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- B.C. has a polluter-pay model to ensure those who are responsible for spills are also responsible for cleaning them up. This model is designed to keep the cost of response off of taxpayers.
- The Spill Cost Recovery Regulation sets out the types of costs that government can recover from a responsible party following a spill. This regulation, under the Environmental Management Act, is the legal mechanism for the polluter pays principle in British Columbia.
- The fact is, barring the Mount Polley tailings storage facility dam failure, this province has not seen a significant mine-related environmental incident in decades. Further, the number of environmental and health and safety related incidents at mines in British Columbia has continued to decline.

- There are a number of hard-learned lessons that have come to light as a result of the Mount Polley incident. And while we can't turn back the clock, we are taking action to tackle these issues head-on.
- Government has recently introduced legislation to establish a world-leading provincial spill response regime for British Columbia.
- One component that government is considering in its proposed spills regime is the creation of a fund that would ensure effective response is available if the spiller is unable, unwilling or unidentified.
- Our proposal is not a liability/insurance fund. It is a response and recovery fund to ensure money is immediately available to begin (and complete) a proper response.
- At this time, the mechanisms for establishing this fund have not yet been determined.

### **Background for the MO:**

#### ***NEWS RELEASE***

May 16, 2016

#### **BC encouraging environmentally risky mining and creating massive taxpayer liability**

(Coast Salish Territory / Vancouver BC – May 16, 2016). The BC government is enabling a dangerous disregard for environmental monitoring, reporting and protection among mining companies by letting them off the hook for the full costs of environmental reclamation – leaving taxpayers liable for more than \$1.5 billion, a new report shows.

“Other industrial sectors treat accident insurance and security deposits as a routine and fundamental cost of doing business and if a warehouse catches fire, a pipeline bursts or a factory has to be shuttered, companies have money set aside to respond effectively and immediately,” said Grand Chief Stewart Phillip, President of the Union of BC Indian Chiefs.

Quebec and Alaska insist on full funding of project reclamation from mining, creating a powerful incentive for companies to focus on safety and best practices.

“By failing to follow suit, BC has reduced this incentive and placed taxpayers at huge financial risk,” remarked Grand Chief Phillip. “Factor in the poor performance, lack of enforcement capacity and muddled political direction of the ministries of mines and energy and of the environment, and the failure to ensure all mines are safe and held accountable - and British Columbians have a great number of reasons to mistrust the mining sector.”

Today the Union of BC Indian Chiefs is releasing an in-depth study by economist Robyn Allan days after a scathing report by Auditor General Carol Bellringer detailed a damning failure of the province's environment monitoring of mines and failure to ensure companies are liable for the cost of accidents and remediation.

“As Ms. Allan's report explains, this failure to hold companies responsible rewards risky behavior because when companies know they can escape being held financially responsible for reclamation, they are more likely to cut corners on safety measures, leading to more accidents and more severe consequences when they happen,” stated Grand Chief Phillip.

Ms. Allan's analysis details how the incredibly irresponsible regime identified in the Auditor General's report has left taxpayers liable for even more than the \$1

billion identified by Ms. Bellringer – and lists steps needed to protect the environment and public coffers.

The analysis shows the Ministry of Energy and Mines had \$1.3 billion in site reclamation costs that hadn't been funded by mine operators as of March 31, 2014, and notes that amount could be higher today because of a spate of recent mine closures. However, the province no longer makes the figures publicly available. The province has also assumed responsibility for reclaiming abandoned mines, putting taxpayers on the hook for a further \$275 million.

The UBCIC calls on the BC government to adopt Ms. Bellringer's report and Ms. Allan's recommendations on mining liability, including requiring companies to provide full financial security for estimated reclamation, to demonstrate they have the necessary coverage in place to cover accidents such as tailings dam collapses like the one at Mount Polley, and to establish an industry fund to cover the cost of dealing with closed and abandoned mines so taxpayers are not left to pay costs for environmental harm.

The UBCIC also endorses and fully supports the call by First Nations Women Advocating Responsible Mining and others for the government to engage First Nations communities as environmental and project monitors and help them establish and fund on-the-land Guardians programmes.

**Media contact:**

For Interviews with report author Robyn Allan contact Sean Durkan: 613-841-6944

Grand Chief Stewart Phillip: 250-490-5314

New release and report online at [http://www.ubcic.bc.ca/bc\\_riskymining](http://www.ubcic.bc.ca/bc_riskymining)

**BACKGROUND:**

Economist Robyn Allan's close look at the Ministry of Energy and Mines reveals gaping holes in its financial assurance policies. [Download the complete report here.](#)

**KEY FINDINGS:**

***Underfunded Reclamation:*** The Province doesn't require mining companies to secure the full cost of restoring contaminated landscapes, rivers and communities. After being saddled with several mine closures in the 1980s-90s, the province planned to establish full security 1997. This never happened. In 2014, it is estimated the Province held \$723 million in security against a liability in excess of \$2 billion. That's \$1.3 billion of unfunded liability.

***Insufficient Funds for Accidents:*** BC does not require companies to guarantee they can afford to respond to a catastrophe. They don't have to post bonds. It could easily change this. Others have. For example, after the Lac Megantic tragedy, the Safe and Accountable Rail Act was changed to compel companies to provide proof they can cover the cost of hazardous spills.

***Financial Incentives for Reckless Behavior:*** Current provincial policy increases the risk of disasters. With no clear liability, some companies cut corners and flout safeguards. They have few inducements to invest in techniques like dry stacking that lower reclamation costs and reduce risk of spills, because there's no incentive to use Best Available Technology when they may never be held accountable if disaster strikes.

***Sweetheart Deals Favoring Miners over Taxpayers:*** MEM routinely lets companies off the hook for even minimal financial assurance. When operators run into economic trouble or face steep reclamation costs, some companies negotiate with MEM to accept lower security deposits—despite the fact that



struggling mines are more likely to default and stick taxpayers with the bill. The Auditor General of British Columbia recently published a report singling out MEM's inability to require companies to offer financial assurance for environmental liabilities. Despite "accepting" the Auditor General's recommendation to ensure the reclamation estimate is accurate and security held sufficient (1.3), the Ministry's response is void of action and accountability. It doesn't have to be this way.

#### **RECOMMENDATIONS:**

British Columbia can create an effective financial assurances framework for restoring mine sites and responding to mine disasters. Here are a few necessary steps outlined in Ms. Allan's report:

1. Require mining companies to post full security for mine site reclamation costs. For new mines, full security to be posted at time of permit issuance; for mines that are operating, under care and maintenance or are closed, require companies to post full security within three to five years.
2. Require companies to hold sufficient financial assurances to meet the full costs of likely environmental damage and third-party losses that arise due to mine related accidents. The level of sufficient financial assurances would be determined by a risk assessment and to include insurance and other hard security instruments such as bonds or cash. Companies should provide proof on an annual basis that such financial resources are available.
3. Establish an industry-funded pool to cover reclamation, unexpected environmental damage and commercial loss costs related to a major or catastrophic event if a polluter is unable to pay.
4. Create a claims process for those who have experienced environmental or economic harm as a result of a mine related accident that is independent from the mining company who caused the accident.
5. Publicly report on an annual basis site reclamation plans, reclamation costs, accident risk assessment with exposure estimate, security held for reclamation and accidental loss, by mine site and owner

## Frankl, Dave MEM:EX

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**From:** Bennett, Bill MEM:EX  
**Sent:** Thursday, May 5, 2016 4:58 PM  
**To:** Haslam, David GCPE:EX; Denniston, Tristan M MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX  
**Subject:** Re: FOR APPROVAL - Media Request: Justine and Sophie re. financial security shortfall...

Ok thanks David

Sent from my BlackBerry 10 smartphone on the TELUS network.

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**From:** Haslam, David GCPE:EX  
**Sent:** Thursday, May 5, 2016 3:28 PM  
**To:** Denniston, Tristan M MEM:EX; Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX  
**Subject:** RE: FOR APPROVAL - Media Request: Justine and Sophie re. financial security shortfall...

Minister. I spoke to Elaine. I understand she briefed you. This is on hold until we clarify what we can release. I've already contacted the reporters and informed them it will take a few days to sort this out.

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Thursday, May 5, 2016 2:57 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** FOR APPROVAL - Media Request: Justine and Sophie re. financial security shortfall...

Good Afternoon Minister,

Here are the underfunded liability numbers you had promised to provide Sophie Rosseau and Justine Hunter with from the media avail on Tuesday.

Please let me know your thoughts.

Regards,

Tristan

**Reporter:** Justine Hunter – Globe & Mail

**Reporter:** Sophie Rousseau – Radio Canada

**Deadline:** ASAP today.

**Request:** Of the \$1.2-billion shortfall referenced, minister said 75 per cent of that is for two companies – Teck and Barrick. Can we get specifics please?

**Recommendation:** Have GCPE provide information be email.

**Response:**

As of March 31, 2014:

Underfunded Liability

Teck: \$737,036,092

Barrick Gold Inc: \$212,082,349

Total: \$949,118,441

Approximately 79% of the \$1.2 billion underfunded liability.

Note:

- The liability the Office of the Auditor General report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.

- The Ministry of Energy and Mines requires financial security on all Mines Act permits. The security is reviewed and updated as required, generally every five years or when there is a major change in the approved mine plan or reclamation program. This is done so that should, for whatever reason, a mine not be able to fully fund all reclamation costs, British Columbians will not be the ones covering the costs.
- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The Ministry of Energy and Mines collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances, the Ministry of Energy and Mines has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time. Teck and Barrick Gold Inc. are two such examples. The ministry has made decisions in the past that those companies aren't going anywhere. They've got a huge asset base, and it is not essential to have as much money in the bank with those particular companies.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Thursday, May 26, 2016 8:10 AM  
**To:** Mills, Shane PREM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX; Gordon, Matt GCPE:EX  
**Subject:** Reclamation security  
**Attachments:** Mine Reclamation Security-Summary\_FINAL\_May 18\_2016.pdf; ATT00001.htm

Good Morning Shane,

Please see below for reclamation KMs. Please also note that this was specifically given to Justine in a follow up of a scrum for orphan mines and Britannia

### Response:

#### **1. How many mines permitted in B.C. since 1969 have British Columbians had to cover the remediation costs for?**

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

MEM generally works on the historic sites with health and safety concerns (ie filling In/caving open holes) and FLNRO or MOE (contaminated sites) works on historic mines with contamination issues (ie Britannia).

The Province began its environmental remediation work at Britannia Mine in 2001 after a financial settlement was reached with the former mine operators. The former operators contributed \$30 million toward the cleanup cost and provincial funding provided an additional \$45.9 million. To date, the Province has spent in excess of \$61.15 million on remediation at Britannia.

Britannia Mine, was once the largest copper producer in the British Commonwealth covering about 9,000 acres. Britannia Mine began production of copper ore over 100 years ago and closed for good in 1974.

Sent from my iPhone

KMs

- Mining companies in British Columbia are liable for reclamation costs of mine sites.
- As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.

- It is important for our government to build greater public confidence in mining so that if a company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unreasonable amount of these costs.
- The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- Statutory decision-makers, not the minister, determine the amount of the security bonds required for each mine. The Ministry of Energy and Mines reviews and updates security amounts as project plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
- The Ministry of Energy and Mines accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis.
- Following the release of the Auditor General's report, government committed to reviewing its policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- Minister of Energy and Mines Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

**2014 Mine Reclamation Securities in BC for Metal and Coal Mines**

Mine	Owner (2014)	Total Bond Amount	Liability Estimate	Differential
<b>COAL MINE PERMITS</b>				
Elk Valley (Elkview, Fording, Greenhills, Coal Mtn, Greenhills)	Teck Coal Ltd.	\$384,460,000.00	\$925,358,035.00	\$540,898,035.00
Sage Creek	Sage Creek Coal Ltd.	\$1,000.00	\$1,000.00	\$0.00
Tent Mountain	Luscar	\$58,500.00	\$58,500.00	\$0.00
Sukunka Coal	Tailsman Energy Inc.	\$50,000.00	\$67,500.00	\$17,500.00
Mt Speiker	Canadian Natural Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Benson Mt.	Netherlands Pacific Mining Co. Ltd.	\$5,000.00	\$5,000.00	\$0.00
Willow Creek	Walter Energy	\$6,000,000.00	\$11,987,574.00	\$5,987,574.00
Quintette	Teck Coal Ltd.	\$20,083,200.00	\$30,070,900.00	\$9,987,700.00
Bullmoose	Teck Coal Ltd.	\$1,000,000.00	\$1,000,000.00	\$0.00
Benson Mt.	Wolf Mountain Coal Ltd.	\$20,000.00	\$20,000.00	\$0.00
Mt Klappan	Fortune Coal Ltd.	\$306,900.00	\$123,050.00	\$0.00
Quinsam Coal Mine	Hillsborough Resouces Ltd.	\$7,281,000.00	\$7,281,000.00	\$0.00
Basin Coal	Coalmont Energy Corp.	\$276,547.00	\$559,500.00	\$282,953.00
Brule	Walter Energy	\$3,350,000.00	\$14,683,875.00	\$11,333,875.00
Wolverine	Walter Energy	\$11,500,000.00	\$12,498,812.00	\$998,812.00
Trend	Peace River Coal Ltd.	\$43,900,000.00	\$111,300,000.00	\$67,400,000.00
<b>METAL MINE PERMITS</b>				
Endako	Thompson Creek Mining Co.	\$15,345,700.00	\$44,560,000.00	\$29,214,300.00
Pinchi	Teck Metals Ltd.	\$2,000,000.00	\$2,000,000.00	\$0.00
Granisle	Glencore Canada Corp.	\$161,522.00	\$4,253,690.00	\$4,092,168.00
Red Mountain	Ministry of Energy and Mines	\$464,991.08	\$464,991.08	\$0.00
Island Copper	BHP Billiton	\$4,208,076.10	\$4,637,000.00	\$428,923.90
Kitsault	Avanti Kitsault Mine Ltd.	\$740,000.00	\$270,000.00	\$0.00
Highland Valley Copper	Teck Highland Valley Copper	\$18,250,000.00	\$204,395,357.00	\$186,145,357.00
Brenda	Glencore Canada Corp.	\$5,000,000.00	\$27,333,333.00	\$22,333,333.00
Cassiar	Cassiar-Jade Contracting Inc.	\$600,000.00	\$1,530,000.00	\$930,000.00
Myra Falls Operation	Nyrstar	\$78,254,733.00	\$118,760,133.00	\$40,505,400.00

Copper Mountain	Copper Mountain Mines Ltd.	\$11,500,500.00	\$12,765,873.00	\$1,265,373.00
Gallowai Bul River	R.H. Stanfield	\$491,511.19	\$498,228.00	\$6,716.81
Bell Mine	Glencore Canada Corp.	\$1,000,000.00	\$45,440,833.00	\$44,440,833.00
Taseko Mines Ltd.	Gibraltar Mines Ltd.	\$45,638,329.00	\$29,800,000.00	\$0.00
Alwin Mine	Dekalb	\$6,000.00	\$6,000.00	\$0.00
Giant Nickel	Barrick Gold Inc.	\$27,000.00	\$600,000.00	\$573,000.00
Silvan/Hickey	Slocan/Klondike Gold Corp	\$75,000.00	\$185,333.00	\$110,333.00
Craigmont	Huldra Silver Corp.	\$700,000.00	\$706,000.00	\$6,000.00
Dolly Varden Mine	Dolly Varden	\$6,000.00	\$6,000.00	\$0.00
Beaverdell	Teck Resources Ltd.	\$5,000.00	\$10,000.00	\$5,000.00
Mt Copeland	KRC Operators	\$3,484.10	\$3,484.10	\$0.00
Sullivan	Teck Metals Ltd.	\$22,500,000.00	\$22,500,000.00	\$0.00
HB Mine	Teck Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Dankoe	439813 BC Ltd.	\$10,000.00	\$10,000.00	\$0.00
Boss Mountain	Glencore Canada Corp.	\$30,000.00	\$2,434,033.00	\$2,404,033.00
Afton	KGHM Ajax Mining Inc.	\$350,000.00	\$350,000.00	\$0.00
Equity	GoldCorp	\$62,447,000.00	\$62,447,000.00	\$0.00
Cusac	Cusac Gold Mines Ltd.	\$264,444.00	\$627,762.00	\$363,318.00
Mosquito Creek	Mosquito Creek	\$5,000.00	\$437,119.00	\$432,119.00
Caroline	New Carolin Gold Corp.	\$256,250.00	\$199,564.00	\$0.00
Scottie Gold	Red Eye Resources	\$15,000.00	\$15,000.00	\$0.00
Baker	Dupont Canada Ltd.	\$15,606.00	\$165,681.00	\$150,075.00
Goldstream	Bethlehem Resources	\$200,000.00	\$1,048,056.00	\$848,056.00
Venus Mine	United Keno Mines	\$7,000.00	\$7,000.00	\$0.00
Taurus	Cassiar Gold Corp/Inter Taurus	\$10,000.00	\$10,000.00	\$0.00
Diamc	Silence Lake	\$10,000.00	\$10,000.00	\$0.00
Baymag	Baymag Mines Co. Ltd.	\$15,101.71	\$836,048.00	\$820,946.29
Ashlu Gold	Osprey Mining and Exploration	\$10,000.00	\$10,000.00	\$0.00
Four-J/Lussier	Georgia Pacific Canada Ltd.	\$20,000.00	\$20,000.00	\$0.00
Perlite	Perlite Canada Inc.	\$0.00	\$0.00	\$0.00
Union Mine	Pearl Resources Ltd.	\$5,000.00	\$5,000.00	\$0.00
Blackdome	J- Pacific Gold Inc	\$100,000.00	\$100,000.00	\$0.00
Nickel Plate	Barrick Gold Inc.	\$1,671,754.00	\$96,500,000.00	\$94,828,246.00
Cheni/Lawyers	Cheni Gold Mines Ltd	\$15,000.00	\$15,000.00	\$0.00

Johnny Mountain	Skyline Gold Corp.	\$562,310.33	\$319,000.00	\$0.00
Premier	Boliden	\$3,000,000.00	\$15,909,000.00	\$12,909,000.00
Parson Barite	Highwood Res/Sherritt	\$10,000.00	\$53,680.00	\$43,680.00
Moberly Silica	HCA Mountain Minerals			\$0.00
Candorado	Candorado Mines	\$0.00	\$3,000,000.00	\$3,000,000.00
Samatosum	FQM Akubra Inc.	\$7,800,000.00	\$7,276,145.00	\$0.00
South Fork Silica	331670 BC Ltd.	\$1,000.00	\$1,000.00	\$0.00
Barrier Feldspar	Kanspar	\$20,000.00	\$20,000.00	\$0.00
Golden Bear	Goldcorp	\$210,000.00	\$73,200.00	\$0.00
Horse Creek Silca	HiTest Sand Inc.	\$125,000.00	\$125,000.00	\$0.00
Sable/Shasta	Int'l Shasta/Sable Resources Ltd.	\$164,000.00	\$1,110,000.00	\$946,000.00
Snip	Barrick Gold Inc.	\$1,000,000.00	\$2,940,833.00	\$1,940,833.00
CIL	Clayburn Industries	\$1,000.00	\$5,000.00	\$4,000.00
Cirque Mine	Cirque Operating Corp.	\$220,000.00	\$220,000.00	\$0.00
Gypo Pit	Pacific Silica and Rock Quarry	\$2,500.00	\$2,500.00	\$0.00
Eskay Creek	Barrick Gold Corp.	\$3,774,000.00	\$118,514,270.00	\$114,740,270.00
QR	Barkerville Gold Mines	\$2,860,000.00	\$10,250,000.00	\$7,390,000.00
Elk / Siwash	Almaden/Fairfield Minerals	\$150,000.00	\$61,816.00	\$0.00
Mount Polley	Mt Polley Mines Ltd.	\$19,050,011.00	\$29,500,000.00	\$10,449,989.00
Huckleberry	Huckleberry Mines Ltd.	\$26,000,000.00	\$59,000,000.00	\$33,000,000.00
Kemess South	AuRico	\$18,520,000.00	\$17,144,663.00	\$0.00
Bralorne	Bralorne Gold Mines Ltd.	\$115,000.00	\$1,114,607.00	\$999,607.00
Bow mines (Tailings)	Golden Dawn Minerals Inc.	\$50,000.00	\$70,000.00	\$20,000.00
Crystal Graphite	Eagle Graphite Corporation	\$0.00	\$0.00	\$0.00
Ainsworth Mill	Blue Bird Mining	\$5,000.00	\$250,000.00	\$245,000.00
Brittania	BC Government			\$0.00
Quinto Mine	Consolidated/Quinto Mining Corp.	\$70,000.00	\$5,000.00	\$0.00
Blue Bell	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
HB Tailings	Regional Distirct East Kootenay	\$0.00	\$0.00	\$0.00
Churchill Copper	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
Max Molybdenum	Forty Two Metals Inc.	\$730,000.00	\$1,313,403.00	\$583,403.00
New Afton	New Gold Inc.	\$9,500,000.00	\$9,681,190.00	\$181,190.00
Galore Creek	Teck Metals Ltd.	\$1,167,000.00	\$1,167,000.00	\$0.00
Ruby Creek	Adanac Molybdenum Corp.	\$100,000.00	\$100,000.00	\$0.00



Tulsequah	Chieftain Metals Inc.	\$1,200,000.00	\$1,200,000.00	\$0.00
Zip Mill	Huakan International Mining Inc.	\$235,000.00	\$303,558.00	\$68,558.00
Lexington-Grenoble	Huakan International Mining Inc.	\$215,000.00	\$168,232.00	\$0.00
Yellowjacket	EaglePlains	\$150,000.00	\$150,000.00	\$0.00
Mount Milligan	Terrain Metals Corp.	\$30,000,000.00	\$35,171,000.00	\$5,171,000.00
Dome Mountain	Gavin Mines Ltd.	\$579,000.00	\$1,360,000.00	\$781,000.00
Bonanza Ledge	Barkerville Gold Mines	\$960,000.00	\$4,446,000.00	\$3,486,000.00
Treasure Mountain	Huldra Silver Inc.	\$505,100.00	\$505,100.00	\$0.00
Red Chris	Red Chris Operating Corp.	\$12,000,000.00	\$9,774,073.00	\$0.00
Yellow Giant (Tel)	Banks Island Gold Ltd.	\$355,000.00	\$283,700.00	\$0.00

\$892,153,070.51	\$2,133,597,234.18	\$1,262,769,510.00
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\*bonds greater than liability have an undersecure of zero (not minus)

## Frankl, Dave MEM:EX

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**From:** Plummer, Glen GCPE:EX  
**Sent:** Tuesday, May 17, 2016 4:24 PM  
**To:** Denniston, Tristan M MEM:EX; Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX  
**Cc:** Amann-Blake, Nathaniel MEM:EX; Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Gilmore, Dan GCPE:EX; McKnight, Elaine L MEM:EX  
**Subject:** FYI - draft QA and one-pager re. security bonds - 17 May 17  
**Attachments:** Security bonds and reclamation liabilities\_one pager\_May 16\_343pm.docx; QA\_Mine Security and liability estimates\_May 17\_336pm.docx; Copy of 2014 Mine Security-Liability Summary.xlsx

**Importance:** High

Hi Eric, Ted and Tristan,

The attached draft one-pager and QA are with Nathaniel for review.

We propose sending the one-pager to Gord Hoekstra along with the mine security liability spreadsheet.

The Hoekstra interview is tentatively set for 10:30 tomorrow morning – TBC upon MBB approval.

Can you please confirm if MBB would like additional support from ministry staff - Peter, Nathaniel and Diane – during the phone interview to address any technical questions Hoekstra may raise?

Thanks,

Glen

Glen Plummer  
Senior Communications Officer  
Ministry of Energy and Mines  
250 952-0559 office  
250 213-5667 cell

## **Ministry of Energy and Mines Security Bonds and Reclamation Liabilities**

In British Columbia mining is regulated in part by the Ministry of Energy, Mines (MEM) under the Mines Act (Act) and the Health, Safety and Reclamation Code for Mines in British Columbia (Code).

Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.

MEM accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.

Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.

MEM reviews and updates security amounts as projects plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.

Changes in regulatory requirements and in particular tolerances for water quality protection have placed increased pressures on many companies. MEM seeks to keep stride with these changes and to require increases in bonding over time, however there is a need to keep a balance to ensure companies can remain in operation and implement the costly changes as needed while at the same time be able to provide for additional security.

The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago. Since 2011, the total amount of security held has more than doubled. Bottom line – Minister Bennett has said we can do better and government will keep that commitment.

Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.

Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.

There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.

Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

## Mine Security Bonds and Liability Estimates

### Q & A

#### **1. What are you doing to address the underfunded mine security liabilities highlighted by the Auditor General and also in the new report from the Union of BC Indian Chiefs?**

- We have already started work to address this. The ministry holds more security bonds now than it did 10 years ago or even five years ago.
- It's important to recognize that liability estimates at mines are not static, the liability can increase from year to year depending on: mine operations, changes to the mine plan, progressive reclamation work, changes in technology and changes in the parameters of concern (i.e. water treatment for selenium and sulphates).
- Since 2011 the total amount of security held has more than doubled. This is largely a result of water treatment being required at several major coal operations because selenium has emerged as a contaminant of concern and that many coal operations have elevated selenium in their discharge.
- Following the release of the Auditor General's report, I said we were going to review our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.
- Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

#### **2. What are the various forms of security for mines held by government?**

- The financial security accepted by MEM, as approved by the Chief Inspector of Mines, may be in the form of cash, treasury bill, Guaranteed Investment Certificates (GIC) held under a safekeeping agreement – a legal agreement that enables the ministry to access the GIC at any time, letter of credit, or Surety Bond. Other forms may be accepted such as an asset agreement but only under certain circumstances.

**3. For some mines, the form of security includes assets. How certain are you that government would be able to liquidate those assets in a timely manner and get full value for them? What are some examples of assets MEM accepts?**

- MEM strictly limits the use of asset agreements and is working with the few companies that now hold asset agreements to replace these with a more suitable form of financial security. (Johnny Mtn, QR, Mt Polley and Huckleberry).
- The majority of the existing asset agreements were established in the mid-90s when such agreements were deemed acceptable by the ministry. One of the asset agreements – Huckleberry – was established in 2014.
- Assets used as security under these agreements include heavy equipment (trucks) and milling equipment. To give you an idea of what some of this equipment is worth, a single haul truck can cost more than \$1.2 million to replace.

**4. How is the value of these assets calculated and by whom?**

- The valuation of the assets is calculated by 3rd party appraisers.

**5. How are the liability estimates for each Mines Act permit calculated and by whom?**

- The mine is required to provide the liability estimate to the ministry and MEM staff then review and evaluate the estimate.
- To protect taxpayers, MEM requires liability estimates to be developed based on what its reclamation costs would be if third-party contractors do the work, as opposed to estimates based on work being done by the mining company itself. This ensures that in the event the company is unable to fulfil its obligations, adequate funds are available to hire contractors to complete the reclamation work.

**6. Are these estimates verified by an independent third-party?**

- MEM inspectors evaluate all liability estimates for mines sites.

**7. The liability estimates for some of these mines seem quite low considering the potential that some will require on-going water treatment for decades. Are the long-term liabilities included in the overall liability estimates?**

- Costing for long term water treatment is done using a phased approach. If water treatment is required immediately and during operations the costing is generally included but for some sites where treatment will not be required for decades after the site closes MEM aims to have full costing in place at closure.

**8. Why have you collected bonds at some mines to cover the full estimated liability amount but not at others?**

- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.

**9. Does MEM conduct financial liability risk assessments to determine which companies you allow to carry underfunded liabilities for their mine sites?**

- The MEM economist will provide a report to the Chief Inspector, when required, on Company health. This assessment is used primarily used to determine a schedule for bonding if required over a period of time.

**10. Why doesn't the province have enough bonds to cover 100% of remediation costs at all mine sites in British Columbia?**

- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.
- For example, Teck and Barrick are responsible for 75% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

**11. Tulsequah Chief Mine has a long-history of environmental concerns related to acid rock drainage. Given the liability estimate for reclamation of this mine is only \$1.2 million, why hasn't the Province simply moved in and addressed the issues?**

- The Tulsequah Chief is an historic mine and operated well before permitting or even acid-rock drainage (ARD) was recognized and understood.
- The current liability of \$1.2 million for the permit holder is based primarily on the surface disturbance at the mine.
- Once the company begins mining operations at the site, as part of the conditions of its permit it will be responsible for addressing the historic environmental issues at the site – establishing water treatment.

**12. Walter Energy filed for bankruptcy in 2015 leaving the future of its three coal mines near Tumbler Ridge in limbo. While the Province holds security for each of these mines, the combined underfunded liability for these mines – Willow Creek, Brule and Wolverine – is more than \$18.3 million. If government gets stuck paying for the reclamation of these sites, who is on the hook for that underfunded liability?**

- As the Mines Act permit holder for Wolverine, Brule and Willow Creek mines, Walter Energy is responsible for all reclamation costs at those sites and the company's chapter 11 filings do not discharge it from this responsibility.
- The company is in the process of trying to sell the three mine sites, but has funds set-aside to start addressing reclamation should it fail to secure a buyer.
- The Province holds security totaling \$20.85 M for the three mine sites. All security remains in good standing.

**13. Given the Walter Energy operations are all coal mines, won't these sites require long-term water treatment?**

- These sites do not require long term active water treatment..
- The company is in the process of trying to sell the three mine sites, but has funds set-aside to start addressing reclamation should it fail to secure a buyer.
- Once a new operator starts, the liability will be reassessed based on the new owner's mine plan and reclamation plan and appropriate bonding collected.

**14. What steps are you taking to reduce the underfunded liability amounts that currently exist for the three Walter Energy mine sites?**

- As the Mines Act permit holder for Wolverine, Brule and Willow Creek mines, Walter Energy is responsible for all reclamation costs at those sites and the company's chapter 11 filings do not discharge it from this responsibility.
- The company is in the process of trying to sell the three mine sites, but has funds set-aside to start addressing reclamation should it fail to secure a buyer.
- Once a new operator starts, the liability will be reassessed based on the new owner's mine plan and reclamation plan and appropriate bonding collected.

**15. Shasta Sable Resources has an underfunded liability of \$946,000 and has not posted any financial statements since 2014. This is a company that the OAG highlighted as having a track record of failing to comply with orders from the Ministry of Energy and Mines. What steps is the ministry taking to ensure the mine returns to compliance and are you taking steps to reduce the mine's underfunded liability?**

- MEM staff are working with Shasta toward bringing the site into full-compliance. There is a plan in place with set deadlines to get the site in full-compliance over the next 12 months.
- Bringing the mine site into -compliance will reduce the potential environmental liabilities at the mine.

**16. Why doesn't MEM increase the security amounts for mines?**

- MEM reviews and updates security amounts as projects plans are reviewed and or in some cases at the discretion of the Chief Inspector of Mines.
- Changes in regulatory requirements and in particular tolerances for water quality protection have placed increased pressures on many companies. MEM seeks to keep stride with these changes and to require increases in bonding over time, however there is a need to keep a balance to ensure companies can remain in operation and implement the costly changes as needed while at the same time be able to provide for additional security.
- For some companies, this balance is easier to achieve than for others and it is reasonable that government takes some risks rather than assume responsibilities for mines that the owners abandon. Having said this, MEM continues to work with these companies to ensure the protection of the workers the public and protection of the environment.

**17. Can MEM increase the security bonds for mines that are currently closed or in care and maintenance?**

- Yes. Security bonds can be evaluated and increased at any time under the discretion of the Chief Inspector, this applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).



**18. Under current legislation, companies are able to provide liability estimates in confidence, meaning this information is not available to the public. Will government address this issue to ensure details of reclamation liabilities and security bonds are publicly available?**

- Following the release of the Auditor General's report, I said we were going to review our policy around mine security bonds and that work is underway. As part of our ongoing work, we are reviewing the confidentiality currently available under the existing legislation.

Page 033 to/à Page 036

Withheld pursuant to/removed as

s.13;s.17

## Frankl, Dave MEM:EX

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**From:** Haslam, David GCPE:EX  
**Sent:** Thursday, May 19, 2016 9:10 AM  
**To:** Wallace-Deering, Eric MEM:EX; Denniston, Tristan M MEM:EX; Lewis, Ted MEM:EX  
**Cc:** Plummer, Glen GCPE:EX; Gilmore, Dan GCPE:EX  
**Subject:** FW: graph  
**Attachments:** Reclamation security page.docx; Recent audits of mining regulation.docx

See below from Nate – graph is on page two of the first attached doc. Increase by almost fourfold since 2001 is correct.

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**From:** Amann-Blake, Nathaniel MEM:EX  
**Sent:** Thursday, May 19, 2016 9:03 AM  
**To:** Haslam, David GCPE:EX  
**Cc:** Plummer, Glen GCPE:EX; Cox, Brad MEM:EX  
**Subject:** RE: graph

Its from page 28 of the 2014 annual report. also attached in word doc. I also attach the overview of recent audits, in particular Alberta 2015 audit found just \$1.57 billion in securities were being held for coal and oilsands mine cleanup, compared to the total estimated reclamation liabilities of \$20.8 billion.

[http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/2014\\_ci\\_annual\\_rpt.pdf](http://www2.gov.bc.ca/assets/gov/farming-natural-resources-and-industry/mineral-exploration-mining/documents/health-and-safety/2014_ci_annual_rpt.pdf)

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**From:** Haslam, David GCPE:EX  
**Sent:** Thursday, May 19, 2016 8:24 AM  
**To:** Amann-Blake, Nathaniel MEM:EX  
**Cc:** Plummer, Glen GCPE:EX  
**Subject:** graph

Hi Nate – do you have an electronic copy of the graph that demonstrates increases in security over last 10 years that you showed MBB yesterday.

David Haslam  
Communications Director  
Ministry of Energy and Mines  
250-361-7989

## **Reclamation security**

### **OAG Report assertion (p.6, 38, 41, 50):**

- BC is under-secured by \$1.2 billion

The OAG Report states that the ministry has estimated the total liability for all mines at more than \$2.1 billion, yet has obtained financial securities for less than half that amount (\$0.9 billion). More up to date numbers show that MEM currently holds \$1,075,611,748.22 in security. This is a substantial increase from the \$100 - \$200 million held throughout the 1990s.

MEM reviews security requirements on all new permits and permit amendments. Security has more than doubled since 2011 because of the requirements that most of the large coal mines in the province will require water treatment in the long term. The total reclamation security held by MEM is published each year in the Chief Inspector of Mines Annual Report.

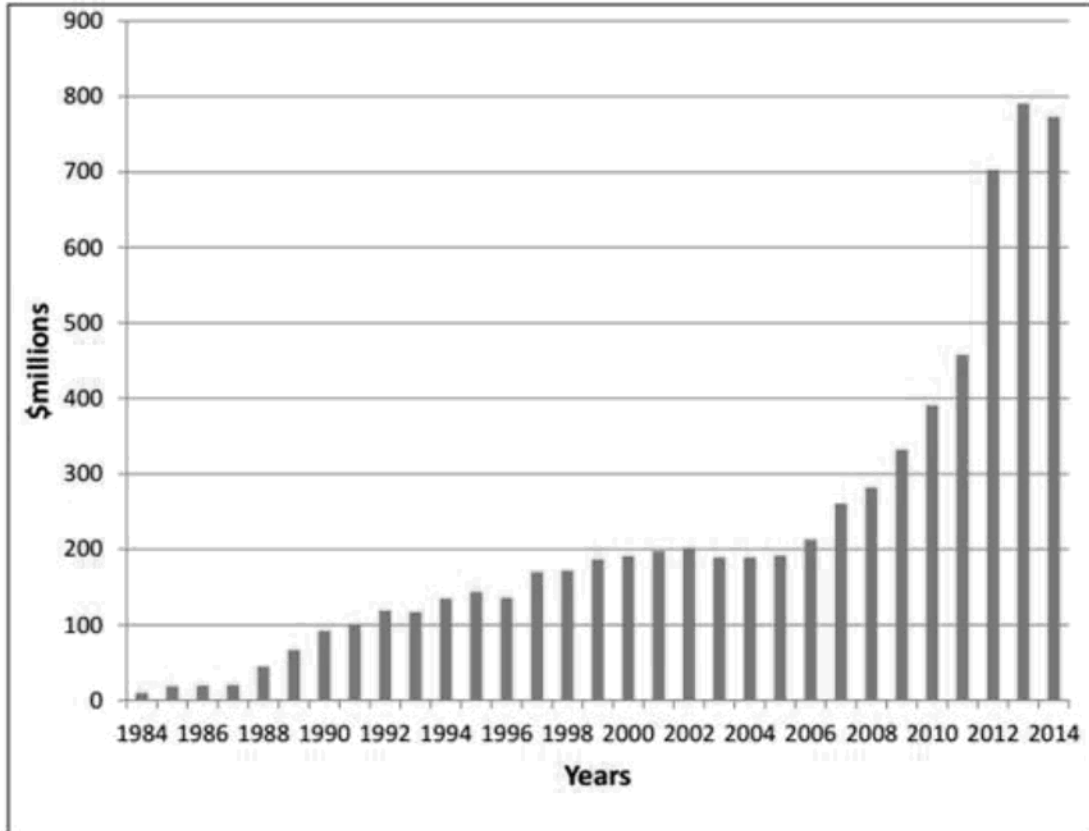
Stating that MEM is “under-secured” suggests that the only appropriate risk management strategy is to obtain 100% security in all cases. However, security bonding is not the only method by which government manages risk. Of great importance is the regulatory practice of requiring mining companies to manage and reduce their environmental liabilities through the development of detailed environmental protection and reclamation plans prior to mining, annual monitoring and reporting, and progressive reclamation through the life of mine.

MEM’s reclamation security policy looks at three classes of miner when considering whether to require 100% security for long term water treatment post-closure:

- 100% hard security prior to the point of closure for all single mine companies
- 100% hard security prior to the point of closure for all mines with ARD and
- For conventional mines operated by multi-mine companies, hard security requirements at closure are based on risk assessment.

MEM acknowledges that some mines do not have 100% security in place, however many of these are owned by large multi-mine companies that are considered a low risk for default, as they are financially sound and are progressing with their reclamation work. For example, Teck and Barrick are responsible for 75% of the unsecured liability that currently exists.

Province has risen from \$10 million in 1984 to more than \$773 million by the end of 2014.



**Figure 5: Reclamation Security Deposits Held by the Province (Initiation to 2014)**

## **Recent audits of mining regulation**

### **Auditor General of Ontario (Dec.2015)**

The Auditor criticized the Ministry of Northern Development and Mines (MNDM) failing to:

- encourage sufficient mineral development in the province,
- obtain sufficient security,
- advance the “Ring of Fire”, and
- ensure sufficient resources and technical expertise to oversee mine closure plans and inspect abandoned mines.

With respect to the amount and adequacy of security held, the report noted that while Ontario holds about \$1 billion of financial security it may be vulnerable due to:

- Legislation that allows companies that pass the Corporate Financial Test to self-assure (self-assured amount is at approximately \$654 million),
- The Ministry lacks a sound estimate of reclamation costs (potential liability),
- The report found that the amount of security actually obtained may inadequate:
  - Many closure plans to be outdated (these plans are the basis of the security amount required),
  - Ministry staff may have significantly underestimated reclamation costs,
  - Ministry staff may have failed to order appropriate testing for things like acid rock drainage.
- Ontario also has a large number of abandoned mines that ceased operations prior to the rules requiring reclamation security in the early 1990s. Potential government liability for such mines is estimated at between \$163 million to \$782 million.

MNDM responded by setting out measures intended to increase mining investment and indicated that it was reviewing security requirements but also noted that changes to Ontario’s self-assurance rules (allowing companies that meet financial solvency tests to completely self-assure) would require legislative amendments.

The Auditor noted that MNDMs’ in-house consultants who are responsible for overseeing and reviewing mine closure plans and for assessing security amounts. The Auditor found that the consultants are also responsible for promoting mineral exploration and development in Ontario by helping the industry through the regulatory process required to develop mining projects. The Auditor recommended that MNDM segregate the responsibility for the promotion of mineral exploration and development in Ontario from those responsible for the oversight of mine-closure plans. MNDM responded by stating that promotion is not an integral part of the consultants’ work.

### **Auditor General of the Province of Alberta (July 2015)**

The Auditor conducted a review of Alberta’s Mine Financial Security Program (MFSP).

*“We have concluded that improvements are needed to both how security is calculated and how security amounts are monitored. Without these improvements, if a mine operator cannot fulfill its reclamation obligations and no other private operator assumes the liability, the province is at risk of having to pay substantial amounts of public money,”*

The audit found that as of Dec. 31, 2014, just \$1.57 billion in securities were being held for coal and oilsands mine cleanup, compared to the total estimated reclamation liabilities of \$20.8 billion. In the opinion of the Auditor, much of the problem centres on the way the government calculates financial securities for companies, which uses an assets-to-liability approach rather than requiring companies to pay full securities up front.

### **Auditor General of Nova Scotia (May 2014)**

Auditor found that the Department of Natural Resources is not adequately managing mineral resources in the Province. While the Department is issuing mineral exploration licenses and leases in compliance with the Act and Regulations, many fundamental administrative practices are not completed:

- The Department’s monitoring of mining activity is not adequate:
  - Operator annual reports are not received and reviewed, and
  - Site visits are not conducted by the Department as often as intended.
- The Department is not doing enough to ensure the security it holds is adequate to cover potential costs for reclaiming mining sites:
  - The Auditor found that the rationale for accepting less than 100% of estimated reclamation costs was not adequately documented and staff did not obtain senior management approval. The Department indicated that it seeks to obtain 100% of the estimated cost to reclaim a mine site at the point of greatest site disturbance. Some operators plan to reclaim a site while they mine, reducing the security required. The Department indicated it may accept less than 100% of the estimated cost to reclaim a site, based on factors such as the size of the company and its ability to pay, and the Department’s assessment of the risk associated with the mining operation.
  - No assessment has been completed to evaluate the Department’s overall exposure for site reclamation costs and whether the risk is being appropriately managed.
- The Department did not track and ensure lease rental payments due for 2012 and 2013 were received as required.

Department of Natural Resources agreed with the findings and recommendations.

## Frankl, Dave MEM:EX

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**From:** Plummer, Glen GCPE:EX  
**Sent:** Wednesday, May 18, 2016 11:38 AM  
**To:** Haslam, David GCPE:EX; Wallace-Deering, Eric MEM:EX; Denniston, Tristan M MEM:EX; Lewis, Ted MEM:EX  
**Cc:** McKnight, Elaine L MEM:EX; Robb, Peter L. MEM:EX; Amann-Blake, Nathaniel MEM:EX; Bellefontaine, Kim MEM:EX; Howe, Diane J MEM:EX  
**Subject:** FYI - Mine reclamation securities QA - fact sheet - table - 18 May 16  
**Attachments:** QA\_Mine Security and liability estimates\_May 18\_1126am\_ADM reviewed.docx; FS\_Mine Reclamation Security in BC\_May 18\_913am.docx; Mine Reclamation Security-Summary\_FINAL\_May 18\_2016.pdf  
  
**Importance:** High

Hi,

The table, fact sheet and updated QA are attached. I've highlighted the edits to the QA, these have been reviewed by Nathaniel and Peter.

Thanks,

Glen

Glen Plummer  
Senior Communications Officer  
Ministry of Energy and Mines  
250 952-0559 office  
250 213-5667 cell



Mine Security Bonds and Liability Estimates  
Q & A

**1. What are you doing to address the underfunded mine security liabilities highlighted by the Auditor General and also in the new report from the Union of BC Indian Chiefs?**

- We have already started work to address this. The ministry holds more security bonds now than it did 10 years ago or even five years ago.
- It's important to recognize that liability estimates at mines are not static, the liability can increase from year to year depending on: mine operations, changes to the mine plan, progressive reclamation work, changes in technology and changes in the parameters of concern (i.e. water treatment for selenium and sulphates).
- Since 2011 the total amount of security held has more than doubled. This is largely a result of water treatment being required at several major coal operations because selenium has emerged as a contaminant of concern and that many coal operations have elevated selenium in their discharge.
- Historically, financial security at the Elk Valley mines was low as it was thought that reclamation liabilities were conventional (i.e. mainly removal of structures, re-sloping, re-vegetation) and that there was low risk of company default. As water quality concerns began to emerge, the ministry began proactively increasing financial securities in 2010, even though the water quality mitigation requirements were not well understood.
- It was not until the approval of the Elk Valley Water Quality Plan in 2014, that the extent of water treatment requirements was defined (i.e. 6 water treatment plants at 4 mines over 20 years, some with multiple phases of water treatment). These liabilities will continue to be assessed and securities reviewed and adjusted over time.
- Following the release of the Auditor General's report, I said we were going to review our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.
- Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

**2. What are the various forms of security for mines held by government?**

- The financial security accepted by MEM, as approved by the Chief Inspector of Mines, may be in the form of cash, treasury bill, Guaranteed Investment Certificates (GIC) held under a safekeeping agreement – a legal agreement that enables the ministry to access the GIC at any time, letter of credit, or Surety Bond. Other forms may be accepted such as an asset agreement but only under certain circumstances.

**3. For some mines, the form of security includes assets. How certain are you that government would be able to liquidate those assets in a timely manner and get full value for them? What are some examples of assets MEM accepts?**

- MEM strictly limits the use of asset agreements and is working with the few companies that now hold asset agreements to replace these with a more suitable form of financial security. (Johnny Mtn, QR, Mt Polley and Huckleberry).
- The majority of the existing asset agreements were established in the mid-90s when such agreements were deemed acceptable by the ministry. One of the asset agreements – Huckleberry – was established in 2014.
- Assets used as security under these agreements include heavy equipment (trucks) and milling equipment. To give you an idea of what some of this equipment is worth, a single haul truck can cost more than \$1.2 million to replace.

**4. How is the value of these assets calculated and by whom?**

- The valuation of the assets is calculated by 3rd party appraisers.

**5. How are the liability estimates for each Mines Act permit calculated and by whom?**

- The mine is required to provide the liability estimate to the ministry and MEM staff then review and evaluate the estimate.
- To protect taxpayers, MEM requires liability estimates to be developed based on what its reclamation costs would be if third-party contractors do the work, as opposed to estimates based on work being done by the mining company itself. This ensures that in the event the company is unable to fulfil its obligations, adequate funds are available to hire contractors to complete the reclamation work.

**6. Are these estimates verified by an independent third-party?**

- MEM inspectors evaluate all liability estimates for mines sites.

**7. The liability estimates for some of these mines seem quite low considering the potential that some will require on-going water treatment for decades. Are the long-term liabilities included in the overall liability estimates?**

- Costing for long term water treatment is done using a phased approach. If water treatment is required immediately and during operations the costing is generally included but for some sites where treatment will not be required for decades after the site closes MEM aims to have full costing in place at closure.

**8. Why have you collected bonds at some mines to cover the full estimated liability amount but not at others?**

- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.
- For example, Teck and Barrick are responsible for 75% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

**9. Is it fair to say that in the case of Teck, Glencore and Barrick, MEM has made judgements that they are safe risks?**

- In the past, judgements were made that large diversified companies posed less of a risk especially when considering conventional reclamation costs. However, several of the Teck, Glencore and Barrick sites now require long term water treatment. Given this, and recognizing the potential risk that these companies may not exist over hundreds of years, MEM has been increasing security bond requirements for these mines.
- In the past several years, security reviews have been focussed on Teck sites (specifically Elk Valley) as these have the largest unfunded liability and Teck has had applications for major expansions. Securities have been reviewed as part of the permitting process.

- One of Glencore's mines (the Bell mine) was reviewed in 2013 when the water treatment plant was permitted. The current security is \$5M, and the mine will have 100% security by November 2017 (\$25.1M) as a condition of its permit.
- The Ministry will review the financial security for Barrick sites in 2016 and 2017.

**10. Does MEM conduct financial liability risk assessments to determine which companies you allow to carry underfunded liabilities for their mine sites?**

- The MEM economist will provide a report to the Chief Inspector, when required, on Company health. This assessment is used primarily used to determine a schedule for bonding if required over a period of time.

**11. Tulsequah Chief Mine has a long-history of environmental concerns related to acid rock drainage. Given the liability estimate for reclamation of this mine is only \$1.2 million, why hasn't the Province simply moved in and addressed the issues?**

- The Tulsequah Chief is an historic mine and operated well before permitting or even acid-rock drainage (ARD) was recognized and understood.
- The current liability of \$1.2 million for the permit holder is based primarily on the surface disturbance at the mine.
- Once the company begins mining operations at the site, as part of the conditions of its permit it will be responsible for addressing the historic environmental issues at the site – establishing water treatment.

**12. Walter Energy filed for bankruptcy in 2015 leaving the future of its three coal mines near Tumbler Ridge in limbo. While the Province holds security for each of these mines, the combined underfunded liability for these mines – Willow Creek, Brule and Wolverine – is more than \$18.3 million. If government gets stuck paying for the reclamation of these sites, who is on the hook for that underfunded liability?**

- As the Mines Act permit holder for Wolverine, Brule and Willow Creek mines, Walter Energy is responsible for all reclamation costs at those sites and the company's chapter 11 filings do not discharge it from this responsibility.
- The company is in the process of trying to sell the three mine sites, but has funds set-aside to start addressing reclamation should it fail to secure a buyer. Progressive reclamation, which would be undertaken if the company is unable to find a buyer, would reduce the amount of underfunded reclamation liability.
- The Province holds security totaling \$20.85 M for the three mine sites. All security remains in good standing.

**13. Given the Walter Energy operations are all coal mines, won't these sites require long-term water treatment?**

- These sites do not require long term active water treatment..
- The company is in the process of trying to sell the three mine sites, but has funds set-aside to start addressing reclamation should it fail to secure a buyer.
- Once a new operator starts, the liability will be reassessed based on the new owner's mine plan and reclamation plan and appropriate bonding collected.

**14. What steps are you taking to reduce the underfunded liability amounts that currently exist for the three Walter Energy mine sites?**

- As the Mines Act permit holder for Wolverine, Brule and Willow Creek mines, Walter Energy is responsible for all reclamation costs at those sites and the company's chapter 11 filings do not discharge it from this responsibility.
- The company is in the process of trying to sell the three mine sites, but has funds set-aside to start addressing reclamation should it fail to secure a buyer.
- Once a new operator starts, the liability will be reassessed based on the new owner's mine plan and reclamation plan and appropriate bonding collected.

**15. Shasta Sable Resources has an underfunded liability of \$946,000 and has not posted any financial statements since 2014. This is a company that the OAG highlighted as having a track record of failing to comply with orders from the Ministry of Energy and Mines. What steps is the ministry taking to ensure the mine returns to compliance and are you taking steps to reduce the mine's underfunded liability?**

- MEM staff are working with Shasta toward bringing the site into full-compliance. There is a plan in place with set deadlines to get the site in full-compliance over the next 12 months.
- Bringing the mine site into -compliance will reduce the potential environmental liabilities at the mine.

**16. Barkerville Gold is a new company. Their \$7 million shortfall at QR must have been agreed to in the past year or to by MEM as the asset changed hands?**

- Barkerville assumed responsibility for all liability when the permit changed.
- The 2014 liability estimate included the need to put a lift on their dam, and other engineering studies. Both have been completed.

**17. Barkerville Gold also has a shortfall at Bonanza Ledge. Is this related to the QR site?**

- No, this is only the Bonanza Ledge site. This estimate as well will be significantly less once the new mine plan is finalized because the company are no longer going to store potentially acid generating rock at surface that would need to be relocated at closure.

**18. What was the rationale for the decision to allow Huckelberry to extend its shortfall in 2014?**

- At the time, the company did not have the financial means to address its shortfall. MEM's economist worked with the company to better understand its situation and the decision was made to accept assets in place of another financial bond. However, the company has committed to replace the asset securities with financial securities moving forward.

**19. Mount Milligan is owned by Thompson Creek but Terrain Metals Corp has the shortfall of \$5 million. Terrain was the previous owner. What is the explanation here?**

- Terrain, the permit holder, is a wholly-owned subsidiary of Thompson Creek. Mt Milligan has recently submitted their Mine Plan update, and MEM will review and at that time will also review the bond.

**20. At the Trend mine, Peace River Coal Ltd is listed as the owner. Is the parent company, Anglo, also legally liable?**

- Peace River, the permit holder, is a wholly-owned subsidiary of Anglo.

**21. Why doesn't MEM increase the security amounts for mines?**

- MEM reviews and updates security amounts as projects plans are reviewed and or in some cases at the discretion of the Chief Inspector of Mines.
- Changes in regulatory requirements and in particular tolerances for water quality protection have placed increased pressures on many companies. MEM seeks to keep stride with these changes and to require increases in bonding over time, however there is a need to keep a balance to ensure companies can remain in operation and implement the costly changes as needed while at the same time be able to provide for additional security.
- For some companies, this balance is easier to achieve than for others and it is reasonable that government takes some risks rather than assume responsibilities for mines that the owners abandon. Having said this, MEM continues to work with these companies to ensure the protection of the workers the public and protection of the environment.

**22. Can MEM increase the security bonds for mines that are currently closed or in care and maintenance?**

- Yes. Security bonds can be evaluated and increased at any time under the discretion of the Chief Inspector, this applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).

**23. Under current legislation, companies are able to provide liability estimates in confidence, meaning this information is not available to the public. Will government address this issue to ensure details of reclamation liabilities and security bonds are publicly available?**

- Following the release of the Auditor General's report, I said we were going to review our policy around mine security bonds and that work is underway. As part of our ongoing work, we are reviewing the confidentiality currently available under the existing legislation.

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## FACTSHEET

[Date]

Ministry of Energy and Mines

### **Mine reclamation security in British Columbia**

- In British Columbia, mining is regulated in part by the Ministry of Energy and Mines (MEM) under the Mines Act (Act) and the Health, Safety and Reclamation Code for Mines in British Columbia (Code).
- Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- MEM accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis. MEM reviews and updates security amounts as projects plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Changes in regulatory requirements and in particular water quality protection have placed increased pressures on many companies. MEM keeps stride with these changes and requires a combination of increases in bonding over time as well as ongoing financial strength from the mine owner to protect the public interest. This approach provides a balance which ensures companies can remain in operation, implementing costly capital programs as needed for permitting while at the same time being able to provide for additional security.
- More specifically, costing for long term water treatment is done using a phased approach. If water treatment is required immediately and during operations the costing is generally included. However, for some sites where treatment will not be required for decades after the site closes MEM's practice is to have full costing in place at closure.



- The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago. Since 2011, the total amount of security held has more than doubled.
- Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require full security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept. Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

Contact:      Suntanu Dalal  
Media Relations  
Ministry of Energy and Mines  
250 952-0628

**2014 Mine Reclamation Securities in BC for Metal and Coal Mines**

Mine	Owner (2014)	Total Bond Amount	Liability Estimate	Differential
<b>COAL MINE PERMITS</b>				
Elk Valley (Elkview, Fording, Greenhills, Coal Mtn, Greenhills)	Teck Coal Ltd.	\$384,460,000.00	\$925,358,035.00	\$540,898,035.00
Sage Creek	Sage Creek Coal Ltd.	\$1,000.00	\$1,000.00	\$0.00
Tent Mountain	Luscar	\$58,500.00	\$58,500.00	\$0.00
Sukunka Coal	Tailsman Energy Inc.	\$50,000.00	\$67,500.00	\$17,500.00
Mt Speiker	Canadian Natural Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Benson Mt.	Netherlands Pacific Mining Co. Ltd.	\$5,000.00	\$5,000.00	\$0.00
Willow Creek	Walter Energy	\$6,000,000.00	\$11,987,574.00	\$5,987,574.00
Quintette	Teck Coal Ltd.	\$20,083,200.00	\$30,070,900.00	\$9,987,700.00
Bullmoose	Teck Coal Ltd.	\$1,000,000.00	\$1,000,000.00	\$0.00
Benson Mt.	Wolf Mountain Coal Ltd.	\$20,000.00	\$20,000.00	\$0.00
Mt Klappan	Fortune Coal Ltd.	\$306,900.00	\$123,050.00	\$0.00
Quinsam Coal Mine	Hillsborough Resouces Ltd.	\$7,281,000.00	\$7,281,000.00	\$0.00
Basin Coal	Coalmont Energy Corp.	\$276,547.00	\$559,500.00	\$282,953.00
Brule	Walter Energy	\$3,350,000.00	\$14,683,875.00	\$11,333,875.00
Wolverine	Walter Energy	\$11,500,000.00	\$12,498,812.00	\$998,812.00
Trend	Peace River Coal Ltd.	\$43,900,000.00	\$111,300,000.00	\$67,400,000.00
<b>METAL MINE PERMITS</b>				
Endako	Thompson Creek Mining Co.	\$15,345,700.00	\$44,560,000.00	\$29,214,300.00
Pinchi	Teck Metals Ltd.	\$2,000,000.00	\$2,000,000.00	\$0.00
Granisle	Glencore Canada Corp.	\$161,522.00	\$4,253,690.00	\$4,092,168.00
Red Mountain	Ministry of Energy and Mines	\$464,991.08	\$464,991.08	\$0.00
Island Copper	BHP Billiton	\$4,208,076.10	\$4,637,000.00	\$428,923.90
Kitsault	Avanti Kitsault Mine Ltd.	\$740,000.00	\$270,000.00	\$0.00
Highland Valley Copper	Teck Highland Valley Copper	\$18,250,000.00	\$204,395,357.00	\$186,145,357.00
Brenda	Glencore Canada Corp.	\$5,000,000.00	\$27,333,333.00	\$22,333,333.00
Cassiar	Cassiar-Jade Contracting Inc.	\$600,000.00	\$1,530,000.00	\$930,000.00
Myra Falls Operation	Nyrstar	\$78,254,733.00	\$118,760,133.00	\$40,505,400.00

Copper Mountain	Copper Mountain Mines Ltd.	\$11,500,500.00	\$12,765,873.00	\$1,265,373.00
Gallowai Bul River	R.H. Stanfield	\$491,511.19	\$498,228.00	\$6,716.81
Bell Mine	Glencore Canada Corp.	\$1,000,000.00	\$45,440,833.00	\$44,440,833.00
Taseko Mines Ltd.	Gibraltar Mines Ltd.	\$45,638,329.00	\$29,800,000.00	\$0.00
Alwin Mine	Dekalb	\$6,000.00	\$6,000.00	\$0.00
Giant Nickel	Barrick Gold Inc.	\$27,000.00	\$600,000.00	\$573,000.00
Silvan/Hickey	Slocan/Klondike Gold Corp	\$75,000.00	\$185,333.00	\$110,333.00
Craigmont	Huldra Silver Corp.	\$700,000.00	\$706,000.00	\$6,000.00
Dolly Varden Mine	Dolly Varden	\$6,000.00	\$6,000.00	\$0.00
Beaverdell	Teck Resources Ltd.	\$5,000.00	\$10,000.00	\$5,000.00
Mt Copeland	KRC Operators	\$3,484.10	\$3,484.10	\$0.00
Sullivan	Teck Metals Ltd.	\$22,500,000.00	\$22,500,000.00	\$0.00
HB Mine	Teck Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Dankoe	439813 BC Ltd.	\$10,000.00	\$10,000.00	\$0.00
Boss Mountain	Glencore Canada Corp.	\$30,000.00	\$2,434,033.00	\$2,404,033.00
Afton	KGHM Ajax Mining Inc.	\$350,000.00	\$350,000.00	\$0.00
Equity	GoldCorp	\$62,447,000.00	\$62,447,000.00	\$0.00
Cusac	Cusac Gold Mines Ltd.	\$264,444.00	\$627,762.00	\$363,318.00
Mosquito Creek	Mosquito Creek	\$5,000.00	\$437,119.00	\$432,119.00
Caroline	New Carolin Gold Corp.	\$256,250.00	\$199,564.00	\$0.00
Scottie Gold	Red Eye Resources	\$15,000.00	\$15,000.00	\$0.00
Baker	Dupont Canada Ltd.	\$15,606.00	\$165,681.00	\$150,075.00
Goldstream	Bethlehem Resources	\$200,000.00	\$1,048,056.00	\$848,056.00
Venus Mine	United Keno Mines	\$7,000.00	\$7,000.00	\$0.00
Taurus	Cassiar Gold Corp/Inter Taurus	\$10,000.00	\$10,000.00	\$0.00
Diamc	Silence Lake	\$10,000.00	\$10,000.00	\$0.00
Baymag	Baymag Mines Co. Ltd.	\$15,101.71	\$836,048.00	\$820,946.29
Ashlu Gold	Osprey Mining and Exploration	\$10,000.00	\$10,000.00	\$0.00
Four-J/Lussier	Georgia Pacific Canada Ltd.	\$20,000.00	\$20,000.00	\$0.00
Perlite	Perlite Canada Inc.	\$0.00	\$0.00	\$0.00
Union Mine	Pearl Resources Ltd.	\$5,000.00	\$5,000.00	\$0.00
Blackdome	J- Pacific Gold Inc	\$100,000.00	\$100,000.00	\$0.00
Nickel Plate	Barrick Gold Inc.	\$1,671,754.00	\$96,500,000.00	\$94,828,246.00
Cheni/Lawyers	Cheni Gold Mines Ltd	\$15,000.00	\$15,000.00	\$0.00

Johnny Mountain	Skyline Gold Corp.	\$562,310.33	\$319,000.00	\$0.00
Premier	Boliden	\$3,000,000.00	\$15,909,000.00	\$12,909,000.00
Parson Barite	Highwood Res/Sherritt	\$10,000.00	\$53,680.00	\$43,680.00
Moberly Silica	HCA Mountain Minerals			\$0.00
Candorado	Candorado Mines	\$0.00	\$3,000,000.00	\$3,000,000.00
Samatosum	FQM Akubra Inc.	\$7,800,000.00	\$7,276,145.00	\$0.00
South Fork Silica	331670 BC Ltd.	\$1,000.00	\$1,000.00	\$0.00
Barrier Feldspar	Kanspar	\$20,000.00	\$20,000.00	\$0.00
Golden Bear	Goldcorp	\$210,000.00	\$73,200.00	\$0.00
Horse Creek Silca	HiTest Sand Inc.	\$125,000.00	\$125,000.00	\$0.00
Sable/Shasta	Int'l Shasta/Sable Resources Ltd.	\$164,000.00	\$1,110,000.00	\$946,000.00
Snip	Barrick Gold Inc.	\$1,000,000.00	\$2,940,833.00	\$1,940,833.00
CIL	Clayburn Industries	\$1,000.00	\$5,000.00	\$4,000.00
Cirque Mine	Cirque Operating Corp.	\$220,000.00	\$220,000.00	\$0.00
Gypo Pit	Pacific Silica and Rock Quarry	\$2,500.00	\$2,500.00	\$0.00
Eskay Creek	Barrick Gold Corp.	\$3,774,000.00	\$118,514,270.00	\$114,740,270.00
QR	Barkerville Gold Mines	\$2,860,000.00	\$10,250,000.00	\$7,390,000.00
Elk / Siwash	Almaden/Fairfield Minerals	\$150,000.00	\$61,816.00	\$0.00
Mount Polley	Mt Polley Mines Ltd.	\$19,050,011.00	\$29,500,000.00	\$10,449,989.00
Huckleberry	Huckleberry Mines Ltd.	\$26,000,000.00	\$59,000,000.00	\$33,000,000.00
Kemess South	AuRico	\$18,520,000.00	\$17,144,663.00	\$0.00
Bralorne	Bralorne Gold Mines Ltd.	\$115,000.00	\$1,114,607.00	\$999,607.00
Bow mines (Tailings)	Golden Dawn Minerals Inc.	\$50,000.00	\$70,000.00	\$20,000.00
Crystal Graphite	Eagle Graphite Corporation	\$0.00	\$0.00	\$0.00
Ainsworth Mill	Blue Bird Mining	\$5,000.00	\$250,000.00	\$245,000.00
Brittania	BC Government			\$0.00
Quinto Mine	Consolidated/Quinto Mining Corp.	\$70,000.00	\$5,000.00	\$0.00
Blue Bell	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
HB Tailings	Regional Distirct East Kootenay	\$0.00	\$0.00	\$0.00
Churchill Copper	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
Max Molybdenum	Forty Two Metals Inc.	\$730,000.00	\$1,313,403.00	\$583,403.00
New Afton	New Gold Inc.	\$9,500,000.00	\$9,681,190.00	\$181,190.00
Galore Creek	Teck Metals Ltd.	\$1,167,000.00	\$1,167,000.00	\$0.00
Ruby Creek	Adanac Molybdenum Corp.	\$100,000.00	\$100,000.00	\$0.00

Tulsequah	Chieftain Metals Inc.	\$1,200,000.00	\$1,200,000.00	\$0.00
Zip Mill	Huakan International Mining Inc.	\$235,000.00	\$303,558.00	\$68,558.00
Lexington-Grenoble	Huakan International Mining Inc.	\$215,000.00	\$168,232.00	\$0.00
Yellowjacket	EaglePlains	\$150,000.00	\$150,000.00	\$0.00
Mount Milligan	Terrain Metals Corp.	\$30,000,000.00	\$35,171,000.00	\$5,171,000.00
Dome Mountain	Gavin Mines Ltd.	\$579,000.00	\$1,360,000.00	\$781,000.00
Bonanza Ledge	Barkerville Gold Mines	\$960,000.00	\$4,446,000.00	\$3,486,000.00
Treasure Mountain	Huldra Silver Inc.	\$505,100.00	\$505,100.00	\$0.00
Red Chris	Red Chris Operating Corp.	\$12,000,000.00	\$9,774,073.00	\$0.00
Yellow Giant (Tel)	Banks Island Gold Ltd.	\$355,000.00	\$283,700.00	\$0.00

\$892,153,070.51	\$2,133,597,234.18	\$1,262,769,510.00
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\*bonds greater than liability have an undersecure of zero (not minus)

## Frankl, Dave MEM:EX

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**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Friday, May 27, 2016 4:11 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX; Haslam, David GCPE:EX  
**Subject:** For Approval: Reply to Wallesz Article  
**Attachments:** OE\_Alaska fisheries\_gillnetters concerns\_May 27\_356pm.docx

Hi Minister

As directed, attached is an op ed that has been drafted for you to reply to the below article from the executive director of the United Southeast Alaska Gillnetters

Please let me know if you have any edits.

I have also added it to the approvals folder on your Ipad.

Eric

Copyright

Page 057

Withheld pursuant to/removed as

Copyright

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## OPINION-EDITORIAL

### **British Columbia is a good neighbour**

**By Bill Bennett**

**Minister of Energy and Mines**

May 27, 2016

(1053 words)

In a recent opinion piece, the Executive Director of the United Southeast Alaska Gillnetters Cynthia Wallesz claims that mining in British Columbia is threatening water, ecosystems, salmon and jobs downstream in southeast Alaska. However, the evidence does not support her claims.

The reality is there is one mine, Brucejack, currently under construction in B.C. within the area covered by the trans-boundary waters treaty and this mine is supported by both British Columbia and Alaska. While there are other mining projects proposed for Northwest B.C., these must first complete an extensive environmental review process and obtain an environmental assessment certificate, just as Brucejack did, before being eligible to proceed to the Mines Act permitting stage.

The only other operating mine, Red Chris, in northwest B.C. is more than 130 kilometres (80 miles) and multiple mountain ranges from the Alaska border. I would also point out the tailings storage facility (TSF) at the mine was the subject of three independent reviews, including one by experts retained by the Tahltan First Nation. Additionally, last April, the Tahltan Nation announced that its members had voted 87 per cent in favour of agreeing to work with the company on the Red Chris project. The unique agreement ensures Tahltan oversight of environmental issues surrounding the mine.

Given the scope and scale of the Mount Polley incident, it's understandable that Alaskans have concerns. The protection of our shared trans-boundary waterways is a key concern to people on both sides of the border. We want to be good neighbours and we understand and share the concerns raised by Alaskans. I live in the Rocky Mountains, and like many British Columbians and Alaskans, I have fished and hunted my whole life. I care deeply about the environment, as do all British Columbians.

British Columbians and Alaskans should know that where there are trans-boundary concerns with a proposed mine development in British Columbia, U.S. state and federal agencies are invited to participate in the environmental assessment and permitting processes. Our government works directly with the Alaska government and other interested groups to provide any information that might be of interest. For example, the State of Alaska has been involved in the authorization process for the Tulsequah Chief, Galore Creek, KSM, Red Chris and Brucejack mine projects.



A memorandum of understanding (MOU) signed on Nov. 25, 2015 by Premier Christy Clark and State of Alaska Governor Bill Walker further strengthens cross-border partnerships between British Columbia and Alaska in many areas of common interest, including mining and environmental matters. The MOU formalizes our mutual commitment to protect and enhance our shared environment, including trans-boundary rivers, watersheds and fisheries.

In order to implement the MOU, British Columbia and Alaska are working on a Statement of Cooperation (SOC) to enhance the protection of trans-boundary waters. This proactive approach will ensure that we are working together effectively on trans-boundary water quality, environmental assessments and permitting for mine projects, and reporting on mine discharges, operations and closure.

I am aware of the concerns many Alaskans have with respect to the Tulsequah Chief Mine and the problems that have occurred at this site since it closed more than 50 years ago. This is an old mine that existed long before most jurisdictions had reclamation legislation or bonding. Alaska officials also confirmed in my presence that the mine site is not causing any damage to the Tulsequah River.

That being said, inspectors with the ministries of Environment, Energy and Mines, and the Environmental Assessment Office did find compliance issues at the Tulsequah Chief Mine and the company was ordered to take specific steps to address these. I can confirm that this work is underway and is being monitored by inspection staff.

I take exception to Ms. Wallesz's ill-informed and overly-negative characterization of British Columbia's regulatory agencies and processes. In British Columbia we closely regulate the approval, development and reclamation of all mines in our province. And, contrary to her claims, mines in this province are required to use best available practices and best available technologies in their operations.

Barring the Mount Polley tailings storage facility dam failure, this province has not seen a significant mine-related environmental incident in decades. Further, the number of environmental and health and safety related incidents at mines in British Columbia has continued to decline.

With respect to mine reclamation securities in British Columbia, mining companies in British Columbia are liable for reclamation costs of mine sites. As a condition of the Mines Act, a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.

In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the Ministry of Energy and Mines may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability shortfalls over time, as determined by ministry analysis.

As Ms. Wallesz states, I did inform her that British Columbia does not have legislation that specifically governs the provision of compensation around financial losses from water quality contamination. What she fails to recognize is that there is also no U.S. state with laws that require this type of compensation. If and when such claims arise, they are addressed in British Columbia in much the same manner as in Alaska or any state in America – through the legal system.

In British Columbia, we also recognize more can be done to improve mining safety and environmental protection. We agree with the Expert Panel, the Chief Inspector of Mines and the Auditor General's Office that 'business as usual' on mine sites in British Columbia is just not good enough, and that's why we are acting on the combined 43 recommendations from the two investigations and the audit.

We believe the Mt Polley disaster, despite being unprecedented in modern B.C. history and despite the hidden, sub-surface cause of the accident, is evidence that improvements in regulation are necessary to increase protection against the unforeseen. And, we are committed to improving the regulatory oversight and reducing the margin of risk so that such a disaster can never happen again.

Our government is leading Canada in making changes to how mining is done, and we will continue to work hard to ensure our policies are the best in the world.

**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Thursday, May 12, 2016 2:33 PM  
**To:** McPhee, Jordan PREM:EX  
**Subject:** Copper Mountain Information

## **AUDITOR GENERAL'S REPORT: CONCERNS RAISED ON RECLAMATION BONDING**

The Auditor-General criticized government for failing to publicly disclose that it has not collected enough security deposits from the industry to cover potential mining accidents. The OAG said the shortfall amounts to \$1.2-billion. Minister Bennett promised to take action to ensure that those deposits are collected.

### **KEY MESSAGES**

- The liability the Office of the Auditor General report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- The Ministry of Energy and Mines requires financial security on all Mines Act permits. The security is reviewed and updated as required, generally every five years or when there is a major change in the approved mine plan or reclamation program. This is done so that should, for whatever reason, a mine not be able to fully fund all reclamation costs, British Columbians will not be the ones covering the costs.
- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The Ministry of Energy and Mines collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances, the Ministry of Energy and Mines has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default.
- The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time. Teck and Barrick Gold Inc. are two such examples. The ministry has made decisions in the past that those companies aren't going anywhere. They've got a huge asset base, and it is not essential to have as much money in the bank with those particular companies.

## **PREVIOUSLY RAISED CONCERNS BY FIRST NATIONS WITH COPPER MOUNTAIN**

Over the past few years, First Nations have raised a few different concerns about operations at the mine. Government continues to work with First Nations, the community and the company to address these concerns in a timely manner.

### **Key Messages**

- Staff with MEM, MOE and MARR continue to work with the company and local First Nations to ensure all concerns are addressed appropriately and in a timely manner.
- This government recognizes the importance of working with First Nations in British Columbia to develop a shared vision for land and resource use.

- Acting in partnership is the best way to provide a meaningful role in land and resource management for First Nations, and to provide for benefit-sharing and new economic opportunities.

## **Background**

### **December 2014 Tailings Spill**

- At approximately 10:20 p.m. on December 10, 2014, the Chief Inspector of Mines was notified of a tailings spill at Copper Mtn. Mine near Princeton.
- The company did not advise Lower and Upper Similkameen FNs of the spill the night it occurred, but contacted both the next day. The chief and council of both bands were on site the next day.
- Staff with the ministries of Environment, and Energy and Mines were immediately deployed onsite to respond to the spill.
- In response to the spill, the province signed a Letter of Understanding (LOU) with the Upper and Lower Similkameen First Nations outlining the initiatives the province would undertake to determine what caused the spill, what its potential impacts were and what steps could be taken to prevent a similar event in the future.
- An independent contractor, AECOM, was hired to investigate the incident and submitted its report to government and the Upper and Lower Similkameen First Nations in the fall of 2015.
- On March 24, 2016 the Lower Similkameen First Nations, in a letter to Minister of Aboriginal Relations and Reconciliation John Rustad rejecting the report from AECOM and requesting funding to hire a new contractor to review the AECOM report.

### **January 2016 Waste Rock Dump failure**

- On January 31, 2016, a waste rock dump on the mine site slumped blocking Copper Mountain road.
- The waste rock slump resulted in a deposit of natural overburden materials (soil, glacial till sediments, and organic debris) in a small non-fish bearing portion of Wolfe Creek which flows into the Similkameen River.
- On February 9, 2016 the Ministry of Environment (MOE) issued a Pollution Abatement Order to Copper Mountain Mine.
- On February 12, 2016 Copper Mountain Mine submitted an Action Plan to MOE proposing measures to recover and manage the landslide overburden materials, and to mitigate and monitor residual risks to the environment.
- Work to remove overburden materials from Wolf Creek was completed on February 26, 2016.
- Re-vegetation of disturbed areas and soil stockpiles are scheduled to be completed over the months of April and May 2016.
- The company continues to undertake water sampling at Wolf Creek.

### **Lower Similkameen Economic Benefits Agreement**

- The Lower Similkameen have raised concerns with the province regarding the band's economic benefits agreement.

## Frankl, Dave MEM:EX

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**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Saturday, April 30, 2016 10:11 AM  
**To:** Kapac de Frias, Martina E ENV:EX  
**Subject:** Latest versions of comms materials re. response to OAG - 29 Apr 16  
**Attachments:** QA\_KM\_OAG report\_compliance and enforcement in mining sector\_April 29\_441pm.docx; IN\_OAG mining compliance and enforcement report\_April 27.docx

Martina,

Fyi on these as they're still awaiting po sign off.

Includes:

- Rollout
- Media plan
- News release with two back grounders.
- MeM Q and A - key messages to be added once news release is final.
- MoE Q and A.

Still to come on our end is power point slides for the presentation and a table that shows the progress made on completing the recommendations of the Independent Panel Report.

Mt Polley permitting at a glance document/upcoming milestones is still being finalized.

Will share monday when we have that.

Eric

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## **Key Messages**

To follow once news release and backgrounder are approved.

## **Q & A**

### **Mount Polley**

- 1. In the audit report, the Auditor General basically makes the assertion that with commodity prices declining, government compliance and enforcement activities are also falling off. What's government's response to this?**

Compliance and enforcement activities of the mining sector are in no way connected commodity prices. In fact the ministry budget was increased the last two years by roughly 40%.

Further, we have brought in amendments to the Mines Act to strengthen government's regulatory oversight of the mining industry and give the ministry additional compliance and enforcement tools. The changes mean we will soon have administrative monetary penalties as an additional compliance and enforcement tool under the Mines Act. Administrative monetary penalties can be imposed for contraventions without involving the courts.

- 2. In her opening comments, isn't the Auditor General basically saying that government's inadequate compliance and enforcement actions for the mining sector resulted in the failure of the tailings dam at Mount Polley?**

In its examination of the Mount Polley TSF failure, the OAG has somehow reached conclusions that differ from the findings of multiple professionals, including three world-leading engineering experts on TSFs. Further, the OAG's findings fail to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolacustrine layer of soils (UGLU). Basically, there wasn't enough site investigation done prior to construction in the mid-1990s.

Two investigations of the dam failure at Mount Polley – one by the Independent Expert Panel and one by the Chief Inspector of Mines – determined the dam failed because the

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strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises.

The Panel, which was empowered in its Terms of Reference to examine any matters it deemed necessary, including the “regulatory oversight by the Ministry of Energy and Mines and the Ministry of Environment” concluded:

“The Panel found that inspections of the TSF would not have prevented failure and that the regulatory staff are well qualified to perform their responsibilities. The Panel found that the performance of the Regulator was as expected. The Panel finds that the MEM Geotechnical Staff and the Contract Inspectors are well qualified to perform their responsibilities. The team is well organized and has clear targets and schedules for annual inspections. The Panel considers the technical qualifications of the MEM Geotechnical Staff as among the best that it has encountered among agencies with similar duties.”

Both investigations also made it clear that responsibility for the design of the TSF is the role of engineer of record not MEM as the regulator. The investigations also found that MEM inspectors did raise a number of issues during reviews and inspections of the Mount Polley TSF. As the Panel noted in its report:

“MEM geotechnical engineers addressed significant issues during the reviews and inspections of the Mount Polley TSF. They had insightful questions for the designers at many instances during their review of the design documents, as noted above. The EOR responded to these questions based on their observations and understanding of site conditions. The EOR is responsible for the overall performance of the structure as well as the interpretation of site conditions. The Regulator has to rely on the expertise and the professionalism of the EOR as the Regulator is not the designer.”

**3. Given what the OAG audit report says about MEM’s role in the Mount Polley TSF failure, what does this mean for the ministry and you as minister?**

Look, I appreciate the work the OAG put into this report. However, the facts don’t support the OAG’s assertion.

First and foremost, the OAG fails to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolaucustrine layer of soils (UGLU).

Both the Independent Panel and the CIM investigation concluded that the fundamental cause of the Mount Polley failure was the lack of appropriate subsurface site characterization when the dam was designed and built. Respectfully, I’d also point out that



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this was not a question of the number of ministry staff on the ground, the number of inspections performed, or an increase in professional reliance since.

I know the Independent Panel and the Chief Inspector of Mines investigations conducted comprehensive site investigations including extensive drilling and core sample testing over seven months to reach their conclusions. The fact is, the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises, and initial site investigation occurred in the mid-1990s.

**4. If, as the OAG implies, the dam failure was as a result of inadequate compliance and enforcement by government, does this mean taxpayers are on the hook for damages?**

No. The company is responsible for covering the costs of environmental remediation as a result of the dam failure.

With all due respect to the OAG, two investigations – one by three globally recognized experts in tailings storage facility design and construction, and one by the Chief Inspector of Mines – determined that the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises.

While both these investigations found other factors exacerbated the collapse of the dam and the ensuing environmental damage, those factors alone or together were not sufficient to cause the failure. Further, at all stages of the tailing storage facility construction, the calculated factor of safety exceeded the Canadian Dam Association guidelines. The geotechnical experts involved in the two investigations all concluded the breach would not have occurred had it not been for the undetected glaciolauustrine layer of soils.

Further, after a nearly 16 months long investigation to determine how and why the failure occurred, the Chief Inspector of Mines (CIM) found that operations on the mine site were not in contravention of any regulation. The CIM also found that the mine and its engineers employed weak practices on the mine site. Weak practices, however, do not constitute a legal contravention of existing mining legislation.

**5. Throughout the report, the OAG states that MEM failed to enforce the tailings storage facility (TSF) design at the Mount Polley Mine. Why didn't MEM take action and require the company and engineer of record to build the TSF in accordance with the original design specifications?**

At various points in the report, the OAG contends that MEM should have stepped in to enforce the "original" design and insisted the mine operator maintain slope angles, buttresses, and beaches called for in that design. However, the OAG should recognize that

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at any mine, designs of mine infrastructure are not static and are changed to reflect new ore body discoveries, changes in mine output, available construction materials, etc.

If you were to visit any long life mine in BC and compare the as-built infrastructure with the “original” design – you would see substantive differences – that is the nature of mining.

Let me just draw an analogy for you between a geotechnical inspector and a municipal building inspector. A building inspector is employed to ensure compliance with the building code. It would be improper for a building inspector to say, “I know that your design is sealed by an engineer and complies with the building code, but I would like you to...add a beam, etc. etc.” This would have the building inspector go from being the regulator to the designer and shift liability from the engineer of record to the municipality. It is equally improper for a geotechnical inspector to meddle with the EOR’s design beyond ensuring that it complies with the Health, Safety and Reclamation Code for Mines in B.C.

The dam was built in general conformance with the design, as approved by the Engineer of Record during every stage of the project. For example, in the 2013 As-built and Annual Review Report the Engineer of Record stated: “In general, the 2013 Stage 9 Raise of the embankment is judged to have been carried out in conformance with design intent.”

I’d also point out the Independent Panel’s findings specific to the role of MEM with regards to the dam design. On page 116 of the panel’s report, the three panel members, all globally recognized as leading experts in the design and operation of tailings storage facilities, make the following statement:

“The engineer of record (EOR) is responsible for the overall performance of the structure as well as the interpretation of site conditions. The regulator has to rely on the expertise and the professionalism of the EOR as the regulator is not the designer.”

As engineers, architects and anyone in the construction industry will tell you, design changes during construction are common on many projects, from dams to bridges to office towers. What matters is that the end product is certified by an engineer as meeting the original design intentions and requirements. I can tell you that over a 20-year span the design of any mine will undergo many changes – it’s the nature of the business.

In the case of the Mount Polley tailings storage facility (TSF), any differences from the original dam design were signed off by the engineer of record, certifying that the dam construction met all of the original design intentions and requirements.

Design specifications were signed and sealed by a professional engineer and submitted for each stage of the dam and each stage was certified by the engineer of record as having met all of the design intentions and requirements once construction was complete.

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**Slope – Beach – Buttress**

- 6. The OAG made the finding that MEM’s lack of effective regulatory oversight contributed to the Mt Polley tailings storage facility breach based on three issues (pages 59-63):**
- **Slope**
  - **Beach**
  - **Buttress**

**This finding seems to put much of the blame for the breach squarely on the ministry. What’s your response to this?**

At various points in the report, the OAG contends that MEM should have stepped in to enforce the “original” design and insisted the mine operator maintain slope angles, buttresses, and beaches called for in that design. However, the OAG should recognize that at any mine, designs of mine infrastructure are not static and are changed to reflect new ore body discoveries, changes in mine output, available construction materials, etc.

If you were to visit any long life mine in BC and compare the as-built infrastructure with the “original” design – you would see substantive differences – that is the nature of mining.

Let me just draw an analogy for you between a geotechnical inspector and a municipal building inspector. A building inspector is employed to ensure compliance with the building code. It would be improper for a building inspector to say, “I know that your design is sealed by an engineer and complies with the building code, but I would like you to...add a beam, etc. etc.” This would have the building inspector go from being the regulator to the designer and shift liability from the engineer of record to the municipality.

It is equally improper for a geotechnical inspector to meddle with the EOR’s design beyond ensuring that it complies with the Health, Safety and Reclamation Code for Mines in B.C. (Code) – which was the case for Mt Polley. The factors of safety satisfied the CDA Dam Safety Guidelines required by the Code.

That being said, the Independent Panel and the Chief Inspector of Mines investigations both confirmed that on multiple occasions MEM posed questions to the mine and its engineers of record regarding the characterization of the foundation, the tailings storage facility (TSF) slope geometry and the adequacy of the beaches. In all instances MEM received written assurances from the professional engineers that there were no dam stability concerns.

- 7. Why did MEM allow the mine operator to continue to maintain over-steepened downstream embankment slopes that did not comply with the original design specifications?**

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As for the slope design, prior to construction of the last (Stage 9) lift, the engineer of record (EOR) analyzed the stability of the Perimeter Embankment using 1.3H:1V slopes, with neither a beach nor a buttress, and reported factors of safety that exceeded the CDA guideline of 1.5.

In their as-built report for Stage 9, the EOR stated that, *“In general, the 2013 Stage 9 raise of the embankment is judged to have been carried out in conformance with the design intent.”*

Given the (reported) robust factor of safety, and the as-built endorsement of the EOR, MEM had no grounds to insist on design changes. To have done so would have placed great liability on the shoulders of government. If government staff become the designers – they “own” the design and all of the risks associated with that design.

**8. Why didn’t MEM require the company to return from the interim 1.4H:1V to the more moderate 2H:1V slope once the stage 5 lift was complete?**

Again, the OAG would have MEM second guessing the professional engineers that certify the design of these structures. As soon as ministry staff do that, government takes ownership of the structure and with it, all of the risk.

To the question of the slope, I’ll just point out that the shallower slope angle of 2H:1V the OAG refers to as being in the original design was still intended to be in place at closure of the mine. The engineer of record certified that the design with the 1.4H:1V was in general conformance with the design intent and allowed for operation within the specified factor of safety.

**9. Why did MEM allow the mine operator to build the slopes even steeper during the stage 7 dam raise, reaching a level that was described by the panel as “unprecedented”?**

The factor of safety of the Perimeter embankment was calculated by the engineer of record (EOR) to be above a factor of safety (FOS) of 1.5 at the time of failure. This is in accordance with the CDA Dam Safety Guidelines– the generally accepted standard for tailings dams.

Even if the embankment had been deemed to be at a FOS of 1.3 at the time of failure, this would not have been inconsistent with practice in other jurisdictions.

The document titled “Application of CDA Dam Safety Guidelines to the Geotechnical Design of Oil Sands Tailings Dams in Northern Alberta” (by Arash Eshraghian, Ph.D and Dennis Becker, Ph.D) contends that a factor of safety of 1.3 is suitable for “static loading and associated phreatic surface during dam raises and immediately at the end of operations (p.33).”

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A January 2009, European Commission reference document: Best Available Techniques for Management of Tailings and Waste-Rock in Mining Activities states that for “any tailings and waste rock management facility, best available technology is to: apply a factor of safety of at least 1.3 to all heaps and dams during operation (p. xiv).”

**10. Why didn't MEM enforce the requirement for beaches in accordance with the original design of the tailings dam?**

At various points in the report, the OAG contends that MEM should have stepped in to enforce the “original” design and insisted the mine operator maintain slope angles, buttresses, and beaches called for in that design. However, the OAG should recognize that at any mine, designs of mine infrastructure are not static and are changed to reflect new ore body discoveries, changes in mine output, available construction materials, etc.

If you were to visit any long life mine in BC and compare the as-built infrastructure with the “original” design – you would see substantive differences – that is the nature of mining.

For the perimeter embankment, analysis by the engineer of record from 2011 forward reported factors of safety that satisfied the Canadian Dam Association design criteria using 1.3H:1V slopes, no beach beyond the U-zone sand cells on the upstream embankment, and no buttressing. In response to one MEM query, the Engineer of Record stated that, *“the tailings embankments have been designed to remain stable for any condition and therefore there is not a ‘requirement’ for a minimum beach width in terms of embankment performance.”*

At every stage of construction, the engineer of record certified that the as-built was in general conformance with the design intent and allowed for operation within the specified factor of safety.

**11. Did MEM follow-up on its 2008 order requiring Mount Polley to maintain beaches, or on the 2010 Annual Dam Safety Inspection where the engineer of record reminded the mine operator of the beach deficiency?**

First of all, it's important to understand that the 2008 MEM order and the 2010 Dam Safety Inspection by the engineer of record (EOR) are in reference to the main embankment and are not relevant to the perimeter embankment which failed. The Inspector's order regarding inadequate beach at the main embankment cannot be applied or interpreted as a warning about beaches of the perimeter embankment.

In fact, we have records that show the mine manager responded to the 2008 MEM order, which stated “the area of concern has been mitigated with waste rock to protect the till

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since the time of the inspection.” Further, records show the MEM geotechnical Inspector was satisfied with the mines response.

Second, the concerns raised in the 2010 DSI were recognized by the new engineer of record and addressed. This included work by the EOR to develop sand cell (beach) construction techniques for the operator.

For the Perimeter Embankment, analysis by the EOR from 2011 forward reported factors of safety that satisfied the Canadian Dam Association design criteria using 1.3H:1V slopes, no beach beyond the U-zone sand cells on the upstream embankment, and no buttressing.

**12. Given the on-going water management issues at the site, why didn’t MEM use existing enforcement mechanisms, as the OAG suggests on p. 65, and just shut the mine down?**

Shutting down the mine would not have resolved the water management issue. Surplus water on the mine site needs to be managed regardless of whether the mine is operational or not. Even if the mine isn’t operating, water continues to collect at the site from snow melt and rain.

**13. If water management was such an issue, why didn’t MEM order the mine operator to build a water treatment facility?**

In preparation for Stage 10, in June 2014 discussion regarding water management, including plans for water treatment and water discharge, were taking place between MEM, Mount Polley Mining Corporation (MPMC) and BGC Engineering (who was expected to be EoR for Stage 10). MPMC was in the process of obtaining a water discharge permit with MOE, and were preparing the required plans and processes required to control the surplus water on-site.

Planning and preparation required to build a water treatment system needed to go through the proper evaluation process in order to protect the environment in the long term, it would not have been practical to order the mine to build a water treatment facility without taking into consideration the various factors involved.

**14. Why didn’t MEM enforce the establishment of buttressing along the main embankment in accordance with the original design and why allow the mine operator to continually defer construction of the buttress along the main embankment?**

The main embankment downstream buttress was not in the original design of the tailings storage facility (TSF). The buttress was included in the stage 4 design and the engineer of record stated at that time: “The buttress at the main embankment is required for closure

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and can be constructed during any stage of the TSF expansion to accommodate the availability of shell zone material.”

Additionally, when the engineer of record proposed the main embankment buttress it was as an additional contingency measure for further enhancing the stability of the main embankment. It was only at stage 9 that the engineer of record made the main embankment buttress a design requirement and the mine operator constructed it in accordance with the design intent at the end of the 2013 construction season.

At various points in the report, the OAG contends that MEM should have stepped in to enforce the “original” design and insisted the mine operator maintain slope angles, buttresses, and beaches called for in that design. However, the OAG should recognize that at any mine, designs of mine infrastructure are not static and are changed to reflect new ore body discoveries, changes in mine output, available construction materials, etc.

If you were to visit any long life mine in BC and compare the as-built infrastructure with the “original” design – you would see substantive differences – that is the nature of mining.

At every stage of construction, the engineer of record certified that the as-built was in general conformance with the design intent and allowed for operation within the factor of safety.

### **Weak Layer**

- 15. On page 62, the report states that the mine’s engineer of record (EOR) and other experts were concerned with the possibility that there may be a weak layer in the dam foundation materials. Why didn’t the Ministry of Energy and Mines (MEM) order the company to address these concerns?**

It’s important to understand that this statement in the OAG report is in reference to the main embankment, not the perimeter embankment where the failure occurred. Further, these concerns regarding the possibility of a weak layer in the main embankment foundation were addressed under the oversight of the engineer of record (EOR).

In addition, the Chief Inspector of Mines (CIM) and the independent panel investigations both confirmed that on multiple occasions MEM posed questions to the mine and its engineers of record regarding the characterization of the foundation, the TSF slope geometry and the adequacy of the beaches. In all instances MEM received assurances from the professional engineers that there were no dam stability concerns.

As the independent panel pointed out on page 116 of its report, MEM as the regulator cannot take on design responsibilities. This role resides with the engineer of record (EOR).

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“The EOR is responsible for the overall performance of the structure as well as the interpretation of site conditions. The regulator has to rely on the expertise and the professionalism of the EOR as the regulator is not the designer.”

**Overtopping Incident**

**16. When the mine operator failed to report the May 2014 over-topping incident, why didn't MEM start looking more closely at the mine and its management practices?**

From what staff have told me about this incident, it really wasn't clear if it was an over-topping of the dam. When MEM staff flew over the site the day after learning about the incident, what they saw were puddles on top of part of the dam. The mine responded by raising the dam crest in this area to bring it to the same level as the entire dam. (Note: this was an area where the company had not completed construction as part of the 2013 dam lift due to weather conditions – snowed out.)

MEM staff reacted swiftly to this incident and carefully monitored the mine's response – requiring timely updates and diligent monitoring of freeboard levels. In fact, the Independent Expert Panel later reported that, *“...freeboard was being carefully monitored around the time of the breach as a result of prior insistence on the part of the Ministry of Energy and Mines (MEM).”*

**AMEC Internal Emails re. Overtopping**

**17. Emails between AMEC engineers show the consulting engineers for the mine had concerns that the company was not responding to the over-topping appropriately, nor was it addressing water management issues. Why didn't MEM act on these concerns?**

Those emails were never directed to MEM and none of the engineers raised those concerns directly to MEM, they were internal emails only.

The Association of Professional Engineers and Geoscientists of B.C. (APEGBC) has informed ministry staff that it is conducting an investigation of the Mount Polley incident.

Engineers in B.C. are not obligated by law or professional best practice standards to their skill levels updated.

**2010 Dam Safety Inspection Concerns**

**18. Why didn't MEM force the mine operator to address the concerns raised in the 2010 annual dam safety inspection report from the Engineer of Record (Knight Piesold)?**



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First, I want to point out that this same EOR did not raise any significant concerns in the 2007, 2008 or 2009 annual dam safety inspection reports – only in 2010 when the EOR was leaving did it raise any concerns.

Second, the concerns raised in the 2010 DSI were investigated by the new engineer of record and addressed. This included:

- The EOR began work with the mine operator on sand cell construction techniques (beaches)
- Instrument installation at 14 new drill holes (11 piezometers and 3 slope inclinometers)

Analysis by the EOR from 2011 forward reported the factors of safety satisfied the Canadian Dam Association design criteria using 1.3H:1V slopes, no beach beyond the U-zone sand cells on the upstream embankment and no toe buttress for the perimeter embankment.

At every stage of construction, the engineer of record certified that the as-built was in general conformance with the design intent and allowed for operation within the specified factor of safety.

### **Mount Polley Restricted Operations and Permit Application**

#### **19. Why is Mount Polley mine being allowed to continue to operate considering the findings of the Office of the Auditor General's audit report?**

The mine site is under close observation by MEM and MOE staff members. It was also important to the community to ensure that families were able to continue to support themselves, government also wanted to make sure a continuation of operations is done in a way that protects the environment.

The authorizations that have been granted to the mine have been subject to highly technical reviews by scientists, engineers, First Nations and community members in order to make sure things are done right.

#### **20. Why did government authorize an extension of Mount Polley's restricted operations permit?**

The permit extension allows the mine to continue restricted operations while its application to return to full production is under review.

Statutory decision-makers with the ministries of Energy and Mines and Environment authorized an extension of the restricted operations permits for Mount Polley Mining

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Corporation, allowing the mine to process an additional one million tonnes of ore. The decision was made in consultation with representatives from the Williams Lake Indian Band and Xat'sull First Nation, and the community of Likely.

The permit amendments increase the mine's allowable production level from four million tonnes to five million tonnes of ore.

The tailings facility will not be utilized during restricted operations. Mount Polley Mine will continue to use Springer Pit, an existing open pit on the mine site, to manage the tailings. This permit extension also authorizes Mount Polley Mining Corporation to complete additional buttressing to the perimeter embankment of its tailings storage facility.

Mine water is being managed in compliance with the MOE permits. A short-term discharge permit was issued for the mine in November 2015. On March 11, 2016 MOE issued a bypass authorization allowing the mine to temporarily increase storage levels in Springer Pit to 1042 metres above sea level (asl) until August 31, 2016 at which time it must return levels to 1030 metres asl. The MOE bypass authorization also allows the mine to temporarily bypass the water treatment plant. Only water that meets the permit requirements for discharge quality will be allowed to bypass water treatment. The bypass is required to deal with freshet flows and a bottleneck at the water treatment plant.

The bypass does not allow the discharge of any greater amount of mine effluent than the discharge permit (0.3m<sup>3</sup>/s). The water that bypasses the water treatment plant has received settling and treatment via storage in the Springer Pit which enables it to meet the permit discharge permit quality limits (as indicated by sampling of the Springer pit water).

**21. What impact will the Office of the Auditor General's findings and findings from the two investigation have on MPMC's application to return to full-production using the tailings storage facility (TSF)?**

That is something that the statutory decision makers will determine as part of the application review process. I know for certain that the findings and recommendations from the independent panel and the chief inspector of mines investigations will be taken into consideration as part of the application process.

A key component of the company's application to return to full operations includes the proposal to use the repaired TSF for tailings storage going forward if the application is approved.

Geotechnical engineers from MEM, along with a geotechnical engineer representing local First Nations are reviewing the geotechnical aspects of the design to ensure it meets or

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exceeds required design standards and conforms with best available practices as recommended by the independent expert panel.

Staff with the ministries of Energy and Mines and Environment, with representatives from the Williams Lake Indian Band and Xat'sull First Nation, and the community of Likely, completed a technical screening review of the application prior to sending the application to the Cariboo mine development review committee for a detailed technical review. Following the detailed technical review by the Mine Development Review Committee (MDRC), the committee chair will provide recommendations to the statutory decision makers at the ministry of Energy and Mines.

In accordance with the Letter of Understanding, MEM along with the Williams Lake and Xat'sull First Nations have identified a number of questions that the company must address as part of the permitting process.

Additionally, the company must submit its long-term water management plan by June 30, 2016 in order to continue operations.

Mines Act permitting decisions are made by the Chief Inspector of Mines, or delegate, and are statutory decisions – completely independent of any political influence. It is anticipated that statutory decision makers with the ministries of Energy and Mines and Environment will make a final decision on the Mount Polley Mining Corporation's application to return to full operations this summer.

### **Engineer of Record Hand-Off Letter**

**22. In 2010, when Knight Piesold handed off engineer of record duties to AMEC, it copied the Chief Inspector of Mines on the hand-off letter it sent to the mine operator. Why didn't MEM take action to respond to concerns raised in that letter?**

I'll start by pointing out that the letter was addressed to the mine operator and the chief inspector was only copied. This letter was notification to inform of the change of the engineer of record (EOR).

In that letter, the EOR did not raise any specific concerns, and one could argue that if they had specific concerns, they should have already dealt with them in their role as the EOR, or directly notified MEM and articulated their concern.

The only notification statement in the letter was the following, "the embankments and the overall tailings impoundment are getting large and it is extremely important that they be monitored, constructed and operated properly to prevent problems in the future". This

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statement would be applicable to a number of tailings dams in the province and would not be considered a warning.

As a professional engineer the EOR had an ethical requirement to clearly and concisely report their concerns to the mining company and to MEM.

The Association of Professional Engineers and Geoscientists of B.C. (APEGBC) has informed ministry staff that it is conducting an investigation of the Mount Polley incident.

### **OAG Rebuttal of Government Response**

**23. How can government take issue with the scope of the audit and the audit criteria for measuring appropriate compliance and enforcement standards when the deputy ministers from MEM and MOE both agreed to these when they signed the OAG's Notice of Examination?**

The Deputy Ministers of Environment and Energy & Mines signed off an Audit Plan where the focus of the audit was to be on the Ministry of Environment and the Ministry of Energy and Mines compliance and enforcement activities that the agencies undertake under the Environmental Management Act and Mines Act.

However, with respect to the Elk Valley the audit seems to be proportionally more focused on the decision making associated with issuing permits as opposed to the focus on the compliance and enforcement after the permits were issued. MOE and EAO have compliance and enforcement plans and strategies for MOE and EAO have compliance and enforcement plans and strategies for the Elk Valley but the OAG never did ask about them, nor were they referenced in the report.

It is true that the Audit Plan did exclude EAO from the scope of this audit because an audit had just been completed. However, that would not have precluded the Auditor General from recognizing the key role played by the Environmental Assessment Office. Many of the mines in B.C. have been subject to the Environmental Assessment process and have received environmental assessment certificates with legally binding requirements.

### **OAG Interviews and Experts**

**24. Do you know if the OAG interviewed the Mount Polley Mine engineers of record?**

We do not know if the OAG interviewed the Mount Polley Mine engineers of record. Details of the OAG interviews, including identities of those interviewed were not provided to us. References or investigation process are not detailed in the OAG report.

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**25. According to the OAG's audit scope on page 92 of the report, the OAG reached its conclusions after interviewing MEM and MOE staff, industry experts and mining engineers. Given this, the OAG reached significantly different conclusions than the Expert Independent Panel and the Chief Inspector of Mines about why the Mount Polley dam failure occurred. Did the OAG find new evidence or did the other two investigations miss something?**

In its examination of the Mount Polley TSF failure, the OAG has somehow reached conclusions that differ from the findings of multiple professionals, including three world-leading engineering experts on TSFs. Further, the OAG's findings fail to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolaucustrine layer of soils (UGLU).

Two investigations of the dam failure at Mount Polley – one by the Independent Expert Panel and one by the Chief Inspector of Mines – determined the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises.

I can tell you that government has made hundreds of thousands of the documents from the two earlier investigations into the Mount Polley TSF failure publicly available. We did this so that British Columbians could see the evidence the experts in those investigations relied upon in order to make their determinations around the cause of the breach.

In conducting the Mount Polley case study, the audit team – quite understandably – augmented their own knowledge of environmental principles, geotechnical engineering and regulatory law. They did so by consulting a panel of subject matter experts, comprising an environmental academic, environmental lawyer, engineer and a former employee. We understand this to be consistent with normal audit practice.

However, proceeding in that manner did not give the Ministries the opportunity to know who was on the panel, what data the panel may have considered on specific points, what opinions they might have offered, or to challenge the thinking of panel members with additional engineering evidence and/or competing legal or scholarly opinions.

### **Professional Reliance**

**26. One of the reasons the OAG gives for MEM failing to enforce the tailings storage facility design is MEM's over-reliance on qualified professionals. Will MEM move away from professional reliance?**

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No. British Columbia and other provinces in Canada and countries around the world have a long history of using professional reliance. The Ministry of Energy and Mines has used the professional reliance model for oversight of tailings storage facilities for decades and that model has remained relatively unchanged. We rely on professional engineers to approve the designs of everything from the cars we drive to the buildings we work in.

And it makes sense - a “one size fits all” approach of prescriptive design requirements can have a negative impact on the ability of engineers to develop new and innovative designs that improve safety and reduce the risk of failure.

The public relies on Qualified Professionals in many areas. Examples of qualified professionals include architects, accountants, lawyers, physicians, pharmacists and engineers. In each case, the qualified professionals are regulated by their respective governing body or association to ensure members meet their association’s standards of conduct or code of ethics. If qualified professionals do not adhere to these standards or codes, then the associations are responsible for disciplinary actions. This is the system that holds professional engineers accountable across Canada.

That being said, we believe there is room for improvement. Following the independent panel investigation, we committed to introduce a new requirement that all operating mines with TSFs in British Columbia establish Independent Tailings Dam Review Boards.

These boards will support improved engineering practices by providing third-party advice on the design, construction, operation and closure of TSFs. Some mines in B.C. already have similar boards in place.

As well, the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) is developing new guidelines to improve professional engineering practices for dam site characterization assessments. These new guidelines will be released by summer 2016.

**27. Will MEM hire the appropriate qualified staff and carry out its own technical reviews of tailings storage facility dam designs and construction, rather than relying on qualified professionals?**

If we were to move in the direction the OAG is suggesting – making MEM as the regulator also responsible for the design of tailings storage facility dams – we would need to have a ministry engineer on-site at every tailings storage dam in the province. Additionally, government would become responsible for liabilities related to these tailings storage facilities – meaning the taxpayers, not the mine operators would be held financially accountable. This is not practical. It’s certainly not prudent. And, it’s not a practice in place in any other jurisdiction I know of.

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The independent panel was very clear on the role of MEM as the regulator. This is outlined on page 116 of the independent panel's report:

“The engineer of record (EOR) is responsible for the overall performance of the structure as well as the interpretation of site conditions. The regulator has to rely on the expertise and the professionalism of the EOR as the regulator is not the designer.”

**Canadian Dam Association Dam Safety Guidelines**

**28. On pages 53 and 54, the OAG says that MEM adopted the Canadian Dam Association's (CDA) Dam Safety Guidelines for dam construction that were not specific to the conditions in B.C. or specific tailings dams. These guidelines were open to interpretation by the Engineer of Record and MEM inspectors, and this resulted in a tailings dam that was built below generally accepted standards for tailings dams. Why did MEM rely on these guidelines rather than requiring the tailings dam to be built to generally accepted standards?**

Not only do we disagree with this assertion of opinion, the CDA guidelines are in fact professionally recognized guidelines that are used throughout Canada by geotechnical engineers for both water and tailings dams. Whether the guidelines could be improved is a separate question, one which the CDA is currently reviewing.

The factor of safety of the Perimeter Embankment was calculated by the EOR to be above 1.5 at the time of failure. This is in accordance with the CDA Dam Safety Guidelines – the generally accepted standard for conventional dams and tailings dams.

**OAG Findings vs. Chief Inspector of Mines Investigation**

**29. The OAG seems to lay blame for the dam failure at Mount Polley squarely on government, yet the Chief Inspector of Mines (CIM) investigation found no fault with government. Does this mean the CIM investigation findings are flawed?**

No. In its examination of the Mount Polley TSF failure, the OAG has somehow reached conclusions that differ from the findings of multiple professionals, including three world-leading engineering experts on TSFs. Further, the OAG's findings fail to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolacustrine layer of soils (UGLU).

As for how the OAG's interpretation of the facts is so different from the findings of the Independent Panel and the Chief Inspector of Mines investigations... that's something that is not explained in the audit report.

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**30. The OAG findings would seem to indicate that the Chief Inspector of Mines investigation either missed evidence or intentionally avoided looking at the possibility that government's lack of compliance and enforcement at Mount Polley resulted in the tailings dam failure. Given this, how can you expect British Columbians to trust the CIM findings?**

I think the OAG report does a disservice to the work of the Chief Inspector of Mines and the team of investigators that investigated the Mount Polley tailings storage facility dam breach.

I have absolute faith in the Chief Inspector of Mines investigation. This was the largest and most complex investigation and analysis ever done in BC. Over a period of about 16 months, the chief inspector of mines (CIM) investigation team conducted approximately 100 interviews and reviewed over 100,000 pages of documents going back to 1989.

The CIM found that the mine and its engineers employed weak practices on the mine site. Weak practices, however, do not constitute a legal contravention of existing mining legislation. That's why many of the chief inspectors recommendations go to new standards and guidelines to improve these practices – this government is committed to implementing these recommendations.

Further, the CIM, with advice from the Ministry of Justice, did not find sufficient evidence that Mount Polley Mining Corporation contravened existing regulatory requirements. Based on these findings, the chief inspector of mines determined there were no actions that would warrant a report to Crown Counsel pursuant to the Mines Act.

**31. The OAG's findings point to failures on the part of Mount Polley Mine to comply with mining regulations and requirements. Given this, why didn't the Chief Inspector of Mines recommend charges?**

In its examination of the Mount Polley TSF failure, the OAG has somehow reached conclusions that differ from the findings of multiple professionals, including three world-leading engineering experts on TSFs. Further, the OAGs findings fail to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolaucustrine layer of soils (UGLU).

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Further, the CIM, with advice from the Ministry of Justice, did not find sufficient evidence that Mount Polley Mining Corporation contravened existing regulatory requirements. Based on these findings, the chief inspector of mines determined there were no actions that would warrant a report to Crown Counsel pursuant to the Mines Act.

**32. Did the OAG interview the Chief Inspector of Mines?**

The Chief Inspector of Mines (CIM), who led the ministry's comprehensive investigation into the Mt Polley breach, was not interviewed by OAG auditors in the course of the audit. The CIM reviewed a draft audit report in late 2015, after the audit was complete, and discussed his concerns about the report with auditors at that time.

**Regulatory Capture**

**33. Why is the Ministry of Energy and Mines responsible for both promoting and regulating of the mining industry given the two priorities seem to conflict?**

The Audit Report contains no factual evidence that the current ministry structure results in any such risk, or in a mind-set of acquiescence on the part of staff involved. The Report lists a number of indicators of potential risk of regulatory capture. But there is nothing in the Report to suggest any actual causal linkage. Specifically, there is no evidence that decisions were made at Mount Polley, in relation to the Elk Valley, or anywhere else to ease or enhance the position of the mining companies involved.

We do not accept that mere appearances are sufficient to warrant the extreme solution of removing compliance and enforcement from MEM. No one is more aware of the need to find the appropriate balance between promotion and regulation of mining in ministry decision-making than those who are asked to do so on a daily basis. We disagree with the suggestion that professional public servants are unable to differentiate between mandate components or that they are unwilling to enforce existing regulations. It is the legislative framework in BC that drives compliance and enforcement activities not the organizational structure.

**34. MEM appears to hit most, if not all, of the possible signs of regulatory capture listed on page 32 of the OAG report. Given this, how can government suggest MEM is not at risk of**

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**regulatory capture and why are you against setting up an independent agency for compliance and enforcement of mining activities when you already have such an agency for oil and gas – the BC Oil and Gas Commission?**

The BC Oil and Gas Commission is responsible for permitting and compliance and enforcement of that sector. It's a model that works there, just as it works at the Ministry of Energy and mines.

I do not accept that mere appearances alone are sufficient to warrant the OAG's extreme and costly recommendation of removing compliance and enforcement from MEM – and after reading the report, that's entirely the basis for the OAG's main recommendation.

First of all, the audit report contains no factual evidence that the current ministry structure results in any such risk, or in a mind-set of acquiescence on the part of staff involved. The report lists a number of indicators of potential risk of regulatory capture, but contains no evidence to suggest any actual causal linkage. Specifically, there is no evidence that decisions were made at Mount Polley, in relation to the Elk Valley, or anywhere else to ease or enhance the position of the mining companies involved.

Secondly, no one is more aware of the need to find the appropriate balance between promotion and regulation of mining in ministry decision-making than those who are asked to do so on a daily basis.

And finally, the list itself is problematic to me as the OAG has not provided any indication of the source for the list. Who is it that determined that the eight items on that list are signs of regulatory capture? How was this determined? What evidence is there to support the OAG's assertion that these eight items are indeed signs of regulatory capture?

I'd also like to point out that during the audit period, government has continued to improve its operational policies and procedures that address many of the concerns raised in the Audit Report.

That aside, in response to the Chief Inspector of Mines investigation and recommendations, within the next 90 days government will establish a mining compliance and enforcement board to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board will be accountable to the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office. A new Deputy Chief Inspector of Mines for Compliance and Enforcement will be appointed to oversee and implement improved compliance and enforcement.

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Along with overseeing compliance and enforcement across the ministry, the team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

### **Regulatory Oversight**

**35. The OAG says in its report that it found a decade of neglect in compliance and enforcement activities within the Ministry of Energy and Mines. Further, the OAG concluded the compliance and enforcement activities are inadequate to protect the province from significant environmental risks. What is government's response to these findings?**

I don't agree with the OAG's assertion and further, the audit team fails to provide any evidence to support this claim.

The fact is, barring the Mount Polley tailings storage facility dam failure, this province has not seen a significant mine-related environmental incident in decades. Further, the number of environmental and health and safety related incidents at mines in British Columbia has continued to decline.

There are a number of hard-learned lessons that have come to light as a result of the Mount Polley incident. And while we can't turn back the clock, we are taking action to tackle these issues head-on.

To that end, we are taking the necessary steps to provide MEM inspectors with the tools they need for a more robust enforcement and compliance structure. Furthermore, where a need for additional resources in the ministry was recognised, government responded by nearly doubling the ministry budget in 2015.

We have brought in amendments to the Mines Act to strengthen government's regulatory oversight of the mining industry and give the ministry additional compliance and enforcement tools. The changes mean we will soon have administrative monetary penalties as an additional compliance and enforcement tool under the Mines Act. Administrative monetary penalties can be imposed for contraventions without involving the courts.

This is part of our ongoing actions to implement the 26 recommendations of the independent panel and the chief inspector of mines following their respective investigations into the Mount Polley tailings storage facility (TSF) failure. Work to implement a number of

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these recommendations is either substantially underway or complete, including improving corporate governance, improving professional engineering practices and strengthening current regulatory operations.

**36. Why doesn't the Ministry of Energy and Mines have a formal compliance and enforcement model in place such as the Ministry of Environment's compliance management framework or something similar to the Organisation for Economic Co-Operation and Development's (OECD) model for a comprehensive compliance and enforcement program as outlined in the audit report?**

The ministry recognizes the need for a more formal compliance and enforcement model. Following his investigation, the Chief Inspector recommended a review of compliance and enforcement function, including capacity and regulatory tools. Government committed to address this recommendation and strengthen compliance and enforcement activities in the ministry.

We have already taken steps to establish a dedicated compliance and enforcement team within the Ministry of Energy and Mines. This team will provide additional support and oversight to existing ministry compliance and enforcement staff. Once in place, the team will consist of a new Deputy Chief Inspector of Mines for Compliance and Enforcement and up to four staff members. Along with overseeing compliance and enforcement across the ministry, the team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

**37. Why, as the OAG states on page 31, doesn't MEM have a strategic plan for its regulatory approach and compliance and enforcement activities?**

The ministry does undertake strategic planning for its compliance and enforcement activities. This planning is done at the provincial and regional level with provincial planning focussed on more specialized areas such geotechnical engineering and electrical inspection.

In fact, the Independent Expert Panel stated that, "*...The Panel finds that MEM Geotechnical Staff and the Contract Inspectors are well qualified to perform their responsibilities. The team is well organized and has clear targets and schedules for annual inspections. The Panel considers the technical qualifications of the MEM Geotechnical Staff as among the best that it has encountered among agencies with similar duties.*"

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Staff at all levels plan compliance and enforcement activities on a number of factors:

- Type of mine - underground versus surface mines.
- Mine operation – seasonal versus year-round activities.
- Material extracted – coal versus metal mining.
- Dam safety rating.
- Level of infrastructure at site.
- Significant change in mining activity.

We recognize there is room for improvement, this will be a priority for the Deputy Chief Inspector of Mines for Compliance and Enforcement.

**38. Does MEM have enough resources to conduct the appropriate level of inspections to ensure mines in B.C. are operating safely?**

Yes. The ministry currently has 103 inspectors (seven positions currently vacant) in the following areas: permitting, which includes geotechnical, and health and safety.

The ministry has more geotechnical inspectors now than in 2001 and they are all registered, professional engineers. 2001: 4 staff, 1 contract (5 total). Today: 3 staff, 4 contract (7 total).

Since 2011 the number of geotechnical inspections has increased dramatically - the ministry now conducts an average of 30 geotechnical inspections annually.

That aside, in response to the Chief Inspector of Mines investigation and recommendations, within the next 90 days government will establish a mining compliance and enforcement board to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board will be accountable to the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office. A new Deputy Chief Inspector of Mines for Compliance and Enforcement will be appointed to oversee and implement improved compliance and enforcement.

Along with overseeing compliance and enforcement across the ministry, the team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

**39. Why doesn't MEM report out on its compliance and enforcement activities?**

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We recognize the need for greater public access to these records and we have started the process to make them more readily available.

The Ministry of Energy and Mines published all dam safety inspections, emergency response plans and related documents online in 2015.

We are investing in improved information systems so that this information can routinely be made public going forward.

**40. Why aren't MEM's and MOE's compliance and enforcement activities co-ordinated, including sharing information on findings of non-compliance and enforcement actions (page 33)?**

Following the independent panel and Chief Inspector of Mines investigations, we recognized more needed to be done to formalize the coordination of compliance and enforcement activities for mining between MEM and MOE.

We are already taking steps to address this by establishing a dedicated compliance and enforcement team within the Ministry of Energy and Mines. This team will provide additional support and oversight to existing ministry compliance and enforcement staff. Once in place, the team will consist of a new Deputy Chief Inspector of Mines for Compliance and Enforcement and up to four staff members. Along with overseeing compliance and enforcement across the ministry, the team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

**41. The OAG report says MEM had nearly 80 inspectors in 2001 before the cuts. How many inspectors are there now and how can inspectors be expected to properly do their jobs if, as the OAG notes on page 35, MEM does not have a formal training program for its inspectors?**

The ministry has mandatory training that all inspectors must complete prior to receiving inspector designation. In 2015, ministry staff began developing a more robust and formalized training curriculum. This will include more formalized policy and procedure.

The ministry currently has 103 inspectors (seven positions currently vacant) in the following areas: permitting, which includes geotechnical, and health and safety.

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Since 2011 the number of geotechnical inspections has increased dramatically - the ministry now conducts an average of 30 geotechnical inspections annually.

### **Reclamation Security Bonds**

**42. What measures does government take to ensure taxpayers won't be on the hook for any long-term closure costs such as water treatment once a mine closes?**

First off, I want to make something very clear. The liability the OAG report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.

MEM requires financial security on all Mines Act permits. The security is reviewed and updated as required, generally every five years or when there is a major change in the approved mine plan or reclamation program. This is done so that should, for whatever reason, a mine not be able to fully fund all reclamation costs British Columbians will not be the ones covering the costs.

Since 2012 total amount of security held has practically doubled. This is largely a result of water treatment being required at several major coal operations because selenium has emerged as a contaminant of concern and that many coal operations have elevated selenium in their discharge.

The total reclamation security held by MEM is published each year in the Chief Inspector of Mines Annual Report. The Province currently holds \$1.07 billion in securities (March 2016).

Security bonding is not the only method by which government manages risk. Of even greater importance is the regulatory practice of requiring mining companies to manage and reduce their environmental liabilities through the development of detailed environmental protection and reclamation plans prior to mining, annual monitoring and reporting, and progressive reclamation through the life of mine.

**43. Why doesn't the province have enough bonds to cover 100% of remediation costs at all mine sites in British Columbia?**

There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.

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It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.

Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.

For example, Teck and Barrick are responsible for 75% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

**44. Do other jurisdictions collect security bonds and do they collect enough to cover 100% of reclamation costs?**

The International Council on Mining and Metals published a report on financial assurance for mine closure and reclamation and the report identified a variety of different models. For example, New Brunswick, and Ontario require financial assurance covering the complete cost of mine cleanup, while Québec requires funds covering 70%. What also differs are the forms of security bonds other jurisdiction will accept. British Columbia will only accept hard forms of security.

Since 2001 taxpayers in the province have only had to cover a portion of reclamation costs on one permitted mine in the province. This was to remove hazardous materials from the millsite at the Candorado mine located near Hedley in the Similkameen. (Need \$ amount)

**45. How many mines permitted in B.C. since 1969 have British Columbians had to cover the remediation costs for?**

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

There has been significantly more spent on historic mines – those mines that operated pre reclamation legislation. MEM generally works on the historic sites with health and safety concerns (ie filling in/caving open holes) and FLNRO or MOE (contaminated sites) works on historic mines with contamination issues (ie Britannia).

**46. On page 6 of the audit, the OAG states that the estimated total liability for all mines in B.C. is \$2.1 billion. How many mines does this represent?**



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There are approximately 26 operating and 88 closed operations.

The estimate of \$2.1 billion quoted by the OAG represents the estimate that the individual mine companies have provided to MEM in their annual estimate of liability. This estimate can vary significantly throughout the year depending on work being done, projects being reviewed and permits being amended.

**47. How many of these mines will require long-term water treatment after closure and where are they located?**

Currently the province has 16 permitted mines requiring water treatment. Another 11 have been identified as requiring or potentially requiring water treatment in the future. This represents roughly 11% of all mines permitted in the Province.

Many of the mines requiring water treatment today were in operation or were historical mines prior to reclamation legislation being implemented and were grandfathered into the permitting process in 1970. Only five mines are considered to be newer operations (Nickel Plate, permitted 1986, Samatosum permitted 1989, Mount Polley permitted 1995, Trend permitted in 2005 and Silvertip in 2015).

The mines that currently have water treatment operations include: Trend, Myra Falls, Bralorne, Bell, Britannia, Island Copper, Brenda, Sullivan, Equity, Nickle Plate, Premier, Samatosum, Line Creek, Eskay, Silvertip and Mount Polley.

Other mines that will or may water treatment in the future include: Endako, Granisle, Kitsault, Fording River, Elkview, Greenhills, Gibraltar, Huckleberry, Brucejack, Highland Valley Copper and Red Chris.

**48. Why doesn't MEM increase the security amounts for mines?**

MEM reviews and updates security amounts as projects plans are reviewed and or in some cases at the discretion of the Chief Inspector of Mines.

Changes in regulatory requirements and in particular tolerances for water quality protection have placed increased pressures on many companies. MEM seeks to keep stride with these changes and to require increases in bonding over time, however there is a need to keep a balance to ensure companies can remain in operation and implement the costly changes as needed while at the same time be able to provide for additional security.

For some companies, this balance is easier to achieve than for others and it is reasonable that government takes some risks rather than assume responsibilities for mines that the

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owners abandon. Having said this, MEM continues to work with these companies to ensure the protection of the workers the public and protection of the environment.

**49. Can MEM increase the security bonds for mines that are currently closed or in care and maintenance?**

Yes. Security bonds can be evaluated and increased at any time under the discretion of the Chief Inspector, this applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).

**Key Findings – Ministry of Environment**

**50. Why, as the OAG states on page 87, didn't Cabinet provide the public or the legislature with the rationale for why approval of the Line Creek Expansion permit was in the public interest?**

I'm not sure how the OAG came to this conclusion. I can point to a number of media stories published around the time of this decision that lay-out our rationale for approving this permit.

Substantial public and stakeholder consultations were undertaken during the development of the area based management plan for the Elk Valley and after permits were granted, various news releases and media interviews by ministers set out for the general public the nature of government decisions.

I personally attended public meetings, and met with media and area residents to discuss the area based management plan for the Elk Valley and explain how our approval of the Line Creek Expansion permit fit into that plan.

In short, working with the mining company, we developed a billion dollar plan that will see the installation of nine active water treatment plants over the next 18 years to stabilize and reverse the water quality trends. And to be blunt about it, without the approval of the Line Creek Expansion permit the company likely would not have had the financial ability to undertake this ambitious plan.

MOE to provide additional QA.

## **OAG AUDIT - MINING COMPLIANCE AND ENFORCEMENT**

- Government thanks the Auditor General for her work on this report and is accepting all recommendations, except one that government will seriously consider.
- During the audit period, MoE has continued to improve its operational policies and procedures – these improvements address many of the concerns raised in the audit.
- For example, MoE has already reviewed its funding mechanism to ensure taxpayers are safeguarded from costs of an environmental disaster. This work was included in the legislation recently introduced on a new provincial spills regime.
- MoE is also preparing to release an annual compliance report summarizing inspections under the Environmental Management Act.
- With respect to the Elk Valley Area Based Management Plan, we are confident we are on the right track to significantly reducing selenium and nitrate over the next decade.
- The Province is committed to address the water quality issues in the Elk Valley while creating a path forward for mining development and ensuring the protection of ecological and human health.

## Background:

- The Office of the Auditor General is releasing an audit on compliance and enforcement in the mining sector during the week of April 25<sup>th</sup>. The report is critical of both MoE and MEM stating the ministries are not protecting the province from environmental risks and have serious gaps in their compliance and enforcement systems.
- The audit summary lists the following as areas where the ministries are deficient:
  - Compliance promotion
  - Compliance verification
  - Enforcement
  - Reporting
  - Ensuring continuous improvement.
- The report highlights two case studies (Mount Polley and Elk Valley water quality) stating MEM's lack of enforcement may have contributed to the tailings breach at Mount Polley and MoE has not been transparent of the risks associated with permitting mines in the Elk Valley which has led to a degradation of water quality.
- The report also notes the Line Creek Expansion permit, the Area-Based Management Plan (ABMP) and the area-based management permit are not protecting the environment and have created several risks which MoE has not made transparent to legislators and the public.
- The report acknowledges MoE has adopted a compliance and enforcement framework but notes there are significant gaps in how the framework is applied.
- Other findings include: no coordination between MEM and MoE on compliance and enforcement activities, both ministries lack necessary resources and tool to manage environmental risks from mining and the ministries are more focussed on permit applications to meet provincial goals therefore fewer resources are dedicated to regulatory activities.
- Report also states MoE has not reviewed or revised its fee schedule for pollutants issued under an Environmental Management Act permit since 2004. And, in some cases, the waste discharge fees do not reflect the environmental impacts.
- The report notes that while MOE has tracked the annual increases of selenium in the Elk Valley watershed for the past 20 years, it took no substantive action to change the trend and only recently attempted to control the pollution through EMA permits.
- Other risks identified by the OAG include:
  - The Line Creek Expansion Permit was granted by Cabinet against advice of MoE staff and despite concerns raised by US EPA.
  - The Line Creek permit allows mining activities in an area inhabited by Westslope Cutthroat Trout, a species of concern under the federal Species at Risk Act.
  - The ABMP puts the Province at risk of contravening the Transboundary Waters Protection Act between Canada and the U.S.
  - The ABMP requires industry to develop 9 water facilities in the Elk Valley which government will be required to monitor and ensure the maintenance of forever.
  - The levels for selenium under the ABMP are not protective of aquatic resources in some parts of the Elk Valley.
- Another issue highlighted is staffing – the report notes a 29% decrease in FTEs in 2014 from 2012 levels. At the same time, EMA authorizations are increasing by an average of 14% a year. The report notes numerous accounts of declining staff morale due to increased workloads and the inability to adequately protect the environment.

- The 13 positions on the compliance team are tasked with ensuring compliance for more than 5500 EMA authorizations (over 400 per person to monitor and/or inspect). There are currently 6 of those positions vacant.
- The OAG reviewed MoE inspection records for 2012, 2013 and 2014 for 8 mines – only 3 of the 8 were inspected each year, not meeting the minimum requirement to inspect high-risk sites annually. For example, Myra Falls had no on-site inspection in any of the 3 years.

#### Appendix: Government response to OAG sub-recommendations

##### Part 1: Recommendations for Government

<p><b>Recommendation 1.0 – Overall Recommendation</b></p> <p>We recommend that the Government of British Columbia create an integrated and independent compliance and enforcement unit for mining activities, with a mandate to ensure the protection of the environment.</p> <p>Given that the Ministry of Energy and Mines is at high risk of <b>regulatory capture</b>, in that MEM’s mandate includes a responsibility to both promote and regulate mining, our expectation is that this new unit would not reside within this ministry.</p>	<p><b>Response:</b></p> <p>It is the legislative framework in BC that drives compliance and enforcement activities not the organizational structure. Many provincial governments across Canada have agencies and ministries with the role of promoting and regulating an industry. In the absence of evidence by the Auditor General that this has compromised the integrity of the ministry or its staff, Government does not see the need for a reorganization of the ministries; however we are prepared to further discuss this with the OAG. Government will establish a Mining C&amp;E Board that will address the need for greater integration between the ministries, as well as with the Environmental Assessment Office.</p>
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## Part 2: Recommendations for Ministry of Energy and Mines and Ministry of Environment

<p><b>Recommendation 1.1 – Strategic Planning</b></p> <p>We recommend that government develop a strategic plan that would detail the activities of an integrated and coordinated regulatory approach, and the necessary capacity, tools, training and expertise required to achieve its goals and objectives.</p>	<p><b>Response:</b></p> <p>A Mining C&amp;E Board will be established to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board will be accountable to the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office.</p> <p>The Board will develop compliance and enforcement plans to map out proactive annual activities based on a risk-based approach. The board will also be responsible for furthering longer term strategic improvements in other areas such as: enhancing training; developing policies, procedures and tools; conducting evaluations; and expanding public reporting.</p> <p>MEM will appoint a new Deputy Chief Inspector of Mines for compliance and enforcement to oversee and implement improved C&amp;E.</p>
<p><b>Recommendation 1.2 – Permit Language</b></p> <p>We recommend that government ensure historical and current permit requirements are written with enforceable language.</p>	<p><b>Response:</b></p> <p>The ministries agree that permits must be written with measureable and enforceable requirements. Both ministries will develop policy to ensure enforceable and measurable requirements are used in all new and amended permits.</p>
<p><b>Recommendation 1.9 – Incentives</b></p> <p>We recommend that government create effective incentives to promote environmentally responsible behavior by industry.</p>	<p><b>Response:</b></p> <p>The ministries agree that it is useful to consider incentives as part of the compliance and enforcement regime governing mines and will continue to consider additional opportunities to recognize and reward good environmental performers. Furthermore, it is expected that expanded public reporting of compliance and enforcement activities will serve as a very effective incentive for promoting environmentally responsible behaviour.</p>

<p><b>Recommendation 1.10 – Risk-Based Approach</b></p> <p>We recommend that government develop a risk-based approach to compliance verification activities, where frequency of inspections are based on risks such as industry’s non-compliance record, industry’s financial state, and industry’s activities (e.g., expansion), as well as risks related to seasonal variations.</p>	<p><b>Response:</b></p> <p>Compliance verification activities conducted by the ministries are founded on a risk-based approach; however, the ministries commit to review policies in this regard.</p> <p>The annual compliance and enforcement planning that will take place at the Mining C&amp;E Board, established under recommendation 1.1, will also be risk-based to optimize the capacity and effectiveness of the ministries’ collective compliance and enforcement resources.</p>
<p><b>Recommendation 1.12 – Qualified Professionals</b></p> <p>We recommend that government establish policies and procedures for the use and oversight of qualified professionals (QP) across the natural resources sector. These policies and procedures should have the following:</p> <ul style="list-style-type: none"> <li>• guidance for staff that outlines the specific nature and amount of oversight expected of a QP’s work;</li> <li>• guidance for staff as to expected timeframe for review and response to QP reports;</li> <li>• updated guidance for staff for recognizing and responding to misconduct by a QP;</li> <li>• controls in place to ensure that there is no undue influence on the QPs by industry; and</li> <li>• controls in place to ensure that recommendations by QPs are adhered to.</li> </ul>	<p><b>Response:</b></p> <p>MEM’s efforts are guided by the <i>Mines Act</i> and the Health, Safety and Reclamation Code for Mines in British Columbia. In particular, the Code Review currently underway is considering specific matters such as the need for a qualified individual designated as a mine dam safety manager to oversee all work associated with a tailings storage facility and will clarify the roles and responsibilities of the Engineer of Record at a mine.</p> <p>The Mining C&amp;E Board, established under recommendation 1.1, will consider how MoE and MEM can strengthen the use and oversight of qualified professionals in the mining sector specifically.</p> <p>The Ministry of Forests, Lands and Natural Resource Operations has established a Qualified Persons in the Natural Resource Sector Framework. This framework guides the development and implementation of Qualified Persons policies and procedures specifically for the mining sector. The framework is based on the three essential components of guidance, competency and accountability and ensures the interests of government, resource users, qualified persons and other stakeholders are recognized and addressed.</p>

<p><b>Recommendation 1.14 – Policies, Procedures and Tools</b></p> <p>We recommend that government develop policies, procedures and enforcement tools for responding to non-compliances when industry does not meet the timeline specified by the ministry.</p>	<p><b>Response:</b></p> <p>The ministries agree on the importance of clear policies, procedures and tools to aid in their compliance and enforcement activities. The ministries will review these in light of the recommendations. The establishment of the Mining C&amp;E Board, under recommendation 1.1, will serve to further inter-ministry collaboration and sharing of best practices.</p> <p>Government will also introduce amendments to the <i>Mines Act</i> to provide for Administrative Monetary Penalties in the spring 2016 legislative session.</p>
<p><b>Recommendation 1.15 – Evaluation and Adjustment</b></p> <p>We recommend government regularly evaluate the effectiveness of their promotional, compliance verification, and enforcement activities and tools and make changes as needed to ensure continuous improvement.</p>	<p><b>Response:</b></p> <p>Annual compliance and enforcement planning and reporting will provide a means to evaluate the effectiveness of the program, to ensure ongoing improved targeting of areas of concern and recognition of strong performers. The ministries will address this recommendation through the establishment of a Mining C&amp;E Board under recommendation 1.1.</p>
<p><b>Recommendation 1.16 – Public Reporting</b></p> <p>We recommend that government report publicly:</p> <ul style="list-style-type: none"> <li>• the results and trends of all mining compliance and enforcement activities;</li> <li>• the effectiveness of compliance and enforcement activities in reducing risks and protecting the environment; and</li> <li>• the estimated liability and the security held for each mine.</li> </ul>	<p><b>Response:</b></p> <p>The ministries support public reporting and have been making progress in this area. MoE has been reporting its enforcement actions for many years through published reports and an online searchable database. It reports all of its enforcement actions including orders, administrative sanctions, administrative monetary penalties, violation tickets and court prosecutions. MoE will work with MEM to explore including their enforcement actions in the reporting.</p> <p>In 2012, the Ministry of Environment published all of its permits for industrial and municipal facilities that discharge waste into the environment, including mines. This dataset provides the opportunity for citizens to access province-wide data on those facilities, including information on fees, locations and discharges.</p> <p>The Ministry of Energy and Mines published all dam safety inspections, emergency response plans and related documents online in 2015. The ministry will continue to publish further documents for all major mines in British Columbia.</p> <p>The ministries will report on trends and effectiveness of C&amp;E in the mining sector.</p>



### Part 3: Recommendations for Ministry of Environment

<p><b>Recommendation 1.5 – Environmental Management Act Waste Discharge Fees</b></p> <p>We recommend that government review its fees under the <i>Environmental Management Act</i> and ensure that the fees are effective in reducing pollution at mine sites.</p>	<p><b>Response:</b></p> <p>The Ministry of Environment is committed to reviewing the fee structure for waste discharges under the <i>Environmental Management Act</i>. Work has already been initiated to assess current fees, as well as conduct a cross-jurisdictional scan of fees imposed by other provinces and territories.</p>
<p><b>Recommendation 1.6 – Cost Recovery</b></p> <p>We recommend that government adopt a cost recovery model for permitting and compliance verification activities that is consistent across all ministries in the natural resources sector.</p>	<p><b>Response:</b></p> <p>The Ministry of Environment recognizes that other natural resource sector ministries, including the Environmental Assessment Office, have begun imposing fees on industry for permitting and compliance verification activities. The ministry will be examining the imposition of fees for these activities.</p> <p>Effective April 1, 2015 permit fees were introduced under the <i>Mines Act</i> and the existing inspection fees were raised. This enabled a budget increase of approx. \$9.3M to the Ministry of Energy and Mines in Budget 2016.</p>
<p><b>Recommendation 1.7 – Decision Making – Use of section 137 of the Environmental Management Act</b></p> <p>We recommend that government be transparent to the public as to its rationale for granting a permit under section 137 of the <i>Environmental Management Act</i>. Specifically, information should include how factors such as economic, environmental, and social attributes were considered in the determination of public interest.</p>	<p><b>Response:</b></p> <p>As provided for in Section 137 of the <i>Environmental Management Act</i>, Cabinet may consider factors that are in the public interest and beyond those that a ministry director may consider. Discussions underlying the approval of an OIC are a matter of Cabinet confidentiality. However, the results of Cabinet decisions, when they are issued in the form of OICs, are published on the BC Laws website.</p>

#### Part 4: Recommendations for Ministry of Energy and Mines

<p><b>Recommendation 1.3 – Security – Adequate Coverage</b> We recommend that government safeguard taxpayers by ensuring the reclamation liability estimate is accurate and that the security held by government is sufficient.</p>	<p><b>Response:</b> As seen in the 2014 Chief Inspector’s Annual Report, “In the past few years, the value of security deposits has increased to reflect more closely the true costs of reclamation. The total value of securities held by the Province has risen from \$10 million in 1984 to more than \$773 million by the end of 2014.”</p>
<p><b>Recommendation 1.4 – Security – Catastrophic Events</b> We recommend that government review its funding mechanisms to ensure taxpayers are safeguarded from the costs of an environmental disaster.</p>	<p><b>Response:</b> Environmental disasters, like the one seen as a result of the Mount Polley tailing facility breach, can result in damage both on and off a mine site. It is the responsibility of the mine operator to ensure sufficient environmental liability insurance is held to meet the risk of such disasters.</p> <p>The <i>Environmental Management Act</i> contains authority for spill response actions and cost recovery to require persons in possession or control of any polluting substance to prepare contingency plans and to implement those plans at their expense in the event of a spill. The Act also provides for the recovery of costs should action to respond to a spill be declared by the Minister.</p> <p>This Act is being amended to proactively require potential polluters to pay into a spill preparedness and response organization. These amendments are due for introduction to the Legislature this year.</p>
<p><b>Recommendation 1.8 – Reclamation Standards</b> We recommend that government develop clear and comprehensive reclamation standards and guidance for industry.</p>	<p><b>Response:</b> Internal work has begun on developing additional guidance materials on a range of reclamation aspects, including erosion and sediment control plans, closure management manuals, reclamation security, etc.</p>
<p><b>Recommendation 1.11 – Systematic Compliance Verification</b> We recommend that government systematically monitor and record compliance with high-risk mine permit requirements.</p>	<p><b>Response:</b> As with Recommendation 1.10 above, a risk-based approach to compliance and enforcement workforce planning will uncover poor performers for closer scrutiny.</p>

<p><b>Recommendation 1.13 – Mine Design</b></p> <p>We recommend that government adequately review mine designs to ensure that they meet government standards, and that government ensure that mines, as constructed, reflect the approved design and standards.</p>	<p><b>Response:</b></p> <p>This recommendation is presented at the conclusion of the Audit Report section on the Mount Polley TSF breach.</p> <p>There had been nine design stages over the life of the TSF at Mount Polley Mine. All stages, including the design stage in place at the time of the breach had been prepared by the design engineer; a qualified professional. MEM reviewed and authorized permit amendments for each stage of the TSF. Each stage of construction was certified by the Engineer of Record in the as-built reports. The failure of the TSF was not an enforcement issue.</p> <p>Through legislation like the <i>Engineers and Geoscientists Act</i>, government has created technical bodies to formalize accountability and protect the public interest. As appropriate in their role, in response to the Expert Panel findings on Mount Polley the Association of Professional Engineers and Geoscientists BC is developing professional practice guidelines for dam site characterization assessments. Government is also undertaking a review of the Mining Code with labour, First Nations and industry representatives to determine how best to implement the expert panel findings.</p>
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## **Frankl, Dave MEM:EX**

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**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Thursday, May 19, 2016 8:40 AM  
**To:** Wallace-Deering, Eric MEM:EX  
**Subject:** Reclamation Security Key Messages

### **Key Messages**

- It's important for our government to build greater public confidence that if a mining company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unfair amount of those costs.
- The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- Statutory decision makers, not the minister, determine what that amount is.
- The Ministry of Energy and Mines holds more security now than it did 10 years ago. Since 2011, the total amount held has more than doubled.
- Following the release of the Auditor General's report, government committed to reviewing our policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how other jurisdictions in Canada and abroad deal with this issue.
- Initial research shows that Auditors-General in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- The Minister has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

### **Background:**

- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require full security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept. Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.
- In British Columbia, mining is regulated in part by the Ministry of Energy and Mines (MEM) under the Mines Act (Act) and the Health, Safety and Reclamation Code for Mines in British Columbia (Code).
- Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- MEM accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in

the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.

- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis. MEM reviews and updates security amounts as projects plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Changes in regulatory requirements and in particular water quality protection have placed increased pressures on many companies. MEM keeps stride with these changes and requires a combination of increases in bonding over time as well as ongoing financial strength from the mine owner to protect the public interest. This approach provides a balance which ensures companies can remain in operation, implementing costly capital programs as needed for permitting while at the same time being able to provide for additional security.
- More specifically, costing for long term water treatment is done using a phased approach. If water treatment is required immediately and during operations the costing is generally included. However, for some sites where treatment will not be required for decades after the site closes MEM's practice is to have full costing in place at closure.

## Frankl, Dave MEM:EX

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**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Wednesday, May 11, 2016 12:25 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX; Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX  
**Subject:** Copper Mountain Information

Hi Minister,

Ahead of the visit to Copper Mountain this week, GCPE have put together some information in case questions arise about either the OAG Report's concerns about reclamation bonding, or concerns raised by First Nations about activities at the mine over the last few years.

Please let me know if you have any questions, concerns or edits before we forward this information.

Thanks,

Eric

### **AUDITOR GENERAL'S REPORT: CONCERNS RAISED ON RECLAMATION BONDING**

The Auditor-General criticized government for failing to publicly disclose that it has not collected enough security deposits from the industry to cover potential mining accidents. The OAG said the shortfall amounts to \$1.2-billion. Minister Bennett promised to take action to ensure that those deposits are collected.

### **KEY MESSAGES**

- The liability the Office of the Auditor General report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- The Ministry of Energy and Mines requires financial security on all Mines Act permits. The security is reviewed and updated as required, generally every five years or when there is a major change in the approved mine plan or reclamation program. This is done so that should, for whatever reason, a mine not be able to fully fund all reclamation costs, British Columbians will not be the ones covering the costs.
- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The Ministry of Energy and Mines collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances, the Ministry of Energy and Mines has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default.
- The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time. Teck and Barrick Gold Inc. are two such examples. The ministry has made decisions in the past that those companies aren't going anywhere. They've got a huge asset base, and it is not essential to have as much money in the bank with those particular companies.

## **PREVIOUSLY RAISED CONCERNS BY FIRST NATIONS WITH COPPER MOUNTAIN**

Over the past few years, First Nations have raised a few different concerns about operations at the mine. Government continues to work with First Nations, the community and the company to address these concerns in a timely manner.

### **Key Messages**

- Staff with MEM, MOE and MARR continue to work with the company and local First Nations to ensure all concerns are addressed appropriately and in a timely manner.
- This government recognizes the importance of working with First Nations in British Columbia to develop a shared vision for land and resource use.
- Acting in partnership is the best way to provide a meaningful role in land and resource management for First Nations, and to provide for benefit-sharing and new economic opportunities.

### **Background**

#### **December 2014 Tailings Spill**

- At approximately 10:20 p.m. on December 10, 2014, the Chief Inspector of Mines was notified of a tailings spill at Copper Mtn. Mine near Princeton.
- The company did not advise Lower and Upper Similkameen FNs of the spill the night it occurred, but contacted both the next day. The chief and council of both bands were on site the next day.
- Staff with the ministries of Environment, and Energy and Mines were immediately deployed onsite to respond to the spill.
- In response to the spill, the province signed a Letter of Understanding (LOU) with the Upper and Lower Similkameen First Nations outlining the initiatives the province would undertake to determine what caused the spill, what its potential impacts were and what steps could be taken to prevent a similar event in the future.
- An independent contractor, AECOM, was hired to investigate the incident and submitted its report to government and the Upper and Lower Similkameen First Nations in the fall of 2015.
- On March 24, 2016 the Lower Similkameen First Nations, in a letter to Minister of Aboriginal Relations and Reconciliation John Rustad rejecting the report from AECOM and requesting funding to hire a new contractor to review the AECOM report.

#### **January 2016 Waste Rock Dump failure**

- On January 31, 2016, a waste rock dump on the mine site slumped blocking Copper Mountain road.
- The waste rock slump resulted in a deposit of natural overburden materials (soil, glacial till sediments, and organic debris) in a small non-fish bearing portion of Wolfe Creek which flows into the Similkameen River.
- On February 9, 2016 the Ministry of Environment (MOE) issued a Pollution Abatement Order to Copper Mountain Mine.
- On February 12, 2016 Copper Mountain Mine submitted an Action Plan to MOE proposing measures to recover and manage the landslide overburden materials, and to mitigate and monitor residual risks to the environment.
- Work to remove overburden materials from Wolf Creek was completed on February 26, 2016.
- Re-vegetation of disturbed areas and soil stockpiles are scheduled to be completed over the months of April and May 2016.
- The company continues to undertake water sampling at Wolf Creek.

#### **Lower Similkameen Economic Benefits Agreement**

- The Lower Similkameen have raised concerns with the province regarding the band's economic benefits agreement.



## Frankl, Dave MEM:EX

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**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Saturday, April 30, 2016 10:09 AM  
**To:** Chin, Ben PREM:EX; Mills, Shane LASS:EX  
**Cc:** Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX; Haslam, David GCPE:EX  
**Subject:** Latest versions of comms materials re. response to OAG - 29 Apr 16  
**Attachments:** QA\_KM\_OAG report\_compliance and enforcement in mining sector\_April 29\_441pm.docx; IN\_OAG mining compliance and enforcement report\_April 27.docx

Shane/Ben,

Attached is the comms package that's been signed off by MeM.

Includes:

- Rollout
- Media plan
- News release with two back grounders.
- MeM Q and A - key messages to be added once news release is final.
- MoE Q and A.

Still to come on our end is power point slides for the presentation and a table that shows the progress made on completing the recommendations of the Independent Panel Report.

Please let me know if you have any suggested edits or questions.

Eric

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## **Key Messages**

To follow once news release and backgrounder are approved.

## **Q & A**

### **Mount Polley**

- 1. In the audit report, the Auditor General basically makes the assertion that with commodity prices declining, government compliance and enforcement activities are also falling off. What's government's response to this?**

Compliance and enforcement activities of the mining sector are in no way connected commodity prices. In fact the ministry budget was increased the last two years by roughly 40%.

Further, we have brought in amendments to the Mines Act to strengthen government's regulatory oversight of the mining industry and give the ministry additional compliance and enforcement tools. The changes mean we will soon have administrative monetary penalties as an additional compliance and enforcement tool under the Mines Act. Administrative monetary penalties can be imposed for contraventions without involving the courts.

- 2. In her opening comments, isn't the Auditor General basically saying that government's inadequate compliance and enforcement actions for the mining sector resulted in the failure of the tailings dam at Mount Polley?**

In its examination of the Mount Polley TSF failure, the OAG has somehow reached conclusions that differ from the findings of multiple professionals, including three world-leading engineering experts on TSFs. Further, the OAG's findings fail to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolacustrine layer of soils (UGLU). Basically, there wasn't enough site investigation done prior to construction in the mid-1990s.

Two investigations of the dam failure at Mount Polley – one by the Independent Expert Panel and one by the Chief Inspector of Mines – determined the dam failed because the

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strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises.

The Panel, which was empowered in its Terms of Reference to examine any matters it deemed necessary, including the “regulatory oversight by the Ministry of Energy and Mines and the Ministry of Environment” concluded:

“The Panel found that inspections of the TSF would not have prevented failure and that the regulatory staff are well qualified to perform their responsibilities. The Panel found that the performance of the Regulator was as expected. The Panel finds that the MEM Geotechnical Staff and the Contract Inspectors are well qualified to perform their responsibilities. The team is well organized and has clear targets and schedules for annual inspections. The Panel considers the technical qualifications of the MEM Geotechnical Staff as among the best that it has encountered among agencies with similar duties.”

Both investigations also made it clear that responsibility for the design of the TSF is the role of engineer of record not MEM as the regulator. The investigations also found that MEM inspectors did raise a number of issues during reviews and inspections of the Mount Polley TSF. As the Panel noted in its report:

“MEM geotechnical engineers addressed significant issues during the reviews and inspections of the Mount Polley TSF. They had insightful questions for the designers at many instances during their review of the design documents, as noted above. The EOR responded to these questions based on their observations and understanding of site conditions. The EOR is responsible for the overall performance of the structure as well as the interpretation of site conditions. The Regulator has to rely on the expertise and the professionalism of the EOR as the Regulator is not the designer.”

**3. Given what the OAG audit report says about MEM’s role in the Mount Polley TSF failure, what does this mean for the ministry and you as minister?**

Look, I appreciate the work the OAG put into this report. However, the facts don’t support the OAG’s assertion.

First and foremost, the OAG fails to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolaucustrine layer of soils (UGLU).

Both the Independent Panel and the CIM investigation concluded that the fundamental cause of the Mount Polley failure was the lack of appropriate subsurface site characterization when the dam was designed and built. Respectfully, I’d also point out that

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this was not a question of the number of ministry staff on the ground, the number of inspections performed, or an increase in professional reliance since.

I know the Independent Panel and the Chief Inspector of Mines investigations conducted comprehensive site investigations including extensive drilling and core sample testing over seven months to reach their conclusions. The fact is, the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises, and initial site investigation occurred in the mid-1990s.

**4. If, as the OAG implies, the dam failure was as a result of inadequate compliance and enforcement by government, does this mean taxpayers are on the hook for damages?**

No. The company is responsible for covering the costs of environmental remediation as a result of the dam failure.

With all due respect to the OAG, two investigations – one by three globally recognized experts in tailings storage facility design and construction, and one by the Chief Inspector of Mines – determined that the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises.

While both these investigations found other factors exacerbated the collapse of the dam and the ensuing environmental damage, those factors alone or together were not sufficient to cause the failure. Further, at all stages of the tailing storage facility construction, the calculated factor of safety exceeded the Canadian Dam Association guidelines. The geotechnical experts involved in the two investigations all concluded the breach would not have occurred had it not been for the undetected glaciolauustrine layer of soils.

Further, after a nearly 16 months long investigation to determine how and why the failure occurred, the Chief Inspector of Mines (CIM) found that operations on the mine site were not in contravention of any regulation. The CIM also found that the mine and its engineers employed weak practices on the mine site. Weak practices, however, do not constitute a legal contravention of existing mining legislation.

**5. Throughout the report, the OAG states that MEM failed to enforce the tailings storage facility (TSF) design at the Mount Polley Mine. Why didn't MEM take action and require the company and engineer of record to build the TSF in accordance with the original design specifications?**

At various points in the report, the OAG contends that MEM should have stepped in to enforce the "original" design and insisted the mine operator maintain slope angles, buttresses, and beaches called for in that design. However, the OAG should recognize that

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at any mine, designs of mine infrastructure are not static and are changed to reflect new ore body discoveries, changes in mine output, available construction materials, etc.

If you were to visit any long life mine in BC and compare the as-built infrastructure with the “original” design – you would see substantive differences – that is the nature of mining.

Let me just draw an analogy for you between a geotechnical inspector and a municipal building inspector. A building inspector is employed to ensure compliance with the building code. It would be improper for a building inspector to say, “I know that your design is sealed by an engineer and complies with the building code, but I would like you to...add a beam, etc. etc.” This would have the building inspector go from being the regulator to the designer and shift liability from the engineer of record to the municipality. It is equally improper for a geotechnical inspector to meddle with the EOR’s design beyond ensuring that it complies with the Health, Safety and Reclamation Code for Mines in B.C.

The dam was built in general conformance with the design, as approved by the Engineer of Record during every stage of the project. For example, in the 2013 As-built and Annual Review Report the Engineer of Record stated: “In general, the 2013 Stage 9 Raise of the embankment is judged to have been carried out in conformance with design intent.”

I’d also point out the Independent Panel’s findings specific to the role of MEM with regards to the dam design. On page 116 of the panel’s report, the three panel members, all globally recognized as leading experts in the design and operation of tailings storage facilities, make the following statement:

“The engineer of record (EOR) is responsible for the overall performance of the structure as well as the interpretation of site conditions. The regulator has to rely on the expertise and the professionalism of the EOR as the regulator is not the designer.”

As engineers, architects and anyone in the construction industry will tell you, design changes during construction are common on many projects, from dams to bridges to office towers. What matters is that the end product is certified by an engineer as meeting the original design intentions and requirements. I can tell you that over a 20-year span the design of any mine will undergo many changes – it’s the nature of the business.

In the case of the Mount Polley tailings storage facility (TSF), any differences from the original dam design were signed off by the engineer of record, certifying that the dam construction met all of the original design intentions and requirements.

Design specifications were signed and sealed by a professional engineer and submitted for each stage of the dam and each stage was certified by the engineer of record as having met all of the design intentions and requirements once construction was complete.

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**Slope – Beach – Buttress**

- 6. The OAG made the finding that MEM’s lack of effective regulatory oversight contributed to the Mt Polley tailings storage facility breach based on three issues (pages 59-63):**
- **Slope**
  - **Beach**
  - **Buttress**

**This finding seems to put much of the blame for the breach squarely on the ministry. What’s your response to this?**

At various points in the report, the OAG contends that MEM should have stepped in to enforce the “original” design and insisted the mine operator maintain slope angles, buttresses, and beaches called for in that design. However, the OAG should recognize that at any mine, designs of mine infrastructure are not static and are changed to reflect new ore body discoveries, changes in mine output, available construction materials, etc.

If you were to visit any long life mine in BC and compare the as-built infrastructure with the “original” design – you would see substantive differences – that is the nature of mining.

Let me just draw an analogy for you between a geotechnical inspector and a municipal building inspector. A building inspector is employed to ensure compliance with the building code. It would be improper for a building inspector to say, “I know that your design is sealed by an engineer and complies with the building code, but I would like you to...add a beam, etc. etc.” This would have the building inspector go from being the regulator to the designer and shift liability from the engineer of record to the municipality.

It is equally improper for a geotechnical inspector to meddle with the EOR’s design beyond ensuring that it complies with the Health, Safety and Reclamation Code for Mines in B.C. (Code) – which was the case for Mt Polley. The factors of safety satisfied the CDA Dam Safety Guidelines required by the Code.

That being said, the Independent Panel and the Chief Inspector of Mines investigations both confirmed that on multiple occasions MEM posed questions to the mine and its engineers of record regarding the characterization of the foundation, the tailings storage facility (TSF) slope geometry and the adequacy of the beaches. In all instances MEM received written assurances from the professional engineers that there were no dam stability concerns.

- 7. Why did MEM allow the mine operator to continue to maintain over-steepened downstream embankment slopes that did not comply with the original design specifications?**

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As for the slope design, prior to construction of the last (Stage 9) lift, the engineer of record (EOR) analyzed the stability of the Perimeter Embankment using 1.3H:1V slopes, with neither a beach nor a buttress, and reported factors of safety that exceeded the CDA guideline of 1.5.

In their as-built report for Stage 9, the EOR stated that, *"In general, the 2013 Stage 9 raise of the embankment is judged to have been carried out in conformance with the design intent."*

Given the (reported) robust factor of safety, and the as-built endorsement of the EOR, MEM had no grounds to insist on design changes. To have done so would have placed great liability on the shoulders of government. If government staff become the designers – they "own" the design and all of the risks associated with that design.

**8. Why didn't MEM require the company to return from the interim 1.4H:1V to the more moderate 2H:1V slope once the stage 5 lift was complete?**

Again, the OAG would have MEM second guessing the professional engineers that certify the design of these structures. As soon as ministry staff do that, government takes ownership of the structure and with it, all of the risk.

To the question of the slope, I'll just point out that the shallower slope angle of 2H:1V the OAG refers to as being in the original design was still intended to be in place at closure of the mine. The engineer of record certified that the design with the 1.4H:1V was in general conformance with the design intent and allowed for operation within the specified factor of safety.

**9. Why did MEM allow the mine operator to build the slopes even steeper during the stage 7 dam raise, reaching a level that was described by the panel as "unprecedented"?**

The factor of safety of the Perimeter embankment was calculated by the engineer of record (EOR) to be above a factor of safety (FOS) of 1.5 at the time of failure. This is in accordance with the CDA Dam Safety Guidelines– the generally accepted standard for tailings dams.

Even if the embankment had been deemed to be at a FOS of 1.3 at the time of failure, this would not have been inconsistent with practice in other jurisdictions.

The document titled "Application of CDA Dam Safety Guidelines to the Geotechnical Design of Oil Sands Tailings Dams in Northern Alberta" (by Arash Eshraghian, Ph.D and Dennis Becker, Ph.D) contends that a factor of safety of 1.3 is suitable for "static loading and associated phreatic surface during dam raises and immediately at the end of operations (p.33)."



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A January 2009, European Commission reference document: Best Available Techniques for Management of Tailings and Waste-Rock in Mining Activities states that for “any tailings and waste rock management facility, best available technology is to: apply a factor of safety of at least 1.3 to all heaps and dams during operation (p. xiv).”

**10. Why didn't MEM enforce the requirement for beaches in accordance with the original design of the tailings dam?**

At various points in the report, the OAG contends that MEM should have stepped in to enforce the “original” design and insisted the mine operator maintain slope angles, buttresses, and beaches called for in that design. However, the OAG should recognize that at any mine, designs of mine infrastructure are not static and are changed to reflect new ore body discoveries, changes in mine output, available construction materials, etc.

If you were to visit any long life mine in BC and compare the as-built infrastructure with the “original” design – you would see substantive differences – that is the nature of mining.

For the perimeter embankment, analysis by the engineer of record from 2011 forward reported factors of safety that satisfied the Canadian Dam Association design criteria using 1.3H:1V slopes, no beach beyond the U-zone sand cells on the upstream embankment, and no buttressing. In response to one MEM query, the Engineer of Record stated that, *“the tailings embankments have been designed to remain stable for any condition and therefore there is not a ‘requirement’ for a minimum beach width in terms of embankment performance.”*

At every stage of construction, the engineer of record certified that the as-built was in general conformance with the design intent and allowed for operation within the specified factor of safety.

**11. Did MEM follow-up on its 2008 order requiring Mount Polley to maintain beaches, or on the 2010 Annual Dam Safety Inspection where the engineer of record reminded the mine operator of the beach deficiency?**

First of all, it's important to understand that the 2008 MEM order and the 2010 Dam Safety Inspection by the engineer of record (EOR) are in reference to the main embankment and are not relevant to the perimeter embankment which failed. The Inspector's order regarding inadequate beach at the main embankment cannot be applied or interpreted as a warning about beaches of the perimeter embankment.

In fact, we have records that show the mine manager responded to the 2008 MEM order, which stated “the area of concern has been mitigated with waste rock to protect the till

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since the time of the inspection.” Further, records show the MEM geotechnical Inspector was satisfied with the mines response.

Second, the concerns raised in the 2010 DSI were recognized by the new engineer of record and addressed. This included work by the EOR to develop sand cell (beach) construction techniques for the operator.

For the Perimeter Embankment, analysis by the EOR from 2011 forward reported factors of safety that satisfied the Canadian Dam Association design criteria using 1.3H:1V slopes, no beach beyond the U-zone sand cells on the upstream embankment, and no buttressing.

**12. Given the on-going water management issues at the site, why didn’t MEM use existing enforcement mechanisms, as the OAG suggests on p. 65, and just shut the mine down?**

Shutting down the mine would not have resolved the water management issue. Surplus water on the mine site needs to be managed regardless of whether the mine is operational or not. Even if the mine isn’t operating, water continues to collect at the site from snow melt and rain.

**13. If water management was such an issue, why didn’t MEM order the mine operator to build a water treatment facility?**

In preparation for Stage 10, in June 2014 discussion regarding water management, including plans for water treatment and water discharge, were taking place between MEM, Mount Polley Mining Corporation (MPMC) and BGC Engineering (who was expected to be EoR for Stage 10). MPMC was in the process of obtaining a water discharge permit with MOE, and were preparing the required plans and processes required to control the surplus water on-site.

Planning and preparation required to build a water treatment system needed to go through the proper evaluation process in order to protect the environment in the long term, it would not have been practical to order the mine to build a water treatment facility without taking into consideration the various factors involved.

**14. Why didn’t MEM enforce the establishment of buttressing along the main embankment in accordance with the original design and why allow the mine operator to continually defer construction of the buttress along the main embankment?**

The main embankment downstream buttress was not in the original design of the tailings storage facility (TSF). The buttress was included in the stage 4 design and the engineer of record stated at that time: “The buttress at the main embankment is required for closure

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and can be constructed during any stage of the TSF expansion to accommodate the availability of shell zone material.”

Additionally, when the engineer of record proposed the main embankment buttress it was as an additional contingency measure for further enhancing the stability of the main embankment. It was only at stage 9 that the engineer of record made the main embankment buttress a design requirement and the mine operator constructed it in accordance with the design intent at the end of the 2013 construction season.

At various points in the report, the OAG contends that MEM should have stepped in to enforce the “original” design and insisted the mine operator maintain slope angles, buttresses, and beaches called for in that design. However, the OAG should recognize that at any mine, designs of mine infrastructure are not static and are changed to reflect new ore body discoveries, changes in mine output, available construction materials, etc.

If you were to visit any long life mine in BC and compare the as-built infrastructure with the “original” design – you would see substantive differences – that is the nature of mining.

At every stage of construction, the engineer of record certified that the as-built was in general conformance with the design intent and allowed for operation within the factor of safety.

### **Weak Layer**

- 15. On page 62, the report states that the mine’s engineer of record (EOR) and other experts were concerned with the possibility that there may be a weak layer in the dam foundation materials. Why didn’t the Ministry of Energy and Mines (MEM) order the company to address these concerns?**

It’s important to understand that this statement in the OAG report is in reference to the main embankment, not the perimeter embankment where the failure occurred. Further, these concerns regarding the possibility of a weak layer in the main embankment foundation were addressed under the oversight of the engineer of record (EOR).

In addition, the Chief Inspector of Mines (CIM) and the independent panel investigations both confirmed that on multiple occasions MEM posed questions to the mine and its engineers of record regarding the characterization of the foundation, the TSF slope geometry and the adequacy of the beaches. In all instances MEM received assurances from the professional engineers that there were no dam stability concerns.

As the independent panel pointed out on page 116 of its report, MEM as the regulator cannot take on design responsibilities. This role resides with the engineer of record (EOR).

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“The EOR is responsible for the overall performance of the structure as well as the interpretation of site conditions. The regulator has to rely on the expertise and the professionalism of the EOR as the regulator is not the designer.”

**Overtopping Incident**

**16. When the mine operator failed to report the May 2014 over-topping incident, why didn't MEM start looking more closely at the mine and its management practices?**

From what staff have told me about this incident, it really wasn't clear if it was an over-topping of the dam. When MEM staff flew over the site the day after learning about the incident, what they saw were puddles on top of part of the dam. The mine responded by raising the dam crest in this area to bring it to the same level as the entire dam. (Note: this was an area where the company had not completed construction as part of the 2013 dam lift due to weather conditions – snowed out.)

MEM staff reacted swiftly to this incident and carefully monitored the mine's response – requiring timely updates and diligent monitoring of freeboard levels. In fact, the Independent Expert Panel later reported that, *“...freeboard was being carefully monitored around the time of the breach as a result of prior insistence on the part of the Ministry of Energy and Mines (MEM).”*

**AMEC Internal Emails re. Overtopping**

**17. Emails between AMEC engineers show the consulting engineers for the mine had concerns that the company was not responding to the over-topping appropriately, nor was it addressing water management issues. Why didn't MEM act on these concerns?**

Those emails were never directed to MEM and none of the engineers raised those concerns directly to MEM, they were internal emails only.

The Association of Professional Engineers and Geoscientists of B.C. (APEGBC) has informed ministry staff that it is conducting an investigation of the Mount Polley incident.

Engineers in B.C. are not obligated by law or professional best practice standards to their skill levels updated.

**2010 Dam Safety Inspection Concerns**

**18. Why didn't MEM force the mine operator to address the concerns raised in the 2010 annual dam safety inspection report from the Engineer of Record (Knight Piesold)?**

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First, I want to point out that this same EOR did not raise any significant concerns in the 2007, 2008 or 2009 annual dam safety inspection reports – only in 2010 when the EOR was leaving did it raise any concerns.

Second, the concerns raised in the 2010 DSI were investigated by the new engineer of record and addressed. This included:

- The EOR began work with the mine operator on sand cell construction techniques (beaches)
- Instrument installation at 14 new drill holes (11 piezometers and 3 slope inclinometers)

Analysis by the EOR from 2011 forward reported the factors of safety satisfied the Canadian Dam Association design criteria using 1.3H:1V slopes, no beach beyond the U-zone sand cells on the upstream embankment and no toe buttress for the perimeter embankment.

At every stage of construction, the engineer of record certified that the as-built was in general conformance with the design intent and allowed for operation within the specified factor of safety.

### **Mount Polley Restricted Operations and Permit Application**

#### **19. Why is Mount Polley mine being allowed to continue to operate considering the findings of the Office of the Auditor General's audit report?**

The mine site is under close observation by MEM and MOE staff members. It was also important to the community to ensure that families were able to continue to support themselves, government also wanted to make sure a continuation of operations is done in a way that protects the environment.

The authorizations that have been granted to the mine have been subject to highly technical reviews by scientists, engineers, First Nations and community members in order to make sure things are done right.

#### **20. Why did government authorize an extension of Mount Polley's restricted operations permit?**

The permit extension allows the mine to continue restricted operations while its application to return to full production is under review.

Statutory decision-makers with the ministries of Energy and Mines and Environment authorized an extension of the restricted operations permits for Mount Polley Mining

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Corporation, allowing the mine to process an additional one million tonnes of ore. The decision was made in consultation with representatives from the Williams Lake Indian Band and Xat'sull First Nation, and the community of Likely.

The permit amendments increase the mine's allowable production level from four million tonnes to five million tonnes of ore.

The tailings facility will not be utilized during restricted operations. Mount Polley Mine will continue to use Springer Pit, an existing open pit on the mine site, to manage the tailings. This permit extension also authorizes Mount Polley Mining Corporation to complete additional buttressing to the perimeter embankment of its tailings storage facility.

Mine water is being managed in compliance with the MOE permits. A short-term discharge permit was issued for the mine in November 2015. On March 11, 2016 MOE issued a bypass authorization allowing the mine to temporarily increase storage levels in Springer Pit to 1042 metres above sea level (asl) until August 31, 2016 at which time it must return levels to 1030 metres asl. The MOE bypass authorization also allows the mine to temporarily bypass the water treatment plant. Only water that meets the permit requirements for discharge quality will be allowed to bypass water treatment. The bypass is required to deal with freshet flows and a bottleneck at the water treatment plant.

The bypass does not allow the discharge of any greater amount of mine effluent than the discharge permit (0.3m<sup>3</sup>/s). The water that bypasses the water treatment plant has received settling and treatment via storage in the Springer Pit which enables it to meet the permit discharge permit quality limits (as indicated by sampling of the Springer pit water).

**21. What impact will the Office of the Auditor General's findings and findings from the two investigation have on MPMC's application to return to full-production using the tailings storage facility (TSF)?**

That is something that the statutory decision makers will determine as part of the application review process. I know for certain that the findings and recommendations from the independent panel and the chief inspector of mines investigations will be taken into consideration as part of the application process.

A key component of the company's application to return to full operations includes the proposal to use the repaired TSF for tailings storage going forward if the application is approved.

Geotechnical engineers from MEM, along with a geotechnical engineer representing local First Nations are reviewing the geotechnical aspects of the design to ensure it meets or

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exceeds required design standards and conforms with best available practices as recommended by the independent expert panel.

Staff with the ministries of Energy and Mines and Environment, with representatives from the Williams Lake Indian Band and Xat'sull First Nation, and the community of Likely, completed a technical screening review of the application prior to sending the application to the Cariboo mine development review committee for a detailed technical review. Following the detailed technical review by the Mine Development Review Committee (MDRC), the committee chair will provide recommendations to the statutory decision makers at the ministry of Energy and Mines.

In accordance with the Letter of Understanding, MEM along with the Williams Lake and Xat'sull First Nations have identified a number of questions that the company must address as part of the permitting process.

Additionally, the company must submit its long-term water management plan by June 30, 2016 in order to continue operations.

Mines Act permitting decisions are made by the Chief Inspector of Mines, or delegate, and are statutory decisions – completely independent of any political influence. It is anticipated that statutory decision makers with the ministries of Energy and Mines and Environment will make a final decision on the Mount Polley Mining Corporation's application to return to full operations this summer.

### **Engineer of Record Hand-Off Letter**

**22. In 2010, when Knight Piesold handed off engineer of record duties to AMEC, it copied the Chief Inspector of Mines on the hand-off letter it sent to the mine operator. Why didn't MEM take action to respond to concerns raised in that letter?**

I'll start by pointing out that the letter was addressed to the mine operator and the chief inspector was only copied. This letter was notification to inform of the change of the engineer of record (EOR).

In that letter, the EOR did not raise any specific concerns, and one could argue that if they had specific concerns, they should have already dealt with them in their role as the EOR, or directly notified MEM and articulated their concern.

The only notification statement in the letter was the following, "the embankments and the overall tailings impoundment are getting large and it is extremely important that they be monitored, constructed and operated properly to prevent problems in the future". This

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statement would be applicable to a number of tailings dams in the province and would not be considered a warning.

As a professional engineer the EOR had an ethical requirement to clearly and concisely report their concerns to the mining company and to MEM.

The Association of Professional Engineers and Geoscientists of B.C. (APEGBC) has informed ministry staff that it is conducting an investigation of the Mount Polley incident.

### **OAG Rebuttal of Government Response**

**23. How can government take issue with the scope of the audit and the audit criteria for measuring appropriate compliance and enforcement standards when the deputy ministers from MEM and MOE both agreed to these when they signed the OAG's Notice of Examination?**

The Deputy Ministers of Environment and Energy & Mines signed off an Audit Plan where the focus of the audit was to be on the Ministry of Environment and the Ministry of Energy and Mines compliance and enforcement activities that the agencies undertake under the Environmental Management Act and Mines Act.

However, with respect to the Elk Valley the audit seems to be proportionally more focused on the decision making associated with issuing permits as opposed to the focus on the compliance and enforcement after the permits were issued. MOE and EAO have compliance and enforcement plans and strategies for MOE and EAO have compliance and enforcement plans and strategies for the Elk Valley but the OAG never did ask about them, nor were they referenced in the report.

It is true that the Audit Plan did exclude EAO from the scope of this audit because an audit had just been completed. However, that would not have precluded the Auditor General from recognizing the key role played by the Environmental Assessment Office. Many of the mines in B.C. have been subject to the Environmental Assessment process and have received environmental assessment certificates with legally binding requirements.

### **OAG Interviews and Experts**

**24. Do you know if the OAG interviewed the Mount Polley Mine engineers of record?**

We do not know if the OAG interviewed the Mount Polley Mine engineers of record. Details of the OAG interviews, including identities of those interviewed were not provided to us. References or investigation process are not detailed in the OAG report.



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- 25. According to the OAG's audit scope on page 92 of the report, the OAG reached its conclusions after interviewing MEM and MOE staff, industry experts and mining engineers. Given this, the OAG reached significantly different conclusions than the Expert Independent Panel and the Chief Inspector of Mines about why the Mount Polley dam failure occurred. Did the OAG find new evidence or did the other two investigations miss something?**

In its examination of the Mount Polley TSF failure, the OAG has somehow reached conclusions that differ from the findings of multiple professionals, including three world-leading engineering experts on TSFs. Further, the OAG's findings fail to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolacustrine layer of soils (UGLU).

Two investigations of the dam failure at Mount Polley – one by the Independent Expert Panel and one by the Chief Inspector of Mines – determined the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises.

I can tell you that government has made hundreds of thousands of the documents from the two earlier investigations into the Mount Polley TSF failure publicly available. We did this so that British Columbians could see the evidence the experts in those investigations relied upon in order to make their determinations around the cause of the breach.

In conducting the Mount Polley case study, the audit team – quite understandably – augmented their own knowledge of environmental principles, geotechnical engineering and regulatory law. They did so by consulting a panel of subject matter experts, comprising an environmental academic, environmental lawyer, engineer and a former employee. We understand this to be consistent with normal audit practice.

However, proceeding in that manner did not give the Ministries the opportunity to know who was on the panel, what data the panel may have considered on specific points, what opinions they might have offered, or to challenge the thinking of panel members with additional engineering evidence and/or competing legal or scholarly opinions.

### **Professional Reliance**

- 26. One of the reasons the OAG gives for MEM failing to enforce the tailings storage facility design is MEM's over-reliance on qualified professionals. Will MEM move away from professional reliance?**

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No. British Columbia and other provinces in Canada and countries around the world have a long history of using professional reliance. The Ministry of Energy and Mines has used the professional reliance model for oversight of tailings storage facilities for decades and that model has remained relatively unchanged. We rely on professional engineers to approve the designs of everything from the cars we drive to the buildings we work in.

And it makes sense - a “one size fits all” approach of prescriptive design requirements can have a negative impact on the ability of engineers to develop new and innovative designs that improve safety and reduce the risk of failure.

The public relies on Qualified Professionals in many areas. Examples of qualified professionals include architects, accountants, lawyers, physicians, pharmacists and engineers. In each case, the qualified professionals are regulated by their respective governing body or association to ensure members meet their association’s standards of conduct or code of ethics. If qualified professionals do not adhere to these standards or codes, then the associations are responsible for disciplinary actions. This is the system that holds professional engineers accountable across Canada.

That being said, we believe there is room for improvement. Following the independent panel investigation, we committed to introduce a new requirement that all operating mines with TSFs in British Columbia establish Independent Tailings Dam Review Boards.

These boards will support improved engineering practices by providing third-party advice on the design, construction, operation and closure of TSFs. Some mines in B.C. already have similar boards in place.

As well, the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) is developing new guidelines to improve professional engineering practices for dam site characterization assessments. These new guidelines will be released by summer 2016.

**27. Will MEM hire the appropriate qualified staff and carry out its own technical reviews of tailings storage facility dam designs and construction, rather than relying on qualified professionals?**

If we were to move in the direction the OAG is suggesting – making MEM as the regulator also responsible for the design of tailings storage facility dams – we would need to have a ministry engineer on-site at every tailings storage dam in the province. Additionally, government would become responsible for liabilities related to these tailings storage facilities – meaning the taxpayers, not the mine operators would be held financially accountable. This is not practical. It’s certainly not prudent. And, it’s not a practice in place in any other jurisdiction I know of.

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The independent panel was very clear on the role of MEM as the regulator. This is outlined on page 116 of the independent panel's report:

“The engineer of record (EOR) is responsible for the overall performance of the structure as well as the interpretation of site conditions. The regulator has to rely on the expertise and the professionalism of the EOR as the regulator is not the designer.”

**Canadian Dam Association Dam Safety Guidelines**

**28. On pages 53 and 54, the OAG says that MEM adopted the Canadian Dam Association's (CDA) Dam Safety Guidelines for dam construction that were not specific to the conditions in B.C. or specific tailings dams. These guidelines were open to interpretation by the Engineer of Record and MEM inspectors, and this resulted in a tailings dam that was built below generally accepted standards for tailings dams. Why did MEM rely on these guidelines rather than requiring the tailings dam to be built to generally accepted standards?**

Not only do we disagree with this assertion of opinion, the CDA guidelines are in fact professionally recognized guidelines that are used throughout Canada by geotechnical engineers for both water and tailings dams. Whether the guidelines could be improved is a separate question, one which the CDA is currently reviewing.

The factor of safety of the Perimeter Embankment was calculated by the EOR to be above 1.5 at the time of failure. This is in accordance with the CDA Dam Safety Guidelines – the generally accepted standard for conventional dams and tailings dams.

**OAG Findings vs. Chief Inspector of Mines Investigation**

**29. The OAG seems to lay blame for the dam failure at Mount Polley squarely on government, yet the Chief Inspector of Mines (CIM) investigation found no fault with government. Does this mean the CIM investigation findings are flawed?**

No. In its examination of the Mount Polley TSF failure, the OAG has somehow reached conclusions that differ from the findings of multiple professionals, including three world-leading engineering experts on TSFs. Further, the OAG's findings fail to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolacustrine layer of soils (UGLU).

As for how the OAG's interpretation of the facts is so different from the findings of the Independent Panel and the Chief Inspector of Mines investigations... that's something that is not explained in the audit report.

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**30. The OAG findings would seem to indicate that the Chief Inspector of Mines investigation either missed evidence or intentionally avoided looking at the possibility that government's lack of compliance and enforcement at Mount Polley resulted in the tailings dam failure. Given this, how can you expect British Columbians to trust the CIM findings?**

I think the OAG report does a disservice to the work of the Chief Inspector of Mines and the team of investigators that investigated the Mount Polley tailings storage facility dam breach.

I have absolute faith in the Chief Inspector of Mines investigation. This was the largest and most complex investigation and analysis ever done in BC. Over a period of about 16 months, the chief inspector of mines (CIM) investigation team conducted approximately 100 interviews and reviewed over 100,000 pages of documents going back to 1989.

The CIM found that the mine and its engineers employed weak practices on the mine site. Weak practices, however, do not constitute a legal contravention of existing mining legislation. That's why many of the chief inspectors recommendations go to new standards and guidelines to improve these practices – this government is committed to implementing these recommendations.

Further, the CIM, with advice from the Ministry of Justice, did not find sufficient evidence that Mount Polley Mining Corporation contravened existing regulatory requirements. Based on these findings, the chief inspector of mines determined there were no actions that would warrant a report to Crown Counsel pursuant to the Mines Act.

**31. The OAG's findings point to failures on the part of Mount Polley Mine to comply with mining regulations and requirements. Given this, why didn't the Chief Inspector of Mines recommend charges?**

In its examination of the Mount Polley TSF failure, the OAG has somehow reached conclusions that differ from the findings of multiple professionals, including three world-leading engineering experts on TSFs. Further, the OAGs findings fail to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolaucustrine layer of soils (UGLU).

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**32. Did the OAG interview the Chief Inspector of Mines?**

The Chief Inspector of Mines (CIM), who led the ministry's comprehensive investigation into the Mt Polley breach, was not interviewed by OAG auditors in the course of the audit. The CIM reviewed a draft audit report in late 2015, after the audit was complete, and discussed his concerns about the report with auditors at that time.

**Regulatory Capture**

**33. Why is the Ministry of Energy and Mines responsible for both promoting and regulating of the mining industry given the two priorities seem to conflict?**

The Audit Report contains no factual evidence that the current ministry structure results in any such risk, or in a mind-set of acquiescence on the part of staff involved. The Report lists a number of indicators of potential risk of regulatory capture. But there is nothing in the Report to suggest any actual causal linkage. Specifically, there is no evidence that decisions were made at Mount Polley, in relation to the Elk Valley, or anywhere else to ease or enhance the position of the mining companies involved.

We do not accept that mere appearances are sufficient to warrant the extreme solution of removing compliance and enforcement from MEM. No one is more aware of the need to find the appropriate balance between promotion and regulation of mining in ministry decision-making than those who are asked to do so on a daily basis. We disagree with the suggestion that professional public servants are unable to differentiate between mandate components or that they are unwilling to enforce existing regulations. It is the legislative framework in BC that drives compliance and enforcement activities not the organizational structure.

**34. MEM appears to hit most, if not all, of the possible signs of regulatory capture listed on page 32 of the OAG report. Given this, how can government suggest MEM is not at risk of**

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**regulatory capture and why are you against setting up an independent agency for compliance and enforcement of mining activities when you already have such an agency for oil and gas – the BC Oil and Gas Commission?**

The BC Oil and Gas Commission is responsible for permitting and compliance and enforcement of that sector. It's a model that works there, just as it works at the Ministry of Energy and mines.

I do not accept that mere appearances alone are sufficient to warrant the OAG's extreme and costly recommendation of removing compliance and enforcement from MEM – and after reading the report, that's entirely the basis for the OAG's main recommendation.

First of all, the audit report contains no factual evidence that the current ministry structure results in any such risk, or in a mind-set of acquiescence on the part of staff involved. The report lists a number of indicators of potential risk of regulatory capture, but contains no evidence to suggest any actual causal linkage. Specifically, there is no evidence that decisions were made at Mount Polley, in relation to the Elk Valley, or anywhere else to ease or enhance the position of the mining companies involved.

Secondly, no one is more aware of the need to find the appropriate balance between promotion and regulation of mining in ministry decision-making than those who are asked to do so on a daily basis.

And finally, the list itself is problematic to me as the OAG has not provided any indication of the source for the list. Who is it that determined that the eight items on that list are signs of regulatory capture? How was this determined? What evidence is there to support the OAG's assertion that these eight items are indeed signs of regulatory capture?

I'd also like to point out that during the audit period, government has continued to improve its operational policies and procedures that address many of the concerns raised in the Audit Report.

That aside, in response to the Chief Inspector of Mines investigation and recommendations, within the next 90 days government will establish a mining compliance and enforcement board to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board will be accountable to the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office. A new Deputy Chief Inspector of Mines for Compliance and Enforcement will be appointed to oversee and implement improved compliance and enforcement.

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Along with overseeing compliance and enforcement across the ministry, the team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

### **Regulatory Oversight**

**35. The OAG says in its report that it found a decade of neglect in compliance and enforcement activities within the Ministry of Energy and Mines. Further, the OAG concluded the compliance and enforcement activities are inadequate to protect the province from significant environmental risks. What is government's response to these findings?**

I don't agree with the OAG's assertion and further, the audit team fails to provide any evidence to support this claim.

The fact is, barring the Mount Polley tailings storage facility dam failure, this province has not seen a significant mine-related environmental incident in decades. Further, the number of environmental and health and safety related incidents at mines in British Columbia has continued to decline.

There are a number of hard-learned lessons that have come to light as a result of the Mount Polley incident. And while we can't turn back the clock, we are taking action to tackle these issues head-on.

To that end, we are taking the necessary steps to provide MEM inspectors with the tools they need for a more robust enforcement and compliance structure. Furthermore, where a need for additional resources in the ministry was recognised, government responded by nearly doubling the ministry budget in 2015.

We have brought in amendments to the Mines Act to strengthen government's regulatory oversight of the mining industry and give the ministry additional compliance and enforcement tools. The changes mean we will soon have administrative monetary penalties as an additional compliance and enforcement tool under the Mines Act. Administrative monetary penalties can be imposed for contraventions without involving the courts.

This is part of our ongoing actions to implement the 26 recommendations of the independent panel and the chief inspector of mines following their respective investigations into the Mount Polley tailings storage facility (TSF) failure. Work to implement a number of

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these recommendations is either substantially underway or complete, including improving corporate governance, improving professional engineering practices and strengthening current regulatory operations.

**36. Why doesn't the Ministry of Energy and Mines have a formal compliance and enforcement model in place such as the Ministry of Environment's compliance management framework or something similar to the Organisation for Economic Co-Operation and Development's (OECD) model for a comprehensive compliance and enforcement program as outlined in the audit report?**

The ministry recognizes the need for a more formal compliance and enforcement model. Following his investigation, the Chief Inspector recommended a review of compliance and enforcement function, including capacity and regulatory tools. Government committed to address this recommendation and strengthen compliance and enforcement activities in the ministry.

We have already taken steps to establish a dedicated compliance and enforcement team within the Ministry of Energy and Mines. This team will provide additional support and oversight to existing ministry compliance and enforcement staff. Once in place, the team will consist of a new Deputy Chief Inspector of Mines for Compliance and Enforcement and up to four staff members. Along with overseeing compliance and enforcement across the ministry, the team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

**37. Why, as the OAG states on page 31, doesn't MEM have a strategic plan for its regulatory approach and compliance and enforcement activities?**

The ministry does undertake strategic planning for its compliance and enforcement activities. This planning is done at the provincial and regional level with provincial planning focussed on more specialized areas such geotechnical engineering and electrical inspection.

In fact, the Independent Expert Panel stated that, "*...The Panel finds that MEM Geotechnical Staff and the Contract Inspectors are well qualified to perform their responsibilities. The team is well organized and has clear targets and schedules for annual inspections. The Panel considers the technical qualifications of the MEM Geotechnical Staff as among the best that it has encountered among agencies with similar duties.*"



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Staff at all levels plan compliance and enforcement activities on a number of factors:

- Type of mine - underground versus surface mines.
- Mine operation – seasonal versus year-round activities.
- Material extracted – coal versus metal mining.
- Dam safety rating.
- Level of infrastructure at site.
- Significant change in mining activity.

We recognize there is room for improvement, this will be a priority for the Deputy Chief Inspector of Mines for Compliance and Enforcement.

**38. Does MEM have enough resources to conduct the appropriate level of inspections to ensure mines in B.C. are operating safely?**

Yes. The ministry currently has 103 inspectors (seven positions currently vacant) in the following areas: permitting, which includes geotechnical, and health and safety.

The ministry has more geotechnical inspectors now than in 2001 and they are all registered, professional engineers. 2001: 4 staff, 1 contract (5 total). Today: 3 staff, 4 contract (7 total).

Since 2011 the number of geotechnical inspections has increased dramatically - the ministry now conducts an average of 30 geotechnical inspections annually.

That aside, in response to the Chief Inspector of Mines investigation and recommendations, within the next 90 days government will establish a mining compliance and enforcement board to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board will be accountable to the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office. A new Deputy Chief Inspector of Mines for Compliance and Enforcement will be appointed to oversee and implement improved compliance and enforcement.

Along with overseeing compliance and enforcement across the ministry, the team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

**39. Why doesn't MEM report out on its compliance and enforcement activities?**

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We recognize the need for greater public access to these records and we have started the process to make them more readily available.

The Ministry of Energy and Mines published all dam safety inspections, emergency response plans and related documents online in 2015.

We are investing in improved information systems so that this information can routinely be made public going forward.

**40. Why aren't MEM's and MOE's compliance and enforcement activities co-ordinated, including sharing information on findings of non-compliance and enforcement actions (page 33)?**

Following the independent panel and Chief Inspector of Mines investigations, we recognized more needed to be done to formalize the coordination of compliance and enforcement activities for mining between MEM and MOE.

We are already taking steps to address this by establishing a dedicated compliance and enforcement team within the Ministry of Energy and Mines. This team will provide additional support and oversight to existing ministry compliance and enforcement staff. Once in place, the team will consist of a new Deputy Chief Inspector of Mines for Compliance and Enforcement and up to four staff members. Along with overseeing compliance and enforcement across the ministry, the team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

**41. The OAG report says MEM had nearly 80 inspectors in 2001 before the cuts. How many inspectors are there now and how can inspectors be expected to properly do their jobs if, as the OAG notes on page 35, MEM does not have a formal training program for its inspectors?**

The ministry has mandatory training that all inspectors must complete prior to receiving inspector designation. In 2015, ministry staff began developing a more robust and formalized training curriculum. This will include more formalized policy and procedure.

The ministry currently has 103 inspectors (seven positions currently vacant) in the following areas: permitting, which includes geotechnical, and health and safety.

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### **Reclamation Security Bonds**

**42. What measures does government take to ensure taxpayers won't be on the hook for any long-term closure costs such as water treatment once a mine closes?**

First off, I want to make something very clear. The liability the OAG report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.

MEM requires financial security on all Mines Act permits. The security is reviewed and updated as required, generally every five years or when there is a major change in the approved mine plan or reclamation program. This is done so that should, for whatever reason, a mine not be able to fully fund all reclamation costs British Columbians will not be the ones covering the costs.

Since 2012 total amount of security held has practically doubled. This is largely a result of water treatment being required at several major coal operations because selenium has emerged as a contaminant of concern and that many coal operations have elevated selenium in their discharge.

The total reclamation security held by MEM is published each year in the Chief Inspector of Mines Annual Report. The Province currently holds \$1.07 billion in securities (March 2016).

Security bonding is not the only method by which government manages risk. Of even greater importance is the regulatory practice of requiring mining companies to manage and reduce their environmental liabilities through the development of detailed environmental protection and reclamation plans prior to mining, annual monitoring and reporting, and progressive reclamation through the life of mine.

**43. Why doesn't the province have enough bonds to cover 100% of remediation costs at all mine sites in British Columbia?**

There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.

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It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.

Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.

For example, Teck and Barrick are responsible for 75% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

**44. Do other jurisdictions collect security bonds and do they collect enough to cover 100% of reclamation costs?**

The International Council on Mining and Metals published a report on financial assurance for mine closure and reclamation and the report identified a variety of different models. For example, New Brunswick, and Ontario require financial assurance covering the complete cost of mine cleanup, while Québec requires funds covering 70%. What also differs are the forms of security bonds other jurisdiction will accept. British Columbia will only accept hard forms of security.

Since 2001 taxpayers in the province have only had to cover a portion of reclamation costs on one permitted mine in the province. This was to remove hazardous materials from the millsite at the Candorado mine located near Hedley in the Similkameen. (Need \$ amount)

**45. How many mines permitted in B.C. since 1969 have British Columbians had to cover the remediation costs for?**

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

There has been significantly more spent on historic mines – those mines that operated pre reclamation legislation. MEM generally works on the historic sites with health and safety concerns (ie filling in/caving open holes) and FLNRO or MOE (contaminated sites) works on historic mines with contamination issues (ie Britannia).

**46. On page 6 of the audit, the OAG states that the estimated total liability for all mines in B.C. is \$2.1 billion. How many mines does this represent?**

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There are approximately 26 operating and 88 closed operations.

The estimate of \$2.1 billion quoted by the OAG represents the estimate that the individual mine companies have provided to MEM in their annual estimate of liability. This estimate can vary significantly throughout the year depending on work being done, projects being reviewed and permits being amended.

**47. How many of these mines will require long-term water treatment after closure and where are they located?**

Currently the province has 16 permitted mines requiring water treatment. Another 11 have been identified as requiring or potentially requiring water treatment in the future. This represents roughly 11% of all mines permitted in the Province.

Many of the mines requiring water treatment today were in operation or were historical mines prior to reclamation legislation being implemented and were grandfathered into the permitting process in 1970. Only five mines are considered to be newer operations (Nickel Plate, permitted 1986, Samatosum permitted 1989, Mount Polley permitted 1995, Trend permitted in 2005 and Silvertip in 2015).

The mines that currently have water treatment operations include: Trend, Myra Falls, Bralorne, Bell, Britannia, Island Copper, Brenda, Sullivan, Equity, Nickle Plate, Premier, Samatosum, Line Creek, Eskay, Silvertip and Mount Polley.

Other mines that will or may water treatment in the future include: Endako, Granisle, Kitsault, Fording River, Elkview, Greenhills, Gibraltar, Huckleberry, Brucejack, Highland Valley Copper and Red Chris.

**48. Why doesn't MEM increase the security amounts for mines?**

MEM reviews and updates security amounts as projects plans are reviewed and or in some cases at the discretion of the Chief Inspector of Mines.

Changes in regulatory requirements and in particular tolerances for water quality protection have placed increased pressures on many companies. MEM seeks to keep stride with these changes and to require increases in bonding over time, however there is a need to keep a balance to ensure companies can remain in operation and implement the costly changes as needed while at the same time be able to provide for additional security.

For some companies, this balance is easier to achieve than for others and it is reasonable that government takes some risks rather than assume responsibilities for mines that the

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owners abandon. Having said this, MEM continues to work with these companies to ensure the protection of the workers the public and protection of the environment.

**49. Can MEM increase the security bonds for mines that are currently closed or in care and maintenance?**

Yes. Security bonds can be evaluated and increased at any time under the discretion of the Chief Inspector, this applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).

**Key Findings – Ministry of Environment**

**50. Why, as the OAG states on page 87, didn't Cabinet provide the public or the legislature with the rationale for why approval of the Line Creek Expansion permit was in the public interest?**

I'm not sure how the OAG came to this conclusion. I can point to a number of media stories published around the time of this decision that lay-out our rationale for approving this permit.

Substantial public and stakeholder consultations were undertaken during the development of the area based management plan for the Elk Valley and after permits were granted, various news releases and media interviews by ministers set out for the general public the nature of government decisions.

I personally attended public meetings, and met with media and area residents to discuss the area based management plan for the Elk Valley and explain how our approval of the Line Creek Expansion permit fit into that plan.

In short, working with the mining company, we developed a billion dollar plan that will see the installation of nine active water treatment plants over the next 18 years to stabilize and reverse the water quality trends. And to be blunt about it, without the approval of the Line Creek Expansion permit the company likely would not have had the financial ability to undertake this ambitious plan.

MOE to provide additional QA.

## **OAG AUDIT - MINING COMPLIANCE AND ENFORCEMENT**

- Government thanks the Auditor General for her work on this report and is accepting all recommendations, except one that government will seriously consider.
- During the audit period, MoE has continued to improve its operational policies and procedures – these improvements address many of the concerns raised in the audit.
- For example, MoE has already reviewed its funding mechanism to ensure taxpayers are safeguarded from costs of an environmental disaster. This work was included in the legislation recently introduced on a new provincial spills regime.
- MoE is also preparing to release an annual compliance report summarizing inspections under the Environmental Management Act.
- With respect to the Elk Valley Area Based Management Plan, we are confident we are on the right track to significantly reducing selenium and nitrate over the next decade.
- The Province is committed to address the water quality issues in the Elk Valley while creating a path forward for mining development and ensuring the protection of ecological and human health.

## Background:

- The Office of the Auditor General is releasing an audit on compliance and enforcement in the mining sector during the week of April 25<sup>th</sup>. The report is critical of both MoE and MEM stating the ministries are not protecting the province from environmental risks and have serious gaps in their compliance and enforcement systems.
- The audit summary lists the following as areas where the ministries are deficient:
  - Compliance promotion
  - Compliance verification
  - Enforcement
  - Reporting
  - Ensuring continuous improvement.
- The report highlights two case studies (Mount Polley and Elk Valley water quality) stating MEM's lack of enforcement may have contributed to the tailings breach at Mount Polley and MoE has not been transparent of the risks associated with permitting mines in the Elk Valley which has led to a degradation of water quality.
- The report also notes the Line Creek Expansion permit, the Area-Based Management Plan (ABMP) and the area-based management permit are not protecting the environment and have created several risks which MoE has not made transparent to legislators and the public.
- The report acknowledges MoE has adopted a compliance and enforcement framework but notes there are significant gaps in how the framework is applied.
- Other findings include: no coordination between MEM and MoE on compliance and enforcement activities, both ministries lack necessary resources and tool to manage environmental risks from mining and the ministries are more focussed on permit applications to meet provincial goals therefore fewer resources are dedicated to regulatory activities.
- Report also states MoE has not reviewed or revised its fee schedule for pollutants issued under an Environmental Management Act permit since 2004. And, in some cases, the waste discharge fees do not reflect the environmental impacts.
- The report notes that while MOE has tracked the annual increases of selenium in the Elk Valley watershed for the past 20 years, it took no substantive action to change the trend and only recently attempted to control the pollution through EMA permits.
- Other risks identified by the OAG include:
  - The Line Creek Expansion Permit was granted by Cabinet against advice of MoE staff and despite concerns raised by US EPA.
  - The Line Creek permit allows mining activities in an area inhabited by Westslope Cutthroat Trout, a species of concern under the federal Species at Risk Act.
  - The ABMP puts the Province at risk of contravening the Transboundary Waters Protection Act between Canada and the U.S.
  - The ABMP requires industry to develop 9 water facilities in the Elk Valley which government will be required to monitor and ensure the maintenance of forever.
  - The levels for selenium under the ABMP are not protective of aquatic resources in some parts of the Elk Valley.
- Another issue highlighted is staffing – the report notes a 29% decrease in FTEs in 2014 from 2012 levels. At the same time, EMA authorizations are increasing by an average of 14% a year. The report notes numerous accounts of declining staff morale due to increased workloads and the inability to adequately protect the environment.



- The 13 positions on the compliance team are tasked with ensuring compliance for more than 5500 EMA authorizations (over 400 per person to monitor and/or inspect). There are currently 6 of those positions vacant.
- The OAG reviewed MoE inspection records for 2012, 2013 and 2014 for 8 mines – only 3 of the 8 were inspected each year, not meeting the minimum requirement to inspect high-risk sites annually. For example, Myra Falls had no on-site inspection in any of the 3 years.

#### Appendix: Government response to OAG sub-recommendations

##### Part 1: Recommendations for Government

<p><b>Recommendation 1.0 – Overall Recommendation</b></p> <p>We recommend that the Government of British Columbia create an integrated and independent compliance and enforcement unit for mining activities, with a mandate to ensure the protection of the environment.</p> <p>Given that the Ministry of Energy and Mines is at high risk of <b>regulatory capture</b>, in that MEM’s mandate includes a responsibility to both promote and regulate mining, our expectation is that this new unit would not reside within this ministry.</p>	<p><b>Response:</b></p> <p>It is the legislative framework in BC that drives compliance and enforcement activities not the organizational structure. Many provincial governments across Canada have agencies and ministries with the role of promoting and regulating an industry. In the absence of evidence by the Auditor General that this has compromised the integrity of the ministry or its staff, Government does not see the need for a reorganization of the ministries; however we are prepared to further discuss this with the OAG. Government will establish a Mining C&amp;E Board that will address the need for greater integration between the ministries, as well as with the Environmental Assessment Office.</p>
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## Part 2: Recommendations for Ministry of Energy and Mines and Ministry of Environment

<p><b>Recommendation 1.1 – Strategic Planning</b></p> <p>We recommend that government develop a strategic plan that would detail the activities of an integrated and coordinated regulatory approach, and the necessary capacity, tools, training and expertise required to achieve its goals and objectives.</p>	<p><b>Response:</b></p> <p>A Mining C&amp;E Board will be established to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board will be accountable to the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office.</p> <p>The Board will develop compliance and enforcement plans to map out proactive annual activities based on a risk-based approach. The board will also be responsible for furthering longer term strategic improvements in other areas such as: enhancing training; developing policies, procedures and tools; conducting evaluations; and expanding public reporting.</p> <p>MEM will appoint a new Deputy Chief Inspector of Mines for compliance and enforcement to oversee and implement improved C&amp;E.</p>
<p><b>Recommendation 1.2 – Permit Language</b></p> <p>We recommend that government ensure historical and current permit requirements are written with enforceable language.</p>	<p><b>Response:</b></p> <p>The ministries agree that permits must be written with measureable and enforceable requirements. Both ministries will develop policy to ensure enforceable and measurable requirements are used in all new and amended permits.</p>
<p><b>Recommendation 1.9 – Incentives</b></p> <p>We recommend that government create effective incentives to promote environmentally responsible behavior by industry.</p>	<p><b>Response:</b></p> <p>The ministries agree that it is useful to consider incentives as part of the compliance and enforcement regime governing mines and will continue to consider additional opportunities to recognize and reward good environmental performers. Furthermore, it is expected that expanded public reporting of compliance and enforcement activities will serve as a very effective incentive for promoting environmentally responsible behaviour.</p>

<p><b>Recommendation 1.10 – Risk-Based Approach</b></p> <p>We recommend that government develop a risk-based approach to compliance verification activities, where frequency of inspections are based on risks such as industry’s non-compliance record, industry’s financial state, and industry’s activities (e.g., expansion), as well as risks related to seasonal variations.</p>	<p><b>Response:</b></p> <p>Compliance verification activities conducted by the ministries are founded on a risk-based approach; however, the ministries commit to review policies in this regard.</p> <p>The annual compliance and enforcement planning that will take place at the Mining C&amp;E Board, established under recommendation 1.1, will also be risk-based to optimize the capacity and effectiveness of the ministries’ collective compliance and enforcement resources.</p>
<p><b>Recommendation 1.12 – Qualified Professionals</b></p> <p>We recommend that government establish policies and procedures for the use and oversight of qualified professionals (QP) across the natural resources sector. These policies and procedures should have the following:</p> <ul style="list-style-type: none"> <li>• guidance for staff that outlines the specific nature and amount of oversight expected of a QP’s work;</li> <li>• guidance for staff as to expected timeframe for review and response to QP reports;</li> <li>• updated guidance for staff for recognizing and responding to misconduct by a QP;</li> <li>• controls in place to ensure that there is no undue influence on the QPs by industry; and</li> <li>• controls in place to ensure that recommendations by QPs are adhered to.</li> </ul>	<p><b>Response:</b></p> <p>MEM’s efforts are guided by the <i>Mines Act</i> and the Health, Safety and Reclamation Code for Mines in British Columbia. In particular, the Code Review currently underway is considering specific matters such as the need for a qualified individual designated as a mine dam safety manager to oversee all work associated with a tailings storage facility and will clarify the roles and responsibilities of the Engineer of Record at a mine.</p> <p>The Mining C&amp;E Board, established under recommendation 1.1, will consider how MoE and MEM can strengthen the use and oversight of qualified professionals in the mining sector specifically.</p> <p>The Ministry of Forests, Lands and Natural Resource Operations has established a Qualified Persons in the Natural Resource Sector Framework. This framework guides the development and implementation of Qualified Persons policies and procedures specifically for the mining sector. The framework is based on the three essential components of guidance, competency and accountability and ensures the interests of government, resource users, qualified persons and other stakeholders are recognized and addressed.</p>

<p><b>Recommendation 1.14 – Policies, Procedures and Tools</b></p> <p>We recommend that government develop policies, procedures and enforcement tools for responding to non-compliances when industry does not meet the timeline specified by the ministry.</p>	<p><b>Response:</b></p> <p>The ministries agree on the importance of clear policies, procedures and tools to aid in their compliance and enforcement activities. The ministries will review these in light of the recommendations. The establishment of the Mining C&amp;E Board, under recommendation 1.1, will serve to further inter-ministry collaboration and sharing of best practices.</p> <p>Government will also introduce amendments to the <i>Mines Act</i> to provide for Administrative Monetary Penalties in the spring 2016 legislative session.</p>
<p><b>Recommendation 1.15 – Evaluation and Adjustment</b></p> <p>We recommend government regularly evaluate the effectiveness of their promotional, compliance verification, and enforcement activities and tools and make changes as needed to ensure continuous improvement.</p>	<p><b>Response:</b></p> <p>Annual compliance and enforcement planning and reporting will provide a means to evaluate the effectiveness of the program, to ensure ongoing improved targeting of areas of concern and recognition of strong performers. The ministries will address this recommendation through the establishment of a Mining C&amp;E Board under recommendation 1.1.</p>
<p><b>Recommendation 1.16 – Public Reporting</b></p> <p>We recommend that government report publicly:</p> <ul style="list-style-type: none"> <li>• the results and trends of all mining compliance and enforcement activities;</li> <li>• the effectiveness of compliance and enforcement activities in reducing risks and protecting the environment; and</li> <li>• the estimated liability and the security held for each mine.</li> </ul>	<p><b>Response:</b></p> <p>The ministries support public reporting and have been making progress in this area. MoE has been reporting its enforcement actions for many years through published reports and an online searchable database. It reports all of its enforcement actions including orders, administrative sanctions, administrative monetary penalties, violation tickets and court prosecutions. MoE will work with MEM to explore including their enforcement actions in the reporting.</p> <p>In 2012, the Ministry of Environment published all of its permits for industrial and municipal facilities that discharge waste into the environment, including mines. This dataset provides the opportunity for citizens to access province-wide data on those facilities, including information on fees, locations and discharges.</p> <p>The Ministry of Energy and Mines published all dam safety inspections, emergency response plans and related documents online in 2015. The ministry will continue to publish further documents for all major mines in British Columbia.</p> <p>The ministries will report on trends and effectiveness of C&amp;E in the mining sector.</p>

### Part 3: Recommendations for Ministry of Environment

<p><b>Recommendation 1.5 – Environmental Management Act Waste Discharge Fees</b></p> <p>We recommend that government review its fees under the <i>Environmental Management Act</i> and ensure that the fees are effective in reducing pollution at mine sites.</p>	<p><b>Response:</b></p> <p>The Ministry of Environment is committed to reviewing the fee structure for waste discharges under the <i>Environmental Management Act</i>. Work has already been initiated to assess current fees, as well as conduct a cross-jurisdictional scan of fees imposed by other provinces and territories.</p>
<p><b>Recommendation 1.6 – Cost Recovery</b></p> <p>We recommend that government adopt a cost recovery model for permitting and compliance verification activities that is consistent across all ministries in the natural resources sector.</p>	<p><b>Response:</b></p> <p>The Ministry of Environment recognizes that other natural resource sector ministries, including the Environmental Assessment Office, have begun imposing fees on industry for permitting and compliance verification activities. The ministry will be examining the imposition of fees for these activities.</p> <p>Effective April 1, 2015 permit fees were introduced under the <i>Mines Act</i> and the existing inspection fees were raised. This enabled a budget increase of approx. \$9.3M to the Ministry of Energy and Mines in Budget 2016.</p>
<p><b>Recommendation 1.7 – Decision Making – Use of section 137 of the Environmental Management Act</b></p> <p>We recommend that government be transparent to the public as to its rationale for granting a permit under section 137 of the <i>Environmental Management Act</i>. Specifically, information should include how factors such as economic, environmental, and social attributes were considered in the determination of public interest.</p>	<p><b>Response:</b></p> <p>As provided for in Section 137 of the <i>Environmental Management Act</i>, Cabinet may consider factors that are in the public interest and beyond those that a ministry director may consider. Discussions underlying the approval of an OIC are a matter of Cabinet confidentiality. However, the results of Cabinet decisions, when they are issued in the form of OICs, are published on the BC Laws website.</p>

#### Part 4: Recommendations for Ministry of Energy and Mines

<p><b>Recommendation 1.3 – Security – Adequate Coverage</b> We recommend that government safeguard taxpayers by ensuring the reclamation liability estimate is accurate and that the security held by government is sufficient.</p>	<p><b>Response:</b> As seen in the 2014 Chief Inspector’s Annual Report, “In the past few years, the value of security deposits has increased to reflect more closely the true costs of reclamation. The total value of securities held by the Province has risen from \$10 million in 1984 to more than \$773 million by the end of 2014.”</p>
<p><b>Recommendation 1.4 – Security – Catastrophic Events</b> We recommend that government review its funding mechanisms to ensure taxpayers are safeguarded from the costs of an environmental disaster.</p>	<p><b>Response:</b> Environmental disasters, like the one seen as a result of the Mount Polley tailing facility breach, can result in damage both on and off a mine site. It is the responsibility of the mine operator to ensure sufficient environmental liability insurance is held to meet the risk of such disasters.</p> <p>The <i>Environmental Management Act</i> contains authority for spill response actions and cost recovery to require persons in possession or control of any polluting substance to prepare contingency plans and to implement those plans at their expense in the event of a spill. The Act also provides for the recovery of costs should action to respond to a spill be declared by the Minister.</p> <p>This Act is being amended to proactively require potential polluters to pay into a spill preparedness and response organization. These amendments are due for introduction to the Legislature this year.</p>
<p><b>Recommendation 1.8 – Reclamation Standards</b> We recommend that government develop clear and comprehensive reclamation standards and guidance for industry.</p>	<p><b>Response:</b> Internal work has begun on developing additional guidance materials on a range of reclamation aspects, including erosion and sediment control plans, closure management manuals, reclamation security, etc.</p>
<p><b>Recommendation 1.11 – Systematic Compliance Verification</b> We recommend that government systematically monitor and record compliance with high-risk mine permit requirements.</p>	<p><b>Response:</b> As with Recommendation 1.10 above, a risk-based approach to compliance and enforcement workforce planning will uncover poor performers for closer scrutiny.</p>

<p><b>Recommendation 1.13 – Mine Design</b></p> <p>We recommend that government adequately review mine designs to ensure that they meet government standards, and that government ensure that mines, as constructed, reflect the approved design and standards.</p>	<p><b>Response:</b></p> <p>This recommendation is presented at the conclusion of the Audit Report section on the Mount Polley TSF breach.</p> <p>There had been nine design stages over the life of the TSF at Mount Polley Mine. All stages, including the design stage in place at the time of the breach had been prepared by the design engineer; a qualified professional. MEM reviewed and authorized permit amendments for each stage of the TSF. Each stage of construction was certified by the Engineer of Record in the as-built reports. The failure of the TSF was not an enforcement issue.</p> <p>Through legislation like the <i>Engineers and Geoscientists Act</i>, government has created technical bodies to formalize accountability and protect the public interest. As appropriate in their role, in response to the Expert Panel findings on Mount Polley the Association of Professional Engineers and Geoscientists BC is developing professional practice guidelines for dam site characterization assessments. Government is also undertaking a review of the Mining Code with labour, First Nations and industry representatives to determine how best to implement the expert panel findings.</p>
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## **Frankl, Dave MEM:EX**

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**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Thursday, May 19, 2016 8:31 AM  
**To:** Haslam, David GCPE:EX; Denniston, Tristan M MEM:EX; Lewis, Ted MEM:EX  
**Subject:** RE: KMs

Thoughts?

- It's important for our government to build greater public confidence that if a mining company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unfair amount of those costs.
- The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- Statutory decision makers, not the minister, determine what that amount is.
- The Ministry of Energy and Mines holds more security now than it did 10 years ago. Since 2011, the total amount held has more than doubled.
- Following the release of the Auditor General's report, government committed to reviewing our policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how other jurisdictions in Canada and abroad deal with this issue.
- Initial research shows that Auditors-General in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- The Minister has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

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**From:** Haslam, David GCPE:EX  
**Sent:** Thursday, May 19, 2016 8:03 AM  
**To:** Wallace-Deering, Eric MEM:EX; Denniston, Tristan M MEM:EX; Lewis, Ted MEM:EX  
**Subject:** KMs

Happy to discuss.

### **Building Public Confidence on Underfunded Liability KMs:**

- It's important for the government to generate more public confidence so that if a mining company defaults on reclamation and clean-up costs of a mine site the taxpayer is not left on the hook for an unfair amount of reclamation costs.
- We are not in a position where I can say that today, so corrective action is required. I hope to have a "concrete" plan in place by early 2017 which will likely include legislative changes to ensure the public has access to this information.
- Ministry of Energy and Mines staff are examining how other jurisdictions in Canada and abroad deal with this issue. Initial research shows provinces such as Ontario, Alberta and Nova Scotia have also identified underfunded liability as an issue.

### **Background:**



- The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago. Since 2011, the total amount of security held has more than doubled.
- Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require full security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept. Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.
- In British Columbia, mining is regulated in part by the Ministry of Energy and Mines (MEM) under the Mines Act (Act) and the Health, Safety and Reclamation Code for Mines in British Columbia (Code).
- Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- MEM accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis. MEM reviews and updates security amounts as projects plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Changes in regulatory requirements and in particular water quality protection have placed increased pressures on many companies. MEM keeps stride with these changes and requires a combination of increases in bonding over time as well as ongoing financial strength from the mine owner to protect the public interest. This approach provides a balance which ensures companies can remain in operation, implementing costly capital programs as needed for permitting while at the same time being able to provide for additional security.
- More specifically, costing for long term water treatment is done using a phased approach. If water treatment is required immediately and during operations the costing is generally included. However, for some sites where treatment will not be required for decades after the site closes MEM's practice is to have full costing in place at closure.

David Haslam  
 Communications Director  
 Ministry of Energy and Mines  
 250-361-7989

## Frankl, Dave MEM:EX

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**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Saturday, April 30, 2016 10:11 AM  
**To:** Kapac de Frias, Martina E ENV:EX  
**Subject:** Latest versions of comms materials re. response to OAG - 29 Apr 16  
**Attachments:** NR\_Government response to OAG report\_compliance and enforcement of the mining sector\_April 29\_441pm.docx; QA\_KM\_OAG report\_compliance and enforcement in mining sector\_April 29\_441pm.docx; QA\_OAG Report\_MoE\_Apr 27.docx; IN\_OAG mining compliance and enforcement report\_April 27.docx

Martina,

Fyi on these as they're still awaiting po sign off.

Includes:

- Rollout
- Media plan
- News release with two back grounders.
- MeM Q and A - key messages to be added once news release is final.
- MoE Q and A.

Still to come on our end is power point slides for the presentation and a table that shows the progress made on completing the recommendations of the Independent Panel Report.

Mt Polley permitting at a glance document/upcoming milestones is still being finalized.

Will share monday when we have that.

Eric

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## NEWS RELEASE

For Immediate Release  
[release number]  
[Date]

Ministry of Energy and Mines

### **Government accepts Auditor General's recommendations**

VICTORIA – The B.C. government is accepting all recommendations from the Office of the Auditor General (OAG) audit report "An Audit of Compliance & Enforcement of the Mining Sector," with the exception of one recommendation that government will seriously consider.

"I want to thank the Office of the Auditor General for this report. We are well on our way to implementing the audit report's 17 recommendations, as well as the combined 26 recommendations from the Independent Expert Panel and the Chief Inspector of Mines," said Bill Bennett, Minister of Energy and Mines. "I agree with the Expert Panel and the Auditor General's Office that 'business as usual' on mine sites in British Columbia is just not good enough, and that's why we are acting on all 43 recommendations."

Government is currently reviewing the Health, Safety and Reclamation Code for Mines in BC and expects the tailings storage facility portion of the Code Review to be completed this spring, with revisions expected to be in place by mid-2016. Government will also work with the Association of Professional Engineers and Geoscientists BC (APEGBC), which has the legislative authority and responsibility to oversee engineers in B.C. to ensure that recommendations directed at them are implemented. This work should be done by spring, 2017.

Recent changes to the Mines Act enable government to include administrative monetary penalties as a more flexible, responsive compliance and enforcement tool. The legislation also increases existing penalties available for court prosecutions under the act. The maximum penalties were raised from \$100,000 and/or up to one year imprisonment to \$1 million and/or up to three years imprisonment.

"Government believes there is no evidence its compliance and enforcement regimes place the environment at risk generally. But the Mt Polley disaster, despite being unprecedented in modern B.C. history and despite the hidden, sub-surface cause of the accident, is evidence that improvements in regulation are necessary to increase protection against the unforeseen," said Bennett. "We are committed to improving the regulatory oversight and reducing the margin of risk so that such a disaster can never happen again."

Despite embracing the vast majority of recommendations in the audit report, government believes a number of assertions in it are incorrect and therefore was compelled to set the record straight in the audit report's "Response from Government." Government's position on these assertions in no way undermines its commitment to making the changes recommended by the Expert Panel, the Chief Inspector of Mines and the Office of the Auditor General.

Government does not, at this time, agree with the OAG's main recommendation to reorganize the Ministry of Energy and Mines (MEM) compliance and enforcement programs into a

separate ministry or agency. This recommendation suggests that the public servants in MEM are incapable of differentiating between promotion, and regulation of mining, a view government does not share.

However, Government does agree that a new, separate compliance and enforcement board will strengthen government's regulatory oversight of the mining sector and the government will, within 90 days, set up a mining compliance and enforcement board. This board will create greater integration between MEM and the Ministry of Environment (MOE), as well as with the Environmental Assessment Office s.13

s.13

Unfortunately, the report fails to understand government's management of the water issues in the Elk Valley. Mining has occurred for over 100 years in the Elk Valley and Government began monitoring water quality in the area in the mid-80s. However, it was not until recently that a more detailed understanding of the increasing selenium levels was realized.

The Ministry of Environment took significant steps to reduce selenium levels in the Elk Valley when, in 2013, it directed the company to take steps to stabilize and reverse water quality concentrations for selenium, cadmium, nitrate and sulphate. Government stands behind these concrete actions, including the valley wide Area Based Management Plan.

"As it stands today, Teck Coal has built one water treatment facility, has committed to building a minimum of eight more such facilities, and has invested millions in testing selenium reduction technologies," said Bennett. "By following the Area Based Management Plan, selenium levels will be reduced over time to acceptable levels and the company, not the taxpayer, will cover those costs."

In addition, the audit does not align with what two investigations of the dam failure at Mount Polley – one by the Independent Expert Panel and one by the Chief Inspector of Mines determined that the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises. Based on both reports it was not a question of the number of ministry staff on the ground or the number of inspections performed. The audit also relies on a misinformed view that "original design" remains a constant benchmark for development of a TSF dam, while in reality, dam designs change regularly at all mines around the world.

"Starting in 1995, there were nine design stages over the life of the Tailings Storage Facility at Mount Polley," said Harvey McLeod, chair of the Code Review tailings storage facility sub-committee and a Vice President with Klohn Crippen Berger Engineering. "This is the nature of mining. The tailings dam design at Mount Polley, just as it is at mines around the world, is not static and evolves throughout the life of operations. This is appropriate engineering practice. Operating mines evolve their tailings dam designs over time to reflect actual operating conditions, all with the assessment and approval of licensed engineers."

The Independent Expert Panel released 35,000 pages of information as part of its investigation and the report is available here: <https://www.mountpolleyreviewpanel.ca/>. The Chief Inspector of Mines investigation released 100,000 pages of information and the report is available here: <http://goo.gl/kBgP13>.

**Learn More:**

Government's full response to each of the Auditor General's recommendations can be found online at:

A complete list of the recommendations from the independent expert panel and the chief inspector of mines is available here: [www.gov.bc.ca/minereview](http://www.gov.bc.ca/minereview)

Two backgrounders follow.

# BACKGROUND

## **Government actions to date to address Mount Polley recommendations**

Two investigations into the Aug. 4, 2014 Mount Polley tailings storage facility (TSF) failure resulted in 26 recommendations to prevent similar incidents from occurring in the future. On Jan. 30, 2015, the Independent Expert Engineering Panel completed its investigation and made seven recommendations and on Dec. 17, 2015, the Chief Inspector of Mines presented his investigation findings and made 19 recommendations.

### **Making progress on all recommendations:**

Work to implement the 26 recommendations is either substantially underway or complete, including improving corporate governance, improving professional engineering practices, and strengthening current regulatory operations. Significant progress has been made on the seven recommendations from the Independent Expert Engineering Panel – government has fully addressed one recommendation and six others are expected to be complete by the end of 2016. Government will also work with industry and professional organizations to ensure recommendations directed at them are implemented. It is anticipated this work will be completed by spring 2017.

### **Code Review:**

Five of the Panel recommendations, along with 12 recommendations from the Chief Inspector of Mines will be addressed through the ongoing Code Review. The tailings storage facility portion of the Code Review is well underway and revisions could be legally in force by mid-2016. The Code Review Committee is chaired by the Chief Inspector of Mines and includes an equal number of representatives from First Nations, mine labour unions, and mine operations management.

### **All tailings storage facility (TSFs) reviewed:**

Immediately following the failure at Mount Polley, the Chief Inspector of Mines ordered geotechnical reviews and third-party reviews of TSFs at all permitted mines in B.C. These did not identify any immediate safety concerns and are available online at:

<http://www2.gov.bc.ca/gov/topic.page?id=9F8D3F4D2F264F7FA278B528D2F08432>

In addition, last January, in response to the independent panel's recommendation to strengthen current regulatory operations, the Chief Inspector of Mines ordered mines to confirm whether foundation materials similar to those at Mount Polley exist below any of their dams. This work was completed in June and no immediate risks or safety concerns were identified.

### **Environmental Assessment Office brings in new requirements:**

In March 2015 the B.C. Environmental Assessment Office established additional information requirements in order to evaluate tailings management options for proposed major mines in

B.C. The new requirements apply to all mine projects with new tailings dams that are currently undergoing an environmental assessment. The required information ensures that companies proposing to build mines with new tailings dams have:

- In addition to the selected option, considered other options that can address the potential for adverse effects on environmental, health, social, heritage and economic values.
- For the option selected, considered the potential risks and implications of that option and have a technically and economically feasible plan to address them.
- Provided a clear and transparent rationale to support the selected option.

**Government boosts penalties for non-compliance:**

On March 15, 2016 government passed legislation that enables government to include administrative monetary penalties as a much more flexible and nimble compliance and enforcement tool under the Mines Act. The legislation also increased penalties available for court prosecutions under the act from \$100,000 and/or up to one year imprisonment to \$1 million and/or up to three years imprisonment.

**New guidelines for engineers and geoscientists:**

As well, the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) is developing new guidelines to improve professional engineering practices for dam site characterization assessments. It is expected that these new guidelines will be released by summer 2016.

**Mining industry making changes:**

In response to the independent panel's recommendation to improve corporate governance, the Mining Association of Canada (MAC) last year initiated an independent, multi-stakeholder expert task force review of its tailings management requirements and guidance documents under its Towards Sustainable Mining program. Last December, MAC released the final report from this task force and is working to implement its recommendations.

**New boards examine TSFs:**

The Province also committed to implementing a new requirement that all operating mines with TSFs in British Columbia establish Independent Tailings Dam Review Boards. This is being addressed as part of the ongoing Code Review. These boards will support improved engineering practices by providing third-party advice on the design, construction, operation and closure of TSFs.

**Province to set up new compliance and enforcement board:**

Within the next 90 days government will establish a mining compliance and enforcement board to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board, comprised of the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office, will:

- Provide guidance and oversight to the full scope of compliance and enforcement for mines in British Columbia (including but not limited to the *Mines Act*, *Environmental Management Act*, and *Environmental Assessment Act*).
- Oversee compliance and enforcement plans to map out proactive annual activities based on a risk-based approach.
- Oversee strategic improvements to further compliance and enforcement effectiveness through integration and coordination; planning; training; policies, procedures and tools; evaluation; and public reporting.

**Ministry of Energy and Mines compliance and enforcement team:**

Work is already underway to establish a dedicated compliance and enforcement team within the Ministry of Energy and Mines. Once in place, the team will include a new Deputy Chief Inspector of Mines for Compliance and Enforcement to oversee compliance and enforcement in the ministry and be accountable to the board. The team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

A complete list of the recommendations from the independent expert panel and the chief inspector of mines is available here: [www.gov.bc.ca/minecodereview](http://www.gov.bc.ca/minecodereview)



## BACKGROUND

### **Government response to Auditor General's report**

The Ministry of Energy and Mines (MEM) and Ministry of Environment (ENV) acknowledge receipt of the Auditor General's Report: An Audit of Compliance and Enforcement of the Mining Sector (Audit Report). Government wishes to thank the Auditor General for undertaking the audit and her staff for their efforts.

We note there are areas of agreement between the Audit Report's 16 sub-recommendations and the combined 26 recommendations by the Mount Polley Independent Expert Engineering Investigation and Review Panel (Expert Panel) and the regulatory investigation of the Chief Inspector of Mines. Government has accepted all of the recommendations put forward by the Expert Panel and Chief Inspector of Mines and implementation is well underway.

We accept the majority of the recommendations in the Audit Report; however, there are five points where we feel obliged to share our perspective for the public record.

#### **Appropriate standards:**

There is a lack of clarity in the Audit Report on what the operational effectiveness of the compliance and enforcement programs should be measured against. Often the measure or standard of expected performance stated in the Audit Report is unclear and/or unsupported by reference to an identified, established authority, such as the legislation and regulation that guides the actions of C&E staff in both ministries. This concern applies at various points in the Audit Report, with the Report's general reference to the Organisation for Economic Co-operation and Development or the International Network for Environmental Compliance and Enforcement rather than the laws of B.C., the stated objectives of the Ministries, or Canadian industry standards.

As a specific example in relation to Mount Polley, the Province is criticized for adopting the Canadian Dam Association's (CDA) Dam Safety Guidelines which, the audit report states, "resulted in a tailings dam that was built below generally accepted standards for tailings dams." Not only do we disagree with this assertion of opinion, the CDA guidelines are in fact professionally recognized guidelines that are used throughout Canada by geotechnical engineers. Whether the guidelines could be improved is a separate question, one which the CDA is currently reviewing. Further, the Minister of Energy and Mines has struck a committee that is tasked with reviewing the Health, Safety and Reclamation Code for Mines in BC to determine whether and in what ways requirements may appropriately be improved or clarified.

#### **Professional public servants:**

The Audit Report suggests that professional public servants are unable to differentiate between mandate components or that they are unwilling to enforce existing regulations. The Audit Report contains no factual evidence that the current ministry structure results in any such risk, or in a mind-set of acquiescence on the part of staff involved. The report lists a number of indicators of potential risk of what it refers to as “regulatory capture.” But there is nothing whatsoever in the Report to suggest any actual causal linkage. Specifically, there is no evidence that decisions were made at Mount Polley, in relation to the Elk Valley, or anywhere else to ease or enhance the position of the mining companies involved.

We do not accept that mere appearances are sufficient to warrant the act of removing compliance and enforcement from MEM. No one is more aware of the need to find the appropriate balance between promotion and regulation of mining in ministry decision-making than those who are asked to do so on a daily basis. It is the legislative framework in B.C. that drives compliance and enforcement activities not the organizational structure.

**Disclosure of Information:**

The Audit Report implies that the ministries failed in their duty to disclose information regarding decisions on mining operations.

In the instance of Mount Polley, there was no breach of any duty to disclose information to the public or to the Legislature. The Information and Privacy Commissioner recently ruled that there was **no** failure by MEM to meet the disclosure requirements of section 25 of the Freedom of Information and Protection of Privacy Act in relation to environmental risk at Mount Polley.

With respect to the permitting of mining operations in the Elk Valley, there was also no breach of any duty on the part of MOE and no failure on the part of cabinet to disclose information to the public or to the Legislature. Before addressing that point, it may be of assistance for the government to set out the decision making process that did occur, the extensive consultations that were undertaken, and to clarify the legal authority under which decisions were made.

As the Audit Report notes, mining in this area has been going on for more than 100 years and over the past 20 years, MOE has been monitoring the health of the watershed with increasing concern. Emerging science began to indicate the potential effects of selenium and other water quality parameters in the Elk Valley watershed, including Fording River, Elk River and Lake Koocanusa. With ENV staff bringing these issues to the attention of the Minister of Environment, the Minister used powers under the Environmental Management Act to issue an Order requiring the mining operator to immediately begin to stabilize and reverse the water quality trends.

The Order required the development of an Area Based Management Plan (ABMP) which meets specific environmental objectives and outcomes such as protection of aquatic ecosystems, protection of human health and protection of groundwater. The ABMP also sets out short, medium and long-term water quality targets. The ABMP lays out a schedule for the installation of nine active water treatment plants over the next 18 years. The long-term targets consider: 1)

current contaminant concentrations, 2) current and emerging economically achievable treatment technologies, 3) sustained balance of environmental, economic and social costs and benefits, and 4) current and emerging science regarding the fate and effects of contaminants.

Substantial public and stakeholder consultations were undertaken during the development of the ABMP and after permits were granted, various news releases and media interviews by ministers set out for the general public the nature of government decisions.

The ABMP was developed by a technical advisory committee with representatives from the mining operator, the local environmental group (Wildsight), the Province, Government of Canada, U.S. Government, the State of Montana, the Ktunaxa Nation, and an independent scientist from UBC. Parallel to the technical advisory committee work, the Province was engaged in a government-to-government process to ensure the Ktunaxa Nation's interests and concerns were addressed. The Ktunaxa Nation Council's public support for the ABMP and the subsequent Elk Valley permit is a reflection of the commitment of the Province, the Ktunaxa Nation and the mining operator to see water quality levels stabilize and improve.

In November 2014, the Minister of Environment approved the ABMP which became policy for the ministry statutory decision maker to consider when making permitting decisions in the Elk Valley. The comprehensive Valley permit, subsequently issued by the ministry statutory decision maker, authorizes water quality discharges and sets legal requirements for the mining company to install nine treatment plants and to implement widespread monitoring to ensure water quality trends are stabilizing and reversing.

A tangible result of this unprecedented effort in problem solving and public and First Nations consultation is the recent announcement of the completion of the commissioning phase of the first treatment plant. The recognition of the ministry's efforts to effectively and responsibly address a historically generated water quality problem while balancing economic, social, cultural and environmental interests was not addressed in the Audit Report.

The Audit Report criticized Cabinet for approving the Line Creek Expansion Permit via an Order-in-Council (OIC) in 2013 on the grounds that the rationale for the decision was not publicly disclosed. Decisions, when they are issued in the form of OICs such as this one, are always published on the BC Laws website. Furthermore, section 137 of the Environmental Management Act specifically outlines what factors Cabinet may consider. These considerations extend to factors such as social and economic needs and whether it is in the public interest to ensure a functioning industry so that longer term investments can continue to be made in areas such as research and development and water treatment technologies.

**Audit Scope:**

The fourth point relates to audit planning decisions as to what was properly within or outside the audit scope.

For example, it is difficult for us to understand why, in a case study examining permitting in the Elk Valley in detail, the Audit Report failed to record the concerted efforts that ENV has undertaken in order to ensure these permits are complied with. After the Minister of Environment approved the ABMP in 2014, the ministry statutory decision maker approved a valley-wide permit for Teck Coal Limited that specified the regulatory requirements for reducing selenium levels. Permit requirements will bend down the curve of growth in selenium levels in Lake Koocanusa by requiring additional investment in water diversion and treatment facilities over the next two decades.

The Audit Report does not comment on the extensive efforts by the ministry to ensure that Teck Coal Limited complies with these regulatory requirements. For instance, in 2014, ENV created a dedicated management position supported by two technical officers to oversee Teck Coal Limited. A compliance plan has been developed that specifies a schedule of inspection frequency and water sampling. The amount of resources and effort that has been focused on compliance of these five particular mines is significant and the ministry has no intention of reducing that attention.

We also wonder why, in examining whether compliance and enforcement activities of the mining sector are protecting the Province from significant environmental risk, the Audit Report did not consider the key role played by the Environmental Assessment Office (EAO) in upholding the Environmental Assessment Act. Many of the mines in British Columbia (new and expansions) have been subject to the Environmental Assessment process and received environmental assessment certificates with legally binding requirements.

Permitting by MEM and ENV happens subsequent to that environmental review process. Additionally, the EAO has its own compliance and enforcement program, which includes oversight of mines and functions complementarily to MEM and ENV. The Auditor General recently reviewed EAO's progress in addressing the recommendations from the 2011 audit on the EAO's oversight of major projects. In that follow-up, the Auditor General acknowledged significant improvements in oversight of environmental assessments projects, including mines.

#### **Mount Polley:**

The Audit Report contains the inference that MEM might have been able to, through proper exercise of their regulatory powers, act to prevent the dam failure at Mount Polley. The Audit opinion is contrary to the Expert Panel finding of cause and is not reflective of the regulatory regime in place at the time. Specifically:

The Panel found that inspections of the TSF would not have prevented failure and that the regulatory staff are well qualified to perform their responsibilities. The Panel found that the performance of the Regulator was as expected.

It is important to understand that mine design, at Mount Polley just as at mines around the world, is not static and evolves throughout the life of operation. This is appropriate engineering practice. Operating mines evolve their designs over time regularly, all with the approval of

licensed engineers. Starting in 1995, there were nine design stages over the life of the Tailings Storage Facility (TSF) at Mount Polley.

All stages, including the design stage in place at the time of the breach had been approved by the design engineer. Each stage of construction was certified by the Engineer of Record (EOR) in the as-built reports. MEM authorized permit amendments for each stage of the TSF. The failure of the TSF was not a compliance and enforcement issue.

It is also important for the reader to understand the difference in design, actions and recommendations for each of the three embankments: Perimeter Embankment, Main Embankment, and South Embankment. Specifically, the Audit Report seems to suggest that items identified by both the EOR and ministry staff at the Main Embankment can be translated, or are somehow related, to the failure of the Perimeter Embankment. Such inferences are not supported by facts or engineering and do not offer supporting evidence that the breach of the Perimeter Embankment was somehow preventable through compliance and enforcement actions.

The Ministry appreciates that the purpose and process of the audit may have been different than those of the Expert Panel and the regulatory investigation of the Chief Inspector of Mines. We are nonetheless concerned about the different findings on fundamental facts that have come out of these processes.

The Expert Panel, which was empowered in its Terms of Reference to examine any matters it deemed necessary, including the “regulatory oversight by the Ministry of Energy and Mines and the Ministry of Environment” and “to comment on what actions could have been taken to prevent this failure and to identify practices or successes in other jurisdictions that could be considered for implementation in BC” concluded:

The Panel finds that the MEM Geotechnical Staff and the Contract Inspectors are well qualified to perform their responsibilities. The team is well organized and has clear targets and schedules for annual inspections. The Panel considers the technical qualifications of the MEM Geotechnical Staff as among the best that it has encountered among agencies with similar duties.

The Panel further concluded:

Additional inspections of the TSF would not have prevented the failure.

Similarly, the extensive investigation by the Chief Inspector of Mines, which considered over 100,000 pages of documents and hundreds of hours of interviews, did not find that the company breached its obligations under the *Mines Act*, the Health, Safety and Reclamation Code for Mines in British Columbia, its permit conditions or any orders to prosecute. This is the regulatory framework that governs the Ministry’s compliance and enforcement actions. We of course await the results of the Ministry of Environment’s investigation of potential breaches of its legislation.

The Audit Report states that “government has adopted an approach to reduce the regulatory burden on industry.” The public relies on Qualified Professionals in many areas. Examples of qualified professionals include architects, accountants, lawyers, physicians, pharmacists and engineers.

In each case, the qualified professionals are regulated by their respective governing body or association to ensure members meet their association’s standards of conduct or code of ethics. If qualified professionals do not adhere to these standards or codes, then the associations are responsible for disciplinary actions. This is the system that holds professional engineers accountable across Canada. The OAG concern about over-reliance on qualified professionals is a criticism of professional bodies’ ability to regulate their professions.

Furthermore, the Audit Report’s assertion that there is over-reliance on qualified professionals is not substantiated in the context of mining. Reliance on engineers and other qualified professionals in the mining industry has been a fact of life in British Columbia for decades. The long standing model used in engineering throughout the world relies on professional engineers to prepare and seal designs; government then reviews these plans. Through legislation like the Engineers and Geoscientists Act, government has created technical bodies to formalize accountability and protect the public interest.

Just as the original design for the Mount Polley TSF was prepared and signed by a Professional Engineer in 1995 and then reviewed by government staff, this was the same for subsequent lifts. In fact, the Expert Panel found:

MEM geotechnical engineers addressed significant issues during the reviews and inspections of the Mount Polley TSF. They had insightful questions for the designers at many instances during their review of the design documents, as noted above. The EOR responded to these questions based on their observations and understanding of site conditions. The EOR is responsible for the overall performance of the structure as well as the interpretation of site conditions. The Regulator has to rely on the expertise and the professionalism of the EOR as the Regulator is not the designer.

Both the Expert Panel and the CIM investigation concluded that the fundamental cause of the Mount Polley failure was the lack of appropriate subsurface site characterization when the dam was designed and built. We respectfully point out that this was not a question of the number of ministry staff on the ground, the number of inspections performed, or an increase in professional reliance since.

In conducting the Mount Polley case study, the audit team – quite understandably – augmented their own knowledge of environmental principles, geotechnical engineering and regulatory law. They did so by consulting a panel of subject matter experts, comprising an environmental

academic, environmental lawyer, engineer and a former employee. We understand this to be consistent with normal audit practice.

However, proceeding in that manner did not give the Ministries the opportunity to know who was on the panel, what data the panel may have considered on specific points, what opinions they might have offered, or to challenge the thinking of panel members with additional engineering evidence and/or competing legal or scholarly opinions.

Government wishes to thank the Auditor General for undertaking the audit and her staff for their efforts. In particular, we appreciate the extended processes by which the Audit Team allowed the Ministries to raise and discuss factual and legal concerns arising in connection with successive drafts of the Audit Report.

The Audit Team responded to many of our concerns, but points of disagreement remained which we believed could not be left unanswered. While we do not accept that the Ministries have been deficient in protecting the environment, or the recommendation to reorganize the compliance and enforcement programs within a separate agency, we do believe the 16 sub-recommendations provide meaningful and constructive guidance that will complement current initiatives already underway.

Government's full response to each of the Auditor General's recommendations can be found online at:

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## QUESTIONS AND ANSWERS

### OAG Report - An Audit of Compliance and Enforcement of the Mining Sector Ministry of Environment April 2016

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**1. Will MoE be accepting any of the recommendations outlined in the report?**

- Yes, government has accepted all but one of the recommendations made – and government will be seriously considering that recommendation.
- The recommendations we are accepting will help guide work that is already underway to improve compliance and enforcement of the mining sector.
- During the audit period, MoE has continued to improve its operational policies and procedures – these improvements address many of the concerns raised in the audit. For example, MoE has implemented additional training for compliance staff.

**2. What improvements have been made by MoE over the course of the audit period that will satisfy these recommendations?**

- Examples include:
  - MoE has already reviewed its funding mechanism to ensure taxpayers are safeguarded from costs of an environmental disaster. This work was included in the legislation recently introduced on a new provincial spills regime.
  - MoE has restructured the various compliance functions into one team, and are striving to ensure all staff has a minimum of 35 hours training per year.
  - With respect to Teck's operations in the Elk Valley, MoE created a dedicated management position supported by two technical officers to oversee Teck and a compliance plan has been developed that specifies a schedule of inspection frequency and water sampling.

**3. What improvements are slated to happen in the future?**

- MoE is committed to reviewing the fee structure for waste discharges under the Environmental Management Act. Work has already been initiated to assess current fees, as well as conduct a cross-jurisdictional scan of fees imposed by other provinces and territories.
- MoE has been reporting its enforcement actions publicly for many years and will work with MEM to explore including MEM's enforcement actions in the reporting.

**4. Why, as the report states, was the Line Creek Expansion Permit granted by Cabinet against the advice of MoE staff and the US EPA?**

- This decision was based on the need to balance social, environmental and economic considerations which is within the purview of cabinet.
- Government publicly released the reasons for the decision to grant this permit in September 2013.



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## QUESTIONS AND ANSWERS

- Cabinet approved permit as an interim measure while the area based management plan (ABMP) was being developed to address water quality throughout the whole of the Elk Valley.
- The report fails to explain that, under EMA, a statutory decision maker could not approve an expansion permit which discharged the proposed amount of selenium into the environment.
- Cabinet can consider a broader range of information, with the perspective of what is in the best interests for British Columbians – this included the need to keep the industry going and keep people employed. In this instance, Teck could continue to earn revenue which is important as they will be paying a substantial amount to meet the commitments in the area-based management plan to stabilize and reverse the selenium trend in the region recognizing that the issue is a historical issue.
- The area-based management plan is a solution whereby Teck is taking long-term responsibility for issues in the region but they must be able to operate while they do this.
- This is why the area-based management plan was created with commitments by Teck to build water treatment plants at and take action against selenium leaching from legacy mining. This plan was the result of over one year of work with the Ktunuxa, a local environmental group (Wildsight), local residents, State of Montana, USEPA and the Government of Canada.

**5. If authorizations under the Environmental Management Act are increasing by an average of 14% per year (as per the report) then why has there been a decrease in staff?**

- Authorizations are up 3% per year not 14% according to ministry staff.
- MoE is focussed on gaining efficiencies in processing and managing authorizations and implementing business improvement practices.
- These improvement practices include streamlining the permitting process by creating detailed guidance documents and providing a workshop with mining clients to better educate them on impact assessment requirements and the permitting process in general.
- Staff are focusing on priorities as well as implementing business improvement practices to gain efficiencies in authorization processing and management, this included re-organizing staff to create specialized compliance and mining teams dedicated to those files.

**6. How can government effectively monitor, inspect and ensure compliance for over 5500 EMA authorizations with only 13 staff (as per the report)?**

- MoE is focussed on prioritization to ensure those sites with the highest risk are in compliance.
- MoE policy states that high risk sites should be inspected (meaning one assessment of compliance – this could include on-site or desk monitoring) once a

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## QUESTIONS AND ANSWERS

year, medium-risk sites once every five year and low risk sites once every 10 years.

- If complaints are received about a permitted site, ministry staff follow up to assess compliance and determine if enforcement action is required.
- In the Elk Valley, compliance efforts are above what is required at four times a year.

### **7. How is it determined what sites are high, medium and low-risk?**

- In the permitting process, the ministry establishes a permit fee and financial security requirements. Based on the financial security required, and the discharge quality and quantity, the risk level is determined.

### **8. Why is MoE not meeting the minimum requirement to inspect high-priority mines? How come Myra Falls had no inspection in 3 years?**

- MoE has met the requirement – inspections mean assessments of compliance and in this instance there have been 5 office reviews of compliance info/reports submitted by Myra Falls since 2012.

### **9. Why has it taken so long for the Province to address selenium in the Elk Valley?**

- The Ministry of Environment has been monitoring water quality in the Elk Valley since 1984.
- The ministry was an active participant in the Elk Valley Selenium Task Force (EVSTF), a partnership between industry, provincial and federal government representatives which conducted selenium monitoring and research studies for over a decade.
- Despite the ongoing work, there were no tangible improvements in the water quality trends and levels in the Elk Valley – this led to the need for the Ministerial Order for an area-based management plan to be issued in April 2013.

### **10. The report states that even with the ABMP in place the levels for selenium are “precautionary” and B.C. is at risk of contravening the Transboundary Water Protection Act – what is MoE’s response to these statements?**

- B.C. is committed to stabilizing and reversing the amount of selenium in the Elk Valley. Doing nothing is not an option.
- Selenium is not easily controlled, as turning off a tap, it will take time to contain and manage and treat historical seepage from decades old mining operations. This is what we intend to accomplish with our area based management plan.

## **TECK ABMP QAs**

### **11. Why was Teck ordered to develop an area based plan?**

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## QUESTIONS AND ANSWERS

- The ministerial order was given to address increasing concentrations of selenium, cadmium, nitrate and sulphate in the Elk Valley watershed, as well as evidence of calcite formation in some waterways.
- These issues are largely associated with historical and current mining activity, and, in particular, leaching from waste rock dumps.
- The intent is to address these issues while creating a path forward for mining development and ensuring the protection of ecological and human health.
- By addressing water quality at a watershed level, future decisions can be considered in the context of the entire watershed, not just on a site by site basis.
- The order allows for the recognition of new and emerging water treatment technologies.

### **12. What is the purpose of the plan?**

- The plan is designed to remediate water quality effects of past and current mining activity in the region and begin the process of stabilizing and reversing water quality trends in the Elk Valley.
- The plan will help guide treatment actions and future development in the area.

### **13. How does Teck plan to immediately stabilize water quality concentrations of selenium, cadmium, nitrate and sulphate, and the rate which calcite forms in the designated area?**

- The plan lays out a schedule for the installation of 9 active water treatment plants over the next 18 years.
- The greatest improvement to water quality should follow the commissioning of the Fording River Operations South plant in 2018.
- This \$600 million investment in treatment by Teck is expected to reduce selenium and nitrate concentrations significantly over the next 10 years. As monitoring data and treatment technology advances, Teck will adaptively manage the many processes and activities laid out in the plan.

### **14. What are the water quality targets established by this plan and how do they change over the short-, medium- and long-term?**

- Water quality targets were established for each of the 7 monitoring stations identified in the plan. These station locations were set out in the ministerial order.
- The short term targets for selenium range from 63ug/L (micrograms per litre) in the Upper Fording River to 19 ug/L in the Elk River downstream of the confluence of the Fording River.
- The long term targets for selenium range from 57ug/L in the Upper Fording to 19 ug/L in the Elk River downstream of Michel Creek.
- The selenium target, for all timeframes, in Lake Koocanusa is 2ug/L.

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## QUESTIONS AND ANSWERS

- One station location has a short-term nitrate target of 20 mg/L (milligrams per litre) which will then reduce to 11 mg/L by end of 2016. The remaining stations are below drinking water guidelines for nitrate.
- The B.C. drinking water guideline for selenium is 10 ug/L and nitrate is 10 mg/L.

### **15. What is the current selenium level in the region? How come all of the targets are still above B.C. drinking water guidelines for selenium?**

- The current level of selenium in the upper Fording River permitted at is 130 ug/L or 13 times higher than the drinking water guideline.
- The whole purpose of this plan is to stabilize and reverse these high levels and we believe this plan sets out a path to achieve our goal.
- There are no drinking water users in this specific section of the Elk Valley and the permit contains a requirement for annual public notification for all potable water users in the Elk Valley.
- IHA was consulted and is informed of all issues related to drinking water.
- Teck has also made commitments for additional monitoring of fish tissue. To-date, limited data from fish tissue samples taken from Lake Koocanusa show fish are safe to eat.

### **16. Does MoE have requirements for selenium when issuing permits to mines? What are these requirements?**

- MoE has included requirements for selenium in permits since 1995.
- Most monitoring programs at mines in the province include water quality monitoring for selenium as a requirement.
- Some mines are required to have a comprehensive monitoring program where selenium is of a concern. This monitoring includes water quality, sediment quality, benthic and fish tissue sampling as well as chronic toxicity assessments. Teck is proposing similar monitoring under the Plan.
- Some mines have limits on the amount of selenium in the discharge and requirements for treatment.

### **17. How is government ensuring Teck follows what is laid out in the Plan?**

- Teck and other permittees in the plan area will be held accountable through Environmental Management Act permits approved by statutory decision makers.
- Environmental Management Act decision makers will use the plan in their decision processes when considering the approval of permit applications in the Elk Valley.
- While the goal will be to ensure permit conditions reflect the commitments in the plan, decision makers must consider all the available information related to an application which may include information other than what is in the plan.
- Each future coal project in the Elk Valley that requires an environmental assessment must be consistent with the plan. Plan commitments that pertain to

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## QUESTIONS AND ANSWERS

the project will be reflected in the environmental assessment certificate, should one be issued.

- A dedicated compliance unit ensuring compliance with the permit and conducting monitoring has been assigned to the file.

### **18. Have any of the Teck Elk Valley mines exceeded the targets set by government since the Valley-Wide Permit was established?**

- The Elk Valley-Wide Permit was issued in November 2014. To date, the Ministry has performed compliance verification inspections under the permit on 18 separate occasions - either through on-site inspections or data reviews.
- Of these 18 compliance assessment occasions, there were approximately 60 individual non-compliances recorded that resulted in 7 advisories and 7 warnings issued to Teck.
- The majority of the non-compliances are due to exceedances of water quality targets at two compliance stations and effluent toxicity failures at several discharge streams.

### **19. How is the Ministry responding to non-compliances under the new Elk Valley-Wide Permit?**

- The ministry, since November 2014, has dedicated staff to this file to provide timely responses to non-compliances.
- The responses follow established ministry protocols to achieve the best environmental outcome and reduce the likelihood of repeated non-compliance. The ministry's response considers the degree of potential impact to the environment, human health and safety as well as the compliance history of the mines.
- Where it is determined that not enough is being done to prevent non-compliances, the ministry may use progressive sanctions.
- To-date, MoE and Teck are working together to ensure the non-compliances are addressed in a timely manner.

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**Key Messages and Q & A**  
**DRAFT**

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## **Key Messages**

To follow once news release and backgrounder are approved.

## **Q & A**

### **Mount Polley**

- 1. In the audit report, the Auditor General basically makes the assertion that with commodity prices declining, government compliance and enforcement activities are also falling off. What's government's response to this?**

Compliance and enforcement activities of the mining sector are in no way connected commodity prices. In fact the ministry budget was increased the last two years by roughly 40%.

Further, we have brought in amendments to the Mines Act to strengthen government's regulatory oversight of the mining industry and give the ministry additional compliance and enforcement tools. The changes mean we will soon have administrative monetary penalties as an additional compliance and enforcement tool under the Mines Act. Administrative monetary penalties can be imposed for contraventions without involving the courts.

- 2. In her opening comments, isn't the Auditor General basically saying that government's inadequate compliance and enforcement actions for the mining sector resulted in the failure of the tailings dam at Mount Polley?**

In its examination of the Mount Polley TSF failure, the OAG has somehow reached conclusions that differ from the findings of multiple professionals, including three world-leading engineering experts on TSFs. Further, the OAG's findings fail to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolacustrine layer of soils (UGLU). Basically, there wasn't enough site investigation done prior to construction in the mid-1990s.

Two investigations of the dam failure at Mount Polley – one by the Independent Expert Panel and one by the Chief Inspector of Mines – determined the dam failed because the

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strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises.

The Panel, which was empowered in its Terms of Reference to examine any matters it deemed necessary, including the “regulatory oversight by the Ministry of Energy and Mines and the Ministry of Environment” concluded:

“The Panel found that inspections of the TSF would not have prevented failure and that the regulatory staff are well qualified to perform their responsibilities. The Panel found that the performance of the Regulator was as expected. The Panel finds that the MEM Geotechnical Staff and the Contract Inspectors are well qualified to perform their responsibilities. The team is well organized and has clear targets and schedules for annual inspections. The Panel considers the technical qualifications of the MEM Geotechnical Staff as among the best that it has encountered among agencies with similar duties.”

Both investigations also made it clear that responsibility for the design of the TSF is the role of engineer of record not MEM as the regulator. The investigations also found that MEM inspectors did raise a number of issues during reviews and inspections of the Mount Polley TSF. As the Panel noted in its report:

“MEM geotechnical engineers addressed significant issues during the reviews and inspections of the Mount Polley TSF. They had insightful questions for the designers at many instances during their review of the design documents, as noted above. The EOR responded to these questions based on their observations and understanding of site conditions. The EOR is responsible for the overall performance of the structure as well as the interpretation of site conditions. The Regulator has to rely on the expertise and the professionalism of the EOR as the Regulator is not the designer.”

**3. Given what the OAG audit report says about MEM’s role in the Mount Polley TSF failure, what does this mean for the ministry and you as minister?**

Look, I appreciate the work the OAG put into this report. However, the facts don’t support the OAG’s assertion.

First and foremost, the OAG fails to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolaucustrine layer of soils (UGLU).

Both the Independent Panel and the CIM investigation concluded that the fundamental cause of the Mount Polley failure was the lack of appropriate subsurface site characterization when the dam was designed and built. Respectfully, I’d also point out that



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this was not a question of the number of ministry staff on the ground, the number of inspections performed, or an increase in professional reliance since.

I know the Independent Panel and the Chief Inspector of Mines investigations conducted comprehensive site investigations including extensive drilling and core sample testing over seven months to reach their conclusions. The fact is, the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises, and initial site investigation occurred in the mid-1990s.

**4. If, as the OAG implies, the dam failure was as a result of inadequate compliance and enforcement by government, does this mean taxpayers are on the hook for damages?**

No. The company is responsible for covering the costs of environmental remediation as a result of the dam failure.

With all due respect to the OAG, two investigations – one by three globally recognized experts in tailings storage facility design and construction, and one by the Chief Inspector of Mines – determined that the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises.

While both these investigations found other factors exacerbated the collapse of the dam and the ensuing environmental damage, those factors alone or together were not sufficient to cause the failure. Further, at all stages of the tailing storage facility construction, the calculated factor of safety exceeded the Canadian Dam Association guidelines. The geotechnical experts involved in the two investigations all concluded the breach would not have occurred had it not been for the undetected glaciolauustrine layer of soils.

Further, after a nearly 16 months long investigation to determine how and why the failure occurred, the Chief Inspector of Mines (CIM) found that operations on the mine site were not in contravention of any regulation. The CIM also found that the mine and its engineers employed weak practices on the mine site. Weak practices, however, do not constitute a legal contravention of existing mining legislation.

**5. Throughout the report, the OAG states that MEM failed to enforce the tailings storage facility (TSF) design at the Mount Polley Mine. Why didn't MEM take action and require the company and engineer of record to build the TSF in accordance with the original design specifications?**

At various points in the report, the OAG contends that MEM should have stepped in to enforce the "original" design and insisted the mine operator maintain slope angles, buttresses, and beaches called for in that design. However, the OAG should recognize that

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at any mine, designs of mine infrastructure are not static and are changed to reflect new ore body discoveries, changes in mine output, available construction materials, etc.

If you were to visit any long life mine in BC and compare the as-built infrastructure with the “original” design – you would see substantive differences – that is the nature of mining.

Let me just draw an analogy for you between a geotechnical inspector and a municipal building inspector. A building inspector is employed to ensure compliance with the building code. It would be improper for a building inspector to say, “I know that your design is sealed by an engineer and complies with the building code, but I would like you to...add a beam, etc. etc.” This would have the building inspector go from being the regulator to the designer and shift liability from the engineer of record to the municipality. It is equally improper for a geotechnical inspector to meddle with the EOR’s design beyond ensuring that it complies with the Health, Safety and Reclamation Code for Mines in B.C.

The dam was built in general conformance with the design, as approved by the Engineer of Record during every stage of the project. For example, in the 2013 As-built and Annual Review Report the Engineer of Record stated: “In general, the 2013 Stage 9 Raise of the embankment is judged to have been carried out in conformance with design intent.”

I’d also point out the Independent Panel’s findings specific to the role of MEM with regards to the dam design. On page 116 of the panel’s report, the three panel members, all globally recognized as leading experts in the design and operation of tailings storage facilities, make the following statement:

“The engineer of record (EOR) is responsible for the overall performance of the structure as well as the interpretation of site conditions. The regulator has to rely on the expertise and the professionalism of the EOR as the regulator is not the designer.”

As engineers, architects and anyone in the construction industry will tell you, design changes during construction are common on many projects, from dams to bridges to office towers. What matters is that the end product is certified by an engineer as meeting the original design intentions and requirements. I can tell you that over a 20-year span the design of any mine will undergo many changes – it’s the nature of the business.

In the case of the Mount Polley tailings storage facility (TSF), any differences from the original dam design were signed off by the engineer of record, certifying that the dam construction met all of the original design intentions and requirements.

Design specifications were signed and sealed by a professional engineer and submitted for each stage of the dam and each stage was certified by the engineer of record as having met all of the design intentions and requirements once construction was complete.

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**Slope – Beach – Buttress**

- 6. The OAG made the finding that MEM’s lack of effective regulatory oversight contributed to the Mt Polley tailings storage facility breach based on three issues (pages 59-63):**
- **Slope**
  - **Beach**
  - **Buttress**

**This finding seems to put much of the blame for the breach squarely on the ministry. What’s your response to this?**

At various points in the report, the OAG contends that MEM should have stepped in to enforce the “original” design and insisted the mine operator maintain slope angles, buttresses, and beaches called for in that design. However, the OAG should recognize that at any mine, designs of mine infrastructure are not static and are changed to reflect new ore body discoveries, changes in mine output, available construction materials, etc.

If you were to visit any long life mine in BC and compare the as-built infrastructure with the “original” design – you would see substantive differences – that is the nature of mining.

Let me just draw an analogy for you between a geotechnical inspector and a municipal building inspector. A building inspector is employed to ensure compliance with the building code. It would be improper for a building inspector to say, “I know that your design is sealed by an engineer and complies with the building code, but I would like you to...add a beam, etc. etc.” This would have the building inspector go from being the regulator to the designer and shift liability from the engineer of record to the municipality.

It is equally improper for a geotechnical inspector to meddle with the EOR’s design beyond ensuring that it complies with the Health, Safety and Reclamation Code for Mines in B.C. (Code) – which was the case for Mt Polley. The factors of safety satisfied the CDA Dam Safety Guidelines required by the Code.

That being said, the Independent Panel and the Chief Inspector of Mines investigations both confirmed that on multiple occasions MEM posed questions to the mine and its engineers of record regarding the characterization of the foundation, the tailings storage facility (TSF) slope geometry and the adequacy of the beaches. In all instances MEM received written assurances from the professional engineers that there were no dam stability concerns.

- 7. Why did MEM allow the mine operator to continue to maintain over-steepened downstream embankment slopes that did not comply with the original design specifications?**

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As for the slope design, prior to construction of the last (Stage 9) lift, the engineer of record (EOR) analyzed the stability of the Perimeter Embankment using 1.3H:1V slopes, with neither a beach nor a buttress, and reported factors of safety that exceeded the CDA guideline of 1.5.

In their as-built report for Stage 9, the EOR stated that, *"In general, the 2013 Stage 9 raise of the embankment is judged to have been carried out in conformance with the design intent."*

Given the (reported) robust factor of safety, and the as-built endorsement of the EOR, MEM had no grounds to insist on design changes. To have done so would have placed great liability on the shoulders of government. If government staff become the designers – they "own" the design and all of the risks associated with that design.

**8. Why didn't MEM require the company to return from the interim 1.4H:1V to the more moderate 2H:1V slope once the stage 5 lift was complete?**

Again, the OAG would have MEM second guessing the professional engineers that certify the design of these structures. As soon as ministry staff do that, government takes ownership of the structure and with it, all of the risk.

To the question of the slope, I'll just point out that the shallower slope angle of 2H:1V the OAG refers to as being in the original design was still intended to be in place at closure of the mine. The engineer of record certified that the design with the 1.4H:1V was in general conformance with the design intent and allowed for operation within the specified factor of safety.

**9. Why did MEM allow the mine operator to build the slopes even steeper during the stage 7 dam raise, reaching a level that was described by the panel as "unprecedented"?**

The factor of safety of the Perimeter embankment was calculated by the engineer of record (EOR) to be above a factor of safety (FOS) of 1.5 at the time of failure. This is in accordance with the CDA Dam Safety Guidelines– the generally accepted standard for tailings dams.

Even if the embankment had been deemed to be at a FOS of 1.3 at the time of failure, this would not have been inconsistent with practice in other jurisdictions.

The document titled "Application of CDA Dam Safety Guidelines to the Geotechnical Design of Oil Sands Tailings Dams in Northern Alberta" (by Arash Eshraghian, Ph.D and Dennis Becker, Ph.D) contends that a factor of safety of 1.3 is suitable for "static loading and associated phreatic surface during dam raises and immediately at the end of operations (p.33)."

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A January 2009, European Commission reference document: Best Available Techniques for Management of Tailings and Waste-Rock in Mining Activities states that for “any tailings and waste rock management facility, best available technology is to: apply a factor of safety of at least 1.3 to all heaps and dams during operation (p. xiv).”

**10. Why didn't MEM enforce the requirement for beaches in accordance with the original design of the tailings dam?**

At various points in the report, the OAG contends that MEM should have stepped in to enforce the “original” design and insisted the mine operator maintain slope angles, buttresses, and beaches called for in that design. However, the OAG should recognize that at any mine, designs of mine infrastructure are not static and are changed to reflect new ore body discoveries, changes in mine output, available construction materials, etc.

If you were to visit any long life mine in BC and compare the as-built infrastructure with the “original” design – you would see substantive differences – that is the nature of mining.

For the perimeter embankment, analysis by the engineer of record from 2011 forward reported factors of safety that satisfied the Canadian Dam Association design criteria using 1.3H:1V slopes, no beach beyond the U-zone sand cells on the upstream embankment, and no buttressing. In response to one MEM query, the Engineer of Record stated that, *“the tailings embankments have been designed to remain stable for any condition and therefore there is not a ‘requirement’ for a minimum beach width in terms of embankment performance.”*

At every stage of construction, the engineer of record certified that the as-built was in general conformance with the design intent and allowed for operation within the specified factor of safety.

**11. Did MEM follow-up on its 2008 order requiring Mount Polley to maintain beaches, or on the 2010 Annual Dam Safety Inspection where the engineer of record reminded the mine operator of the beach deficiency?**

First of all, it's important to understand that the 2008 MEM order and the 2010 Dam Safety Inspection by the engineer of record (EOR) are in reference to the main embankment and are not relevant to the perimeter embankment which failed. The Inspector's order regarding inadequate beach at the main embankment cannot be applied or interpreted as a warning about beaches of the perimeter embankment.

In fact, we have records that show the mine manager responded to the 2008 MEM order, which stated “the area of concern has been mitigated with waste rock to protect the till

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since the time of the inspection.” Further, records show the MEM geotechnical Inspector was satisfied with the mines response.

Second, the concerns raised in the 2010 DSI were recognized by the new engineer of record and addressed. This included work by the EOR to develop sand cell (beach) construction techniques for the operator.

For the Perimeter Embankment, analysis by the EOR from 2011 forward reported factors of safety that satisfied the Canadian Dam Association design criteria using 1.3H:1V slopes, no beach beyond the U-zone sand cells on the upstream embankment, and no buttressing.

**12. Given the on-going water management issues at the site, why didn’t MEM use existing enforcement mechanisms, as the OAG suggests on p. 65, and just shut the mine down?**

Shutting down the mine would not have resolved the water management issue. Surplus water on the mine site needs to be managed regardless of whether the mine is operational or not. Even if the mine isn’t operating, water continues to collect at the site from snow melt and rain.

**13. If water management was such an issue, why didn’t MEM order the mine operator to build a water treatment facility?**

In preparation for Stage 10, in June 2014 discussion regarding water management, including plans for water treatment and water discharge, were taking place between MEM, Mount Polley Mining Corporation (MPMC) and BGC Engineering (who was expected to be EoR for Stage 10). MPMC was in the process of obtaining a water discharge permit with MOE, and were preparing the required plans and processes required to control the surplus water on-site.

Planning and preparation required to build a water treatment system needed to go through the proper evaluation process in order to protect the environment in the long term, it would not have been practical to order the mine to build a water treatment facility without taking into consideration the various factors involved.

**14. Why didn’t MEM enforce the establishment of buttressing along the main embankment in accordance with the original design and why allow the mine operator to continually defer construction of the buttress along the main embankment?**

The main embankment downstream buttress was not in the original design of the tailings storage facility (TSF). The buttress was included in the stage 4 design and the engineer of record stated at that time: “The buttress at the main embankment is required for closure

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and can be constructed during any stage of the TSF expansion to accommodate the availability of shell zone material.”

Additionally, when the engineer of record proposed the main embankment buttress it was as an additional contingency measure for further enhancing the stability of the main embankment. It was only at stage 9 that the engineer of record made the main embankment buttress a design requirement and the mine operator constructed it in accordance with the design intent at the end of the 2013 construction season.

At various points in the report, the OAG contends that MEM should have stepped in to enforce the “original” design and insisted the mine operator maintain slope angles, buttresses, and beaches called for in that design. However, the OAG should recognize that at any mine, designs of mine infrastructure are not static and are changed to reflect new ore body discoveries, changes in mine output, available construction materials, etc.

If you were to visit any long life mine in BC and compare the as-built infrastructure with the “original” design – you would see substantive differences – that is the nature of mining.

At every stage of construction, the engineer of record certified that the as-built was in general conformance with the design intent and allowed for operation within the factor of safety.

### **Weak Layer**

- 15. On page 62, the report states that the mine’s engineer of record (EOR) and other experts were concerned with the possibility that there may be a weak layer in the dam foundation materials. Why didn’t the Ministry of Energy and Mines (MEM) order the company to address these concerns?**

It’s important to understand that this statement in the OAG report is in reference to the main embankment, not the perimeter embankment where the failure occurred. Further, these concerns regarding the possibility of a weak layer in the main embankment foundation were addressed under the oversight of the engineer of record (EOR).

In addition, the Chief Inspector of Mines (CIM) and the independent panel investigations both confirmed that on multiple occasions MEM posed questions to the mine and its engineers of record regarding the characterization of the foundation, the TSF slope geometry and the adequacy of the beaches. In all instances MEM received assurances from the professional engineers that there were no dam stability concerns.

As the independent panel pointed out on page 116 of its report, MEM as the regulator cannot take on design responsibilities. This role resides with the engineer of record (EOR).

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“The EOR is responsible for the overall performance of the structure as well as the interpretation of site conditions. The regulator has to rely on the expertise and the professionalism of the EOR as the regulator is not the designer.”

**Overtopping Incident**

**16. When the mine operator failed to report the May 2014 over-topping incident, why didn't MEM start looking more closely at the mine and its management practices?**

From what staff have told me about this incident, it really wasn't clear if it was an over-topping of the dam. When MEM staff flew over the site the day after learning about the incident, what they saw were puddles on top of part of the dam. The mine responded by raising the dam crest in this area to bring it to the same level as the entire dam. (Note: this was an area where the company had not completed construction as part of the 2013 dam lift due to weather conditions – snowed out.)

MEM staff reacted swiftly to this incident and carefully monitored the mine's response – requiring timely updates and diligent monitoring of freeboard levels. In fact, the Independent Expert Panel later reported that, *“...freeboard was being carefully monitored around the time of the breach as a result of prior insistence on the part of the Ministry of Energy and Mines (MEM).”*

**AMEC Internal Emails re. Overtopping**

**17. Emails between AMEC engineers show the consulting engineers for the mine had concerns that the company was not responding to the over-topping appropriately, nor was it addressing water management issues. Why didn't MEM act on these concerns?**

Those emails were never directed to MEM and none of the engineers raised those concerns directly to MEM, they were internal emails only.

The Association of Professional Engineers and Geoscientists of B.C. (APEGBC) has informed ministry staff that it is conducting an investigation of the Mount Polley incident.

Engineers in B.C. are not obligated by law or professional best practice standards to their skill levels updated.

**2010 Dam Safety Inspection Concerns**

**18. Why didn't MEM force the mine operator to address the concerns raised in the 2010 annual dam safety inspection report from the Engineer of Record (Knight Piesold)?**



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First, I want to point out that this same EOR did not raise any significant concerns in the 2007, 2008 or 2009 annual dam safety inspection reports – only in 2010 when the EOR was leaving did it raise any concerns.

Second, the concerns raised in the 2010 DSI were investigated by the new engineer of record and addressed. This included:

- The EOR began work with the mine operator on sand cell construction techniques (beaches)
- Instrument installation at 14 new drill holes (11 piezometers and 3 slope inclinometers)

Analysis by the EOR from 2011 forward reported the factors of safety satisfied the Canadian Dam Association design criteria using 1.3H:1V slopes, no beach beyond the U-zone sand cells on the upstream embankment and no toe buttress for the perimeter embankment.

At every stage of construction, the engineer of record certified that the as-built was in general conformance with the design intent and allowed for operation within the specified factor of safety.

### **Mount Polley Restricted Operations and Permit Application**

#### **19. Why is Mount Polley mine being allowed to continue to operate considering the findings of the Office of the Auditor General's audit report?**

The mine site is under close observation by MEM and MOE staff members. It was also important to the community to ensure that families were able to continue to support themselves, government also wanted to make sure a continuation of operations is done in a way that protects the environment.

The authorizations that have been granted to the mine have been subject to highly technical reviews by scientists, engineers, First Nations and community members in order to make sure things are done right.

#### **20. Why did government authorize an extension of Mount Polley's restricted operations permit?**

The permit extension allows the mine to continue restricted operations while its application to return to full production is under review.

Statutory decision-makers with the ministries of Energy and Mines and Environment authorized an extension of the restricted operations permits for Mount Polley Mining

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Corporation, allowing the mine to process an additional one million tonnes of ore. The decision was made in consultation with representatives from the Williams Lake Indian Band and Xat'sull First Nation, and the community of Likely.

The permit amendments increase the mine's allowable production level from four million tonnes to five million tonnes of ore.

The tailings facility will not be utilized during restricted operations. Mount Polley Mine will continue to use Springer Pit, an existing open pit on the mine site, to manage the tailings. This permit extension also authorizes Mount Polley Mining Corporation to complete additional buttressing to the perimeter embankment of its tailings storage facility.

Mine water is being managed in compliance with the MOE permits. A short-term discharge permit was issued for the mine in November 2015. On March 11, 2016 MOE issued a bypass authorization allowing the mine to temporarily increase storage levels in Springer Pit to 1042 metres above sea level (asl) until August 31, 2016 at which time it must return levels to 1030 metres asl. The MOE bypass authorization also allows the mine to temporarily bypass the water treatment plant. Only water that meets the permit requirements for discharge quality will be allowed to bypass water treatment. The bypass is required to deal with freshet flows and a bottleneck at the water treatment plant.

The bypass does not allow the discharge of any greater amount of mine effluent than the discharge permit (0.3m<sup>3</sup>/s). The water that bypasses the water treatment plant has received settling and treatment via storage in the Springer Pit which enables it to meet the permit discharge permit quality limits (as indicated by sampling of the Springer pit water).

**21. What impact will the Office of the Auditor General's findings and findings from the two investigation have on MPMC's application to return to full-production using the tailings storage facility (TSF)?**

That is something that the statutory decision makers will determine as part of the application review process. I know for certain that the findings and recommendations from the independent panel and the chief inspector of mines investigations will be taken into consideration as part of the application process.

A key component of the company's application to return to full operations includes the proposal to use the repaired TSF for tailings storage going forward if the application is approved.

Geotechnical engineers from MEM, along with a geotechnical engineer representing local First Nations are reviewing the geotechnical aspects of the design to ensure it meets or

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exceeds required design standards and conforms with best available practices as recommended by the independent expert panel.

Staff with the ministries of Energy and Mines and Environment, with representatives from the Williams Lake Indian Band and Xat'sull First Nation, and the community of Likely, completed a technical screening review of the application prior to sending the application to the Cariboo mine development review committee for a detailed technical review. Following the detailed technical review by the Mine Development Review Committee (MDRC), the committee chair will provide recommendations to the statutory decision makers at the ministry of Energy and Mines.

In accordance with the Letter of Understanding, MEM along with the Williams Lake and Xat'sull First Nations have identified a number of questions that the company must address as part of the permitting process.

Additionally, the company must submit its long-term water management plan by June 30, 2016 in order to continue operations.

Mines Act permitting decisions are made by the Chief Inspector of Mines, or delegate, and are statutory decisions – completely independent of any political influence. It is anticipated that statutory decision makers with the ministries of Energy and Mines and Environment will make a final decision on the Mount Polley Mining Corporation's application to return to full operations this summer.

### **Engineer of Record Hand-Off Letter**

**22. In 2010, when Knight Piesold handed off engineer of record duties to AMEC, it copied the Chief Inspector of Mines on the hand-off letter it sent to the mine operator. Why didn't MEM take action to respond to concerns raised in that letter?**

I'll start by pointing out that the letter was addressed to the mine operator and the chief inspector was only copied. This letter was notification to inform of the change of the engineer of record (EOR).

In that letter, the EOR did not raise any specific concerns, and one could argue that if they had specific concerns, they should have already dealt with them in their role as the EOR, or directly notified MEM and articulated their concern.

The only notification statement in the letter was the following, "the embankments and the overall tailings impoundment are getting large and it is extremely important that they be monitored, constructed and operated properly to prevent problems in the future". This

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statement would be applicable to a number of tailings dams in the province and would not be considered a warning.

As a professional engineer the EOR had an ethical requirement to clearly and concisely report their concerns to the mining company and to MEM.

The Association of Professional Engineers and Geoscientists of B.C. (APEGBC) has informed ministry staff that it is conducting an investigation of the Mount Polley incident.

### **OAG Rebuttal of Government Response**

**23. How can government take issue with the scope of the audit and the audit criteria for measuring appropriate compliance and enforcement standards when the deputy ministers from MEM and MOE both agreed to these when they signed the OAG's Notice of Examination?**

The Deputy Ministers of Environment and Energy & Mines signed off an Audit Plan where the focus of the audit was to be on the Ministry of Environment and the Ministry of Energy and Mines compliance and enforcement activities that the agencies undertake under the Environmental Management Act and Mines Act.

However, with respect to the Elk Valley the audit seems to be proportionally more focused on the decision making associated with issuing permits as opposed to the focus on the compliance and enforcement after the permits were issued. MOE and EAO have compliance and enforcement plans and strategies for MOE and EAO have compliance and enforcement plans and strategies for the Elk Valley but the OAG never did ask about them, nor were they referenced in the report.

It is true that the Audit Plan did exclude EAO from the scope of this audit because an audit had just been completed. However, that would not have precluded the Auditor General from recognizing the key role played by the Environmental Assessment Office. Many of the mines in B.C. have been subject to the Environmental Assessment process and have received environmental assessment certificates with legally binding requirements.

### **OAG Interviews and Experts**

**24. Do you know if the OAG interviewed the Mount Polley Mine engineers of record?**

We do not know if the OAG interviewed the Mount Polley Mine engineers of record. Details of the OAG interviews, including identities of those interviewed were not provided to us. References or investigation process are not detailed in the OAG report.

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**25. According to the OAG's audit scope on page 92 of the report, the OAG reached its conclusions after interviewing MEM and MOE staff, industry experts and mining engineers. Given this, the OAG reached significantly different conclusions than the Expert Independent Panel and the Chief Inspector of Mines about why the Mount Polley dam failure occurred. Did the OAG find new evidence or did the other two investigations miss something?**

In its examination of the Mount Polley TSF failure, the OAG has somehow reached conclusions that differ from the findings of multiple professionals, including three world-leading engineering experts on TSFs. Further, the OAG's findings fail to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolaucustrine layer of soils (UGLU).

Two investigations of the dam failure at Mount Polley – one by the Independent Expert Panel and one by the Chief Inspector of Mines – determined the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises.

I can tell you that government has made hundreds of thousands of the documents from the two earlier investigations into the Mount Polley TSF failure publicly available. We did this so that British Columbians could see the evidence the experts in those investigations relied upon in order to make their determinations around the cause of the breach.

In conducting the Mount Polley case study, the audit team – quite understandably – augmented their own knowledge of environmental principles, geotechnical engineering and regulatory law. They did so by consulting a panel of subject matter experts, comprising an environmental academic, environmental lawyer, engineer and a former employee. We understand this to be consistent with normal audit practice.

However, proceeding in that manner did not give the Ministries the opportunity to know who was on the panel, what data the panel may have considered on specific points, what opinions they might have offered, or to challenge the thinking of panel members with additional engineering evidence and/or competing legal or scholarly opinions.

### **Professional Reliance**

**26. One of the reasons the OAG gives for MEM failing to enforce the tailings storage facility design is MEM's over-reliance on qualified professionals. Will MEM move away from professional reliance?**

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No. British Columbia and other provinces in Canada and countries around the world have a long history of using professional reliance. The Ministry of Energy and Mines has used the professional reliance model for oversight of tailings storage facilities for decades and that model has remained relatively unchanged. We rely on professional engineers to approve the designs of everything from the cars we drive to the buildings we work in.

And it makes sense - a “one size fits all” approach of prescriptive design requirements can have a negative impact on the ability of engineers to develop new and innovative designs that improve safety and reduce the risk of failure.

The public relies on Qualified Professionals in many areas. Examples of qualified professionals include architects, accountants, lawyers, physicians, pharmacists and engineers. In each case, the qualified professionals are regulated by their respective governing body or association to ensure members meet their association’s standards of conduct or code of ethics. If qualified professionals do not adhere to these standards or codes, then the associations are responsible for disciplinary actions. This is the system that holds professional engineers accountable across Canada.

That being said, we believe there is room for improvement. Following the independent panel investigation, we committed to introduce a new requirement that all operating mines with TSFs in British Columbia establish Independent Tailings Dam Review Boards.

These boards will support improved engineering practices by providing third-party advice on the design, construction, operation and closure of TSFs. Some mines in B.C. already have similar boards in place.

As well, the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) is developing new guidelines to improve professional engineering practices for dam site characterization assessments. These new guidelines will be released by summer 2016.

**27. Will MEM hire the appropriate qualified staff and carry out its own technical reviews of tailings storage facility dam designs and construction, rather than relying on qualified professionals?**

If we were to move in the direction the OAG is suggesting – making MEM as the regulator also responsible for the design of tailings storage facility dams – we would need to have a ministry engineer on-site at every tailings storage dam in the province. Additionally, government would become responsible for liabilities related to these tailings storage facilities – meaning the taxpayers, not the mine operators would be held financially accountable. This is not practical. It’s certainly not prudent. And, it’s not a practice in place in any other jurisdiction I know of.

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The independent panel was very clear on the role of MEM as the regulator. This is outlined on page 116 of the independent panel's report:

“The engineer of record (EOR) is responsible for the overall performance of the structure as well as the interpretation of site conditions. The regulator has to rely on the expertise and the professionalism of the EOR as the regulator is not the designer.”

**Canadian Dam Association Dam Safety Guidelines**

**28. On pages 53 and 54, the OAG says that MEM adopted the Canadian Dam Association's (CDA) Dam Safety Guidelines for dam construction that were not specific to the conditions in B.C. or specific tailings dams. These guidelines were open to interpretation by the Engineer of Record and MEM inspectors, and this resulted in a tailings dam that was built below generally accepted standards for tailings dams. Why did MEM rely on these guidelines rather than requiring the tailings dam to be built to generally accepted standards?**

Not only do we disagree with this assertion of opinion, the CDA guidelines are in fact professionally recognized guidelines that are used throughout Canada by geotechnical engineers for both water and tailings dams. Whether the guidelines could be improved is a separate question, one which the CDA is currently reviewing.

The factor of safety of the Perimeter Embankment was calculated by the EOR to be above 1.5 at the time of failure. This is in accordance with the CDA Dam Safety Guidelines – the generally accepted standard for conventional dams and tailings dams.

**OAG Findings vs. Chief Inspector of Mines Investigation**

**29. The OAG seems to lay blame for the dam failure at Mount Polley squarely on government, yet the Chief Inspector of Mines (CIM) investigation found no fault with government. Does this mean the CIM investigation findings are flawed?**

No. In its examination of the Mount Polley TSF failure, the OAG has somehow reached conclusions that differ from the findings of multiple professionals, including three world-leading engineering experts on TSFs. Further, the OAG's findings fail to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolacustrine layer of soils (UGLU).

As for how the OAG's interpretation of the facts is so different from the findings of the Independent Panel and the Chief Inspector of Mines investigations... that's something that is not explained in the audit report.

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**30. The OAG findings would seem to indicate that the Chief Inspector of Mines investigation either missed evidence or intentionally avoided looking at the possibility that government's lack of compliance and enforcement at Mount Polley resulted in the tailings dam failure. Given this, how can you expect British Columbians to trust the CIM findings?**

I think the OAG report does a disservice to the work of the Chief Inspector of Mines and the team of investigators that investigated the Mount Polley tailings storage facility dam breach.

I have absolute faith in the Chief Inspector of Mines investigation. This was the largest and most complex investigation and analysis ever done in BC. Over a period of about 16 months, the chief inspector of mines (CIM) investigation team conducted approximately 100 interviews and reviewed over 100,000 pages of documents going back to 1989.

The CIM found that the mine and its engineers employed weak practices on the mine site. Weak practices, however, do not constitute a legal contravention of existing mining legislation. That's why many of the chief inspectors recommendations go to new standards and guidelines to improve these practices – this government is committed to implementing these recommendations.

Further, the CIM, with advice from the Ministry of Justice, did not find sufficient evidence that Mount Polley Mining Corporation contravened existing regulatory requirements. Based on these findings, the chief inspector of mines determined there were no actions that would warrant a report to Crown Counsel pursuant to the Mines Act.

**31. The OAG's findings point to failures on the part of Mount Polley Mine to comply with mining regulations and requirements. Given this, why didn't the Chief Inspector of Mines recommend charges?**

In its examination of the Mount Polley TSF failure, the OAG has somehow reached conclusions that differ from the findings of multiple professionals, including three world-leading engineering experts on TSFs. Further, the OAGs findings fail to recognize that, as numerous geotechnical engineers and geoscientists have concluded, the breach at the Mount Polley TSF dam would not have occurred had it not been for the undetected glaciolaucustrine layer of soils (UGLU).

Two investigations of the dam failure at Mount Polley – one by the Independent Expert Panel and one by the Chief Inspector of Mines – determined the dam failed because the strength and location of a layer of clay underneath the dam was not taken into account in the design or in subsequent dam raises.



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Further, the CIM, with advice from the Ministry of Justice, did not find sufficient evidence that Mount Polley Mining Corporation contravened existing regulatory requirements. Based on these findings, the chief inspector of mines determined there were no actions that would warrant a report to Crown Counsel pursuant to the Mines Act.

**32. Did the OAG interview the Chief Inspector of Mines?**

The Chief Inspector of Mines (CIM), who led the ministry's comprehensive investigation into the Mt Polley breach, was not interviewed by OAG auditors in the course of the audit. The CIM reviewed a draft audit report in late 2015, after the audit was complete, and discussed his concerns about the report with auditors at that time.

**Regulatory Capture**

**33. Why is the Ministry of Energy and Mines responsible for both promoting and regulating of the mining industry given the two priorities seem to conflict?**

The Audit Report contains no factual evidence that the current ministry structure results in any such risk, or in a mind-set of acquiescence on the part of staff involved. The Report lists a number of indicators of potential risk of regulatory capture. But there is nothing in the Report to suggest any actual causal linkage. Specifically, there is no evidence that decisions were made at Mount Polley, in relation to the Elk Valley, or anywhere else to ease or enhance the position of the mining companies involved.

We do not accept that mere appearances are sufficient to warrant the extreme solution of removing compliance and enforcement from MEM. No one is more aware of the need to find the appropriate balance between promotion and regulation of mining in ministry decision-making than those who are asked to do so on a daily basis. We disagree with the suggestion that professional public servants are unable to differentiate between mandate components or that they are unwilling to enforce existing regulations. It is the legislative framework in BC that drives compliance and enforcement activities not the organizational structure.

**34. MEM appears to hit most, if not all, of the possible signs of regulatory capture listed on page 32 of the OAG report. Given this, how can government suggest MEM is not at risk of**

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**regulatory capture and why are you against setting up an independent agency for compliance and enforcement of mining activities when you already have such an agency for oil and gas – the BC Oil and Gas Commission?**

The BC Oil and Gas Commission is responsible for permitting and compliance and enforcement of that sector. It's a model that works there, just as it works at the Ministry of Energy and mines.

I do not accept that mere appearances alone are sufficient to warrant the OAG's extreme and costly recommendation of removing compliance and enforcement from MEM – and after reading the report, that's entirely the basis for the OAG's main recommendation.

First of all, the audit report contains no factual evidence that the current ministry structure results in any such risk, or in a mind-set of acquiescence on the part of staff involved. The report lists a number of indicators of potential risk of regulatory capture, but contains no evidence to suggest any actual causal linkage. Specifically, there is no evidence that decisions were made at Mount Polley, in relation to the Elk Valley, or anywhere else to ease or enhance the position of the mining companies involved.

Secondly, no one is more aware of the need to find the appropriate balance between promotion and regulation of mining in ministry decision-making than those who are asked to do so on a daily basis.

And finally, the list itself is problematic to me as the OAG has not provided any indication of the source for the list. Who is it that determined that the eight items on that list are signs of regulatory capture? How was this determined? What evidence is there to support the OAG's assertion that these eight items are indeed signs of regulatory capture?

I'd also like to point out that during the audit period, government has continued to improve its operational policies and procedures that address many of the concerns raised in the Audit Report.

That aside, in response to the Chief Inspector of Mines investigation and recommendations, within the next 90 days government will establish a mining compliance and enforcement board to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board will be accountable to the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office. A new Deputy Chief Inspector of Mines for Compliance and Enforcement will be appointed to oversee and implement improved compliance and enforcement.

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Along with overseeing compliance and enforcement across the ministry, the team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

### **Regulatory Oversight**

**35. The OAG says in its report that it found a decade of neglect in compliance and enforcement activities within the Ministry of Energy and Mines. Further, the OAG concluded the compliance and enforcement activities are inadequate to protect the province from significant environmental risks. What is government's response to these findings?**

I don't agree with the OAG's assertion and further, the audit team fails to provide any evidence to support this claim.

The fact is, barring the Mount Polley tailings storage facility dam failure, this province has not seen a significant mine-related environmental incident in decades. Further, the number of environmental and health and safety related incidents at mines in British Columbia has continued to decline.

There are a number of hard-learned lessons that have come to light as a result of the Mount Polley incident. And while we can't turn back the clock, we are taking action to tackle these issues head-on.

To that end, we are taking the necessary steps to provide MEM inspectors with the tools they need for a more robust enforcement and compliance structure. Furthermore, where a need for additional resources in the ministry was recognised, government responded by nearly doubling the ministry budget in 2015.

We have brought in amendments to the Mines Act to strengthen government's regulatory oversight of the mining industry and give the ministry additional compliance and enforcement tools. The changes mean we will soon have administrative monetary penalties as an additional compliance and enforcement tool under the Mines Act. Administrative monetary penalties can be imposed for contraventions without involving the courts.

This is part of our ongoing actions to implement the 26 recommendations of the independent panel and the chief inspector of mines following their respective investigations into the Mount Polley tailings storage facility (TSF) failure. Work to implement a number of

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these recommendations is either substantially underway or complete, including improving corporate governance, improving professional engineering practices and strengthening current regulatory operations.

**36. Why doesn't the Ministry of Energy and Mines have a formal compliance and enforcement model in place such as the Ministry of Environment's compliance management framework or something similar to the Organisation for Economic Co-Operation and Development's (OECD) model for a comprehensive compliance and enforcement program as outlined in the audit report?**

The ministry recognizes the need for a more formal compliance and enforcement model. Following his investigation, the Chief Inspector recommended a review of compliance and enforcement function, including capacity and regulatory tools. Government committed to address this recommendation and strengthen compliance and enforcement activities in the ministry.

We have already taken steps to establish a dedicated compliance and enforcement team within the Ministry of Energy and Mines. This team will provide additional support and oversight to existing ministry compliance and enforcement staff. Once in place, the team will consist of a new Deputy Chief Inspector of Mines for Compliance and Enforcement and up to four staff members. Along with overseeing compliance and enforcement across the ministry, the team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

**37. Why, as the OAG states on page 31, doesn't MEM have a strategic plan for its regulatory approach and compliance and enforcement activities?**

The ministry does undertake strategic planning for its compliance and enforcement activities. This planning is done at the provincial and regional level with provincial planning focussed on more specialized areas such geotechnical engineering and electrical inspection.

In fact, the Independent Expert Panel stated that, "*...The Panel finds that MEM Geotechnical Staff and the Contract Inspectors are well qualified to perform their responsibilities. The team is well organized and has clear targets and schedules for annual inspections. The Panel considers the technical qualifications of the MEM Geotechnical Staff as among the best that it has encountered among agencies with similar duties.*"

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Staff at all levels plan compliance and enforcement activities on a number of factors:

- Type of mine - underground versus surface mines.
- Mine operation – seasonal versus year-round activities.
- Material extracted – coal versus metal mining.
- Dam safety rating.
- Level of infrastructure at site.
- Significant change in mining activity.

We recognize there is room for improvement, this will be a priority for the Deputy Chief Inspector of Mines for Compliance and Enforcement.

**38. Does MEM have enough resources to conduct the appropriate level of inspections to ensure mines in B.C. are operating safely?**

Yes. The ministry currently has 103 inspectors (seven positions currently vacant) in the following areas: permitting, which includes geotechnical, and health and safety.

The ministry has more geotechnical inspectors now than in 2001 and they are all registered, professional engineers. 2001: 4 staff, 1 contract (5 total). Today: 3 staff, 4 contract (7 total).

Since 2011 the number of geotechnical inspections has increased dramatically - the ministry now conducts an average of 30 geotechnical inspections annually.

That aside, in response to the Chief Inspector of Mines investigation and recommendations, within the next 90 days government will establish a mining compliance and enforcement board to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board will be accountable to the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office. A new Deputy Chief Inspector of Mines for Compliance and Enforcement will be appointed to oversee and implement improved compliance and enforcement.

Along with overseeing compliance and enforcement across the ministry, the team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

**39. Why doesn't MEM report out on its compliance and enforcement activities?**

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We recognize the need for greater public access to these records and we have started the process to make them more readily available.

The Ministry of Energy and Mines published all dam safety inspections, emergency response plans and related documents online in 2015.

We are investing in improved information systems so that this information can routinely be made public going forward.

**40. Why aren't MEM's and MOE's compliance and enforcement activities co-ordinated, including sharing information on findings of non-compliance and enforcement actions (page 33)?**

Following the independent panel and Chief Inspector of Mines investigations, we recognized more needed to be done to formalize the coordination of compliance and enforcement activities for mining between MEM and MOE.

We are already taking steps to address this by establishing a dedicated compliance and enforcement team within the Ministry of Energy and Mines. This team will provide additional support and oversight to existing ministry compliance and enforcement staff. Once in place, the team will consist of a new Deputy Chief Inspector of Mines for Compliance and Enforcement and up to four staff members. Along with overseeing compliance and enforcement across the ministry, the team's responsibilities will include:

- Developing and implementing an annual compliance and enforcement plan.
- Enhancing the framework and expertise for major investigations.
- Improving the compliance and enforcement tracking system.
- Coordinating compliance and enforcement with other government agencies and ministries.

**41. The OAG report says MEM had nearly 80 inspectors in 2001 before the cuts. How many inspectors are there now and how can inspectors be expected to properly do their jobs if, as the OAG notes on page 35, MEM does not have a formal training program for its inspectors?**

The ministry has mandatory training that all inspectors must complete prior to receiving inspector designation. In 2015, ministry staff began developing a more robust and formalized training curriculum. This will include more formalized policy and procedure.

The ministry currently has 103 inspectors (seven positions currently vacant) in the following areas: permitting, which includes geotechnical, and health and safety.

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### **Reclamation Security Bonds**

**42. What measures does government take to ensure taxpayers won't be on the hook for any long-term closure costs such as water treatment once a mine closes?**

First off, I want to make something very clear. The liability the OAG report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.

MEM requires financial security on all Mines Act permits. The security is reviewed and updated as required, generally every five years or when there is a major change in the approved mine plan or reclamation program. This is done so that should, for whatever reason, a mine not be able to fully fund all reclamation costs British Columbians will not be the ones covering the costs.

Since 2012 total amount of security held has practically doubled. This is largely a result of water treatment being required at several major coal operations because selenium has emerged as a contaminant of concern and that many coal operations have elevated selenium in their discharge.

The total reclamation security held by MEM is published each year in the Chief Inspector of Mines Annual Report. The Province currently holds \$1.07 billion in securities (March 2016).

Security bonding is not the only method by which government manages risk. Of even greater importance is the regulatory practice of requiring mining companies to manage and reduce their environmental liabilities through the development of detailed environmental protection and reclamation plans prior to mining, annual monitoring and reporting, and progressive reclamation through the life of mine.

**43. Why doesn't the province have enough bonds to cover 100% of remediation costs at all mine sites in British Columbia?**

There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.

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It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.

Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.

For example, Teck and Barrick are responsible for 75% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

**44. Do other jurisdictions collect security bonds and do they collect enough to cover 100% of reclamation costs?**

The International Council on Mining and Metals published a report on financial assurance for mine closure and reclamation and the report identified a variety of different models. For example, New Brunswick, and Ontario require financial assurance covering the complete cost of mine cleanup, while Québec requires funds covering 70%. What also differs are the forms of security bonds other jurisdiction will accept. British Columbia will only accept hard forms of security.

Since 2001 taxpayers in the province have only had to cover a portion of reclamation costs on one permitted mine in the province. This was to remove hazardous materials from the millsite at the Candorado mine located near Hedley in the Similkameen. (Need \$ amount)

**45. How many mines permitted in B.C. since 1969 have British Columbians had to cover the remediation costs for?**

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

There has been significantly more spent on historic mines – those mines that operated pre reclamation legislation. MEM generally works on the historic sites with health and safety concerns (ie filling in/caving open holes) and FLNRO or MOE (contaminated sites) works on historic mines with contamination issues (ie Britannia).

**46. On page 6 of the audit, the OAG states that the estimated total liability for all mines in B.C. is \$2.1 billion. How many mines does this represent?**



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There are approximately 26 operating and 88 closed operations.

The estimate of \$2.1 billion quoted by the OAG represents the estimate that the individual mine companies have provided to MEM in their annual estimate of liability. This estimate can vary significantly throughout the year depending on work being done, projects being reviewed and permits being amended.

**47. How many of these mines will require long-term water treatment after closure and where are they located?**

Currently the province has 16 permitted mines requiring water treatment. Another 11 have been identified as requiring or potentially requiring water treatment in the future. This represents roughly 11% of all mines permitted in the Province.

Many of the mines requiring water treatment today were in operation or were historical mines prior to reclamation legislation being implemented and were grandfathered into the permitting process in 1970. Only five mines are considered to be newer operations (Nickel Plate, permitted 1986, Samatosum permitted 1989, Mount Polley permitted 1995, Trend permitted in 2005 and Silvertip in 2015).

The mines that currently have water treatment operations include: Trend, Myra Falls, Bralorne, Bell, Britannia, Island Copper, Brenda, Sullivan, Equity, Nickle Plate, Premier, Samatosum, Line Creek, Eskay, Silvertip and Mount Polley.

Other mines that will or may water treatment in the future include: Endako, Granisle, Kitsault, Fording River, Elkview, Greenhills, Gibraltar, Huckleberry, Brucejack, Highland Valley Copper and Red Chris.

**48. Why doesn't MEM increase the security amounts for mines?**

MEM reviews and updates security amounts as projects plans are reviewed and or in some cases at the discretion of the Chief Inspector of Mines.

Changes in regulatory requirements and in particular tolerances for water quality protection have placed increased pressures on many companies. MEM seeks to keep stride with these changes and to require increases in bonding over time, however there is a need to keep a balance to ensure companies can remain in operation and implement the costly changes as needed while at the same time be able to provide for additional security.

For some companies, this balance is easier to achieve than for others and it is reasonable that government takes some risks rather than assume responsibilities for mines that the

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owners abandon. Having said this, MEM continues to work with these companies to ensure the protection of the workers the public and protection of the environment.

**49. Can MEM increase the security bonds for mines that are currently closed or in care and maintenance?**

Yes. Security bonds can be evaluated and increased at any time under the discretion of the Chief Inspector, this applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).

**Key Findings – Ministry of Environment**

**50. Why, as the OAG states on page 87, didn't Cabinet provide the public or the legislature with the rationale for why approval of the Line Creek Expansion permit was in the public interest?**

I'm not sure how the OAG came to this conclusion. I can point to a number of media stories published around the time of this decision that lay-out our rationale for approving this permit.

Substantial public and stakeholder consultations were undertaken during the development of the area based management plan for the Elk Valley and after permits were granted, various news releases and media interviews by ministers set out for the general public the nature of government decisions.

I personally attended public meetings, and met with media and area residents to discuss the area based management plan for the Elk Valley and explain how our approval of the Line Creek Expansion permit fit into that plan.

In short, working with the mining company, we developed a billion dollar plan that will see the installation of nine active water treatment plants over the next 18 years to stabilize and reverse the water quality trends. And to be blunt about it, without the approval of the Line Creek Expansion permit the company likely would not have had the financial ability to undertake this ambitious plan.

MOE to provide additional QA.

## **OAG AUDIT - MINING COMPLIANCE AND ENFORCEMENT**

- Government thanks the Auditor General for her work on this report and is accepting all recommendations, except one that government will seriously consider.
- During the audit period, MoE has continued to improve its operational policies and procedures – these improvements address many of the concerns raised in the audit.
- For example, MoE has already reviewed its funding mechanism to ensure taxpayers are safeguarded from costs of an environmental disaster. This work was included in the legislation recently introduced on a new provincial spills regime.
- MoE is also preparing to release an annual compliance report summarizing inspections under the Environmental Management Act.
- With respect to the Elk Valley Area Based Management Plan, we are confident we are on the right track to significantly reducing selenium and nitrate over the next decade.
- The Province is committed to address the water quality issues in the Elk Valley while creating a path forward for mining development and ensuring the protection of ecological and human health.

## Background:

- The Office of the Auditor General is releasing an audit on compliance and enforcement in the mining sector during the week of April 25<sup>th</sup>. The report is critical of both MoE and MEM stating the ministries are not protecting the province from environmental risks and have serious gaps in their compliance and enforcement systems.
- The audit summary lists the following as areas where the ministries are deficient:
  - Compliance promotion
  - Compliance verification
  - Enforcement
  - Reporting
  - Ensuring continuous improvement.
- The report highlights two case studies (Mount Polley and Elk Valley water quality) stating MEM's lack of enforcement may have contributed to the tailings breach at Mount Polley and MoE has not been transparent of the risks associated with permitting mines in the Elk Valley which has led to a degradation of water quality.
- The report also notes the Line Creek Expansion permit, the Area-Based Management Plan (ABMP) and the area-based management permit are not protecting the environment and have created several risks which MoE has not made transparent to legislators and the public.
- The report acknowledges MoE has adopted a compliance and enforcement framework but notes there are significant gaps in how the framework is applied.
- Other findings include: no coordination between MEM and MoE on compliance and enforcement activities, both ministries lack necessary resources and tool to manage environmental risks from mining and the ministries are more focussed on permit applications to meet provincial goals therefore fewer resources are dedicated to regulatory activities.
- Report also states MoE has not reviewed or revised its fee schedule for pollutants issued under an Environmental Management Act permit since 2004. And, in some cases, the waste discharge fees do not reflect the environmental impacts.
- The report notes that while MOE has tracked the annual increases of selenium in the Elk Valley watershed for the past 20 years, it took no substantive action to change the trend and only recently attempted to control the pollution through EMA permits.
- Other risks identified by the OAG include:
  - The Line Creek Expansion Permit was granted by Cabinet against advice of MoE staff and despite concerns raised by US EPA.
  - The Line Creek permit allows mining activities in an area inhabited by Westslope Cutthroat Trout, a species of concern under the federal Species at Risk Act.
  - The ABMP puts the Province at risk of contravening the Transboundary Waters Protection Act between Canada and the U.S.
  - The ABMP requires industry to develop 9 water facilities in the Elk Valley which government will be required to monitor and ensure the maintenance of forever.
  - The levels for selenium under the ABMP are not protective of aquatic resources in some parts of the Elk Valley.
- Another issue highlighted is staffing – the report notes a 29% decrease in FTEs in 2014 from 2012 levels. At the same time, EMA authorizations are increasing by an average of 14% a year. The report notes numerous accounts of declining staff morale due to increased workloads and the inability to adequately protect the environment.

- The 13 positions on the compliance team are tasked with ensuring compliance for more than 5500 EMA authorizations (over 400 per person to monitor and/or inspect). There are currently 6 of those positions vacant.
- The OAG reviewed MoE inspection records for 2012, 2013 and 2014 for 8 mines – only 3 of the 8 were inspected each year, not meeting the minimum requirement to inspect high-risk sites annually. For example, Myra Falls had no on-site inspection in any of the 3 years.

#### Appendix: Government response to OAG sub-recommendations

##### Part 1: Recommendations for Government

<p><b>Recommendation 1.0 – Overall Recommendation</b></p> <p>We recommend that the Government of British Columbia create an integrated and independent compliance and enforcement unit for mining activities, with a mandate to ensure the protection of the environment.</p> <p>Given that the Ministry of Energy and Mines is at high risk of <b>regulatory capture</b>, in that MEM’s mandate includes a responsibility to both promote and regulate mining, our expectation is that this new unit would not reside within this ministry.</p>	<p><b>Response:</b></p> <p>It is the legislative framework in BC that drives compliance and enforcement activities not the organizational structure. Many provincial governments across Canada have agencies and ministries with the role of promoting and regulating an industry. In the absence of evidence by the Auditor General that this has compromised the integrity of the ministry or its staff, Government does not see the need for a reorganization of the ministries; however we are prepared to further discuss this with the OAG. Government will establish a Mining C&amp;E Board that will address the need for greater integration between the ministries, as well as with the Environmental Assessment Office.</p>
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## Part 2: Recommendations for Ministry of Energy and Mines and Ministry of Environment

<p><b>Recommendation 1.1 – Strategic Planning</b></p> <p>We recommend that government develop a strategic plan that would detail the activities of an integrated and coordinated regulatory approach, and the necessary capacity, tools, training and expertise required to achieve its goals and objectives.</p>	<p><b>Response:</b></p> <p>A Mining C&amp;E Board will be established to oversee an integrated and coordinated regulatory approach to mining in the Province of B.C. The Board will be accountable to the Deputy Minister of Energy and Mines, the Deputy Minister of Environment and the Associate Deputy Minister of the Environmental Assessment Office.</p> <p>The Board will develop compliance and enforcement plans to map out proactive annual activities based on a risk-based approach. The board will also be responsible for furthering longer term strategic improvements in other areas such as: enhancing training; developing policies, procedures and tools; conducting evaluations; and expanding public reporting.</p> <p>MEM will appoint a new Deputy Chief Inspector of Mines for compliance and enforcement to oversee and implement improved C&amp;E.</p>
<p><b>Recommendation 1.2 – Permit Language</b></p> <p>We recommend that government ensure historical and current permit requirements are written with enforceable language.</p>	<p><b>Response:</b></p> <p>The ministries agree that permits must be written with measureable and enforceable requirements. Both ministries will develop policy to ensure enforceable and measurable requirements are used in all new and amended permits.</p>
<p><b>Recommendation 1.9 – Incentives</b></p> <p>We recommend that government create effective incentives to promote environmentally responsible behavior by industry.</p>	<p><b>Response:</b></p> <p>The ministries agree that it is useful to consider incentives as part of the compliance and enforcement regime governing mines and will continue to consider additional opportunities to recognize and reward good environmental performers. Furthermore, it is expected that expanded public reporting of compliance and enforcement activities will serve as a very effective incentive for promoting environmentally responsible behaviour.</p>

<p><b>Recommendation 1.10 – Risk-Based Approach</b></p> <p>We recommend that government develop a risk-based approach to compliance verification activities, where frequency of inspections are based on risks such as industry’s non-compliance record, industry’s financial state, and industry’s activities (e.g., expansion), as well as risks related to seasonal variations.</p>	<p><b>Response:</b></p> <p>Compliance verification activities conducted by the ministries are founded on a risk-based approach; however, the ministries commit to review policies in this regard.</p> <p>The annual compliance and enforcement planning that will take place at the Mining C&amp;E Board, established under recommendation 1.1, will also be risk-based to optimize the capacity and effectiveness of the ministries’ collective compliance and enforcement resources.</p>
<p><b>Recommendation 1.12 – Qualified Professionals</b></p> <p>We recommend that government establish policies and procedures for the use and oversight of qualified professionals (QP) across the natural resources sector. These policies and procedures should have the following:</p> <ul style="list-style-type: none"> <li>• guidance for staff that outlines the specific nature and amount of oversight expected of a QP’s work;</li> <li>• guidance for staff as to expected timeframe for review and response to QP reports;</li> <li>• updated guidance for staff for recognizing and responding to misconduct by a QP;</li> <li>• controls in place to ensure that there is no undue influence on the QPs by industry; and</li> <li>• controls in place to ensure that recommendations by QPs are adhered to.</li> </ul>	<p><b>Response:</b></p> <p>MEM’s efforts are guided by the <i>Mines Act</i> and the Health, Safety and Reclamation Code for Mines in British Columbia. In particular, the Code Review currently underway is considering specific matters such as the need for a qualified individual designated as a mine dam safety manager to oversee all work associated with a tailings storage facility and will clarify the roles and responsibilities of the Engineer of Record at a mine.</p> <p>The Mining C&amp;E Board, established under recommendation 1.1, will consider how MoE and MEM can strengthen the use and oversight of qualified professionals in the mining sector specifically.</p> <p>The Ministry of Forests, Lands and Natural Resource Operations has established a Qualified Persons in the Natural Resource Sector Framework. This framework guides the development and implementation of Qualified Persons policies and procedures specifically for the mining sector. The framework is based on the three essential components of guidance, competency and accountability and ensures the interests of government, resource users, qualified persons and other stakeholders are recognized and addressed.</p>

<p><b>Recommendation 1.14 – Policies, Procedures and Tools</b></p> <p>We recommend that government develop policies, procedures and enforcement tools for responding to non-compliances when industry does not meet the timeline specified by the ministry.</p>	<p><b>Response:</b></p> <p>The ministries agree on the importance of clear policies, procedures and tools to aid in their compliance and enforcement activities. The ministries will review these in light of the recommendations. The establishment of the Mining C&amp;E Board, under recommendation 1.1, will serve to further inter-ministry collaboration and sharing of best practices.</p> <p>Government will also introduce amendments to the <i>Mines Act</i> to provide for Administrative Monetary Penalties in the spring 2016 legislative session.</p>
<p><b>Recommendation 1.15 – Evaluation and Adjustment</b></p> <p>We recommend government regularly evaluate the effectiveness of their promotional, compliance verification, and enforcement activities and tools and make changes as needed to ensure continuous improvement.</p>	<p><b>Response:</b></p> <p>Annual compliance and enforcement planning and reporting will provide a means to evaluate the effectiveness of the program, to ensure ongoing improved targeting of areas of concern and recognition of strong performers. The ministries will address this recommendation through the establishment of a Mining C&amp;E Board under recommendation 1.1.</p>
<p><b>Recommendation 1.16 – Public Reporting</b></p> <p>We recommend that government report publicly:</p> <ul style="list-style-type: none"> <li>• the results and trends of all mining compliance and enforcement activities;</li> <li>• the effectiveness of compliance and enforcement activities in reducing risks and protecting the environment; and</li> <li>• the estimated liability and the security held for each mine.</li> </ul>	<p><b>Response:</b></p> <p>The ministries support public reporting and have been making progress in this area. MoE has been reporting its enforcement actions for many years through published reports and an online searchable database. It reports all of its enforcement actions including orders, administrative sanctions, administrative monetary penalties, violation tickets and court prosecutions. MoE will work with MEM to explore including their enforcement actions in the reporting.</p> <p>In 2012, the Ministry of Environment published all of its permits for industrial and municipal facilities that discharge waste into the environment, including mines. This dataset provides the opportunity for citizens to access province-wide data on those facilities, including information on fees, locations and discharges.</p> <p>The Ministry of Energy and Mines published all dam safety inspections, emergency response plans and related documents online in 2015. The ministry will continue to publish further documents for all major mines in British Columbia.</p> <p>The ministries will report on trends and effectiveness of C&amp;E in the mining sector.</p>



### Part 3: Recommendations for Ministry of Environment

<p><b>Recommendation 1.5 – Environmental Management Act Waste Discharge Fees</b></p> <p>We recommend that government review its fees under the <i>Environmental Management Act</i> and ensure that the fees are effective in reducing pollution at mine sites.</p>	<p><b>Response:</b></p> <p>The Ministry of Environment is committed to reviewing the fee structure for waste discharges under the <i>Environmental Management Act</i>. Work has already been initiated to assess current fees, as well as conduct a cross-jurisdictional scan of fees imposed by other provinces and territories.</p>
<p><b>Recommendation 1.6 – Cost Recovery</b></p> <p>We recommend that government adopt a cost recovery model for permitting and compliance verification activities that is consistent across all ministries in the natural resources sector.</p>	<p><b>Response:</b></p> <p>The Ministry of Environment recognizes that other natural resource sector ministries, including the Environmental Assessment Office, have begun imposing fees on industry for permitting and compliance verification activities. The ministry will be examining the imposition of fees for these activities.</p> <p>Effective April 1, 2015 permit fees were introduced under the <i>Mines Act</i> and the existing inspection fees were raised. This enabled a budget increase of approx. \$9.3M to the Ministry of Energy and Mines in Budget 2016.</p>
<p><b>Recommendation 1.7 – Decision Making – Use of section 137 of the Environmental Management Act</b></p> <p>We recommend that government be transparent to the public as to its rationale for granting a permit under section 137 of the <i>Environmental Management Act</i>. Specifically, information should include how factors such as economic, environmental, and social attributes were considered in the determination of public interest.</p>	<p><b>Response:</b></p> <p>As provided for in Section 137 of the <i>Environmental Management Act</i>, Cabinet may consider factors that are in the public interest and beyond those that a ministry director may consider. Discussions underlying the approval of an OIC are a matter of Cabinet confidentiality. However, the results of Cabinet decisions, when they are issued in the form of OICs, are published on the BC Laws website.</p>

#### Part 4: Recommendations for Ministry of Energy and Mines

<p><b>Recommendation 1.3 – Security – Adequate Coverage</b> We recommend that government safeguard taxpayers by ensuring the reclamation liability estimate is accurate and that the security held by government is sufficient.</p>	<p><b>Response:</b> As seen in the 2014 Chief Inspector’s Annual Report, “In the past few years, the value of security deposits has increased to reflect more closely the true costs of reclamation. The total value of securities held by the Province has risen from \$10 million in 1984 to more than \$773 million by the end of 2014.”</p>
<p><b>Recommendation 1.4 – Security – Catastrophic Events</b> We recommend that government review its funding mechanisms to ensure taxpayers are safeguarded from the costs of an environmental disaster.</p>	<p><b>Response:</b> Environmental disasters, like the one seen as a result of the Mount Polley tailing facility breach, can result in damage both on and off a mine site. It is the responsibility of the mine operator to ensure sufficient environmental liability insurance is held to meet the risk of such disasters.</p> <p>The <i>Environmental Management Act</i> contains authority for spill response actions and cost recovery to require persons in possession or control of any polluting substance to prepare contingency plans and to implement those plans at their expense in the event of a spill. The Act also provides for the recovery of costs should action to respond to a spill be declared by the Minister.</p> <p>This Act is being amended to proactively require potential polluters to pay into a spill preparedness and response organization. These amendments are due for introduction to the Legislature this year.</p>
<p><b>Recommendation 1.8 – Reclamation Standards</b> We recommend that government develop clear and comprehensive reclamation standards and guidance for industry.</p>	<p><b>Response:</b> Internal work has begun on developing additional guidance materials on a range of reclamation aspects, including erosion and sediment control plans, closure management manuals, reclamation security, etc.</p>
<p><b>Recommendation 1.11 – Systematic Compliance Verification</b> We recommend that government systematically monitor and record compliance with high-risk mine permit requirements.</p>	<p><b>Response:</b> As with Recommendation 1.10 above, a risk-based approach to compliance and enforcement workforce planning will uncover poor performers for closer scrutiny.</p>

<p><b>Recommendation 1.13 – Mine Design</b></p> <p>We recommend that government adequately review mine designs to ensure that they meet government standards, and that government ensure that mines, as constructed, reflect the approved design and standards.</p>	<p><b>Response:</b></p> <p>This recommendation is presented at the conclusion of the Audit Report section on the Mount Polley TSF breach.</p> <p>There had been nine design stages over the life of the TSF at Mount Polley Mine. All stages, including the design stage in place at the time of the breach had been prepared by the design engineer; a qualified professional. MEM reviewed and authorized permit amendments for each stage of the TSF. Each stage of construction was certified by the Engineer of Record in the as-built reports. The failure of the TSF was not an enforcement issue.</p> <p>Through legislation like the <i>Engineers and Geoscientists Act</i>, government has created technical bodies to formalize accountability and protect the public interest. As appropriate in their role, in response to the Expert Panel findings on Mount Polley the Association of Professional Engineers and Geoscientists BC is developing professional practice guidelines for dam site characterization assessments. Government is also undertaking a review of the Mining Code with labour, First Nations and industry representatives to determine how best to implement the expert panel findings.</p>
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## Frankl, Dave MEM:EX

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**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Wednesday, May 18, 2016 11:59 AM  
**To:** Mills, Shane LASS:EX; Chin, Ben PREM:EX; Gordon, Matt GCPE:EX  
**Cc:** Haslam, David GCPE:EX; Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX; Koolsbergen, Nick GCPE:EX  
**Subject:** Mine Reclamation Bonding Information  
**Attachments:** FS\_Mine Reclamation Security in BC\_May 18\_913am.docx; Mine Reclamation Security-Summary\_FINAL\_May 18\_2016.pdf; QA\_Mine Security and liability estimates\_May 18\_1126am\_ADM reviewed.docx

Hello,

We have a media request from Gord Hoekstra following up on the Auditor General's report, which stated that government needs to collect \$1.3 billion in security from the mining industry to cover the full potential cost of mine reclamation.

Attached is the information Minister plans to use for his interview with Gord Hoekstra at 2:30 today (Fact Sheet, Q and A, Summary Table of Reclamation Security held by government).

Once approved, our plan was to send the Fact Sheet and Table to Gord, as well as post the Fact Sheet to the Mt. Polley website.

Please let me know if there are any questions.

Thanks,

Eric

### **Mine reclamation security in British Columbia**

- The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago. Since 2011, the total amount of security held has more than doubled.
- Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require full security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept. Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.
- In British Columbia, mining is regulated in part by the Ministry of Energy and Mines (MEM) under the Mines Act (Act) and the Health, Safety and Reclamation Code for Mines in British Columbia (Code).
- Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection

of land, watercourses and cultural resources. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.

- MEM accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis. MEM reviews and updates security amounts as projects plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Changes in regulatory requirements and in particular water quality protection have placed increased pressures on many companies. MEM keeps stride with these changes and requires a combination of increases in bonding over time as well as ongoing financial strength from the mine owner to protect the public interest. This approach provides a balance which ensures companies can remain in operation, implementing costly capital programs as needed for permitting while at the same time being able to provide for additional security.
- More specifically, costing for long term water treatment is done using a phased approach. If water treatment is required immediately and during operations the costing is generally included. However, for some sites where treatment will not be required for decades after the site closes MEM's practice is to have full costing in place at closure.

Contact:       Suntanu Dalal  
Media Relations  
Ministry of Energy and Mines  
250 952-0628

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## FACTSHEET

[Date]

Ministry of Energy and Mines

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Contact:       Suntanu Dalal  
Media Relations  
Ministry of Energy and Mines  
250 952-0628

**2014 Mine Reclamation Securities in BC for Metal and Coal Mines**

Mine	Owner (2014)	Total Bond Amount	Liability Estimate	Differential
<b>COAL MINE PERMITS</b>				
Elk Valley (Elkview, Fording, Greenhills, Coal Mtn, Greenhills)	Teck Coal Ltd.	\$384,460,000.00	\$925,358,035.00	\$540,898,035.00
Sage Creek	Sage Creek Coal Ltd.	\$1,000.00	\$1,000.00	\$0.00
Tent Mountain	Luscar	\$58,500.00	\$58,500.00	\$0.00
Sukunka Coal	Tailsman Energy Inc.	\$50,000.00	\$67,500.00	\$17,500.00
Mt Speiker	Canadian Natural Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Benson Mt.	Netherlands Pacific Mining Co. Ltd.	\$5,000.00	\$5,000.00	\$0.00
Willow Creek	Walter Energy	\$6,000,000.00	\$11,987,574.00	\$5,987,574.00
Quintette	Teck Coal Ltd.	\$20,083,200.00	\$30,070,900.00	\$9,987,700.00
Bullmoose	Teck Coal Ltd.	\$1,000,000.00	\$1,000,000.00	\$0.00
Benson Mt.	Wolf Mountain Coal Ltd.	\$20,000.00	\$20,000.00	\$0.00
Mt Klappan	Fortune Coal Ltd.	\$306,900.00	\$123,050.00	\$0.00
Quinsam Coal Mine	Hillsborough Resouces Ltd.	\$7,281,000.00	\$7,281,000.00	\$0.00
Basin Coal	Coalmont Energy Corp.	\$276,547.00	\$559,500.00	\$282,953.00
Brule	Walter Energy	\$3,350,000.00	\$14,683,875.00	\$11,333,875.00
Wolverine	Walter Energy	\$11,500,000.00	\$12,498,812.00	\$998,812.00
Trend	Peace River Coal Ltd.	\$43,900,000.00	\$111,300,000.00	\$67,400,000.00
<b>METAL MINE PERMITS</b>				
Endako	Thompson Creek Mining Co.	\$15,345,700.00	\$44,560,000.00	\$29,214,300.00
Pinchi	Teck Metals Ltd.	\$2,000,000.00	\$2,000,000.00	\$0.00
Granisle	Glencore Canada Corp.	\$161,522.00	\$4,253,690.00	\$4,092,168.00
Red Mountain	Ministry of Energy and Mines	\$464,991.08	\$464,991.08	\$0.00
Island Copper	BHP Billiton	\$4,208,076.10	\$4,637,000.00	\$428,923.90
Kitsault	Avanti Kitsault Mine Ltd.	\$740,000.00	\$270,000.00	\$0.00
Highland Valley Copper	Teck Highland Valley Copper	\$18,250,000.00	\$204,395,357.00	\$186,145,357.00
Brenda	Glencore Canada Corp.	\$5,000,000.00	\$27,333,333.00	\$22,333,333.00
Cassiar	Cassiar-Jade Contracting Inc.	\$600,000.00	\$1,530,000.00	\$930,000.00
Myra Falls Operation	Nyrstar	\$78,254,733.00	\$118,760,133.00	\$40,505,400.00



Copper Mountain	Copper Mountain Mines Ltd.	\$11,500,500.00	\$12,765,873.00	\$1,265,373.00
Gallowai Bul River	R.H. Stanfield	\$491,511.19	\$498,228.00	\$6,716.81
Bell Mine	Glencore Canada Corp.	\$1,000,000.00	\$45,440,833.00	\$44,440,833.00
Taseko Mines Ltd.	Gibraltar Mines Ltd.	\$45,638,329.00	\$29,800,000.00	\$0.00
Alwin Mine	Dekalb	\$6,000.00	\$6,000.00	\$0.00
Giant Nickel	Barrick Gold Inc.	\$27,000.00	\$600,000.00	\$573,000.00
Silvan/Hickey	Slocan/Klondike Gold Corp	\$75,000.00	\$185,333.00	\$110,333.00
Craigmont	Huldra Silver Corp.	\$700,000.00	\$706,000.00	\$6,000.00
Dolly Varden Mine	Dolly Varden	\$6,000.00	\$6,000.00	\$0.00
Beaverdell	Teck Resources Ltd.	\$5,000.00	\$10,000.00	\$5,000.00
Mt Copeland	KRC Operators	\$3,484.10	\$3,484.10	\$0.00
Sullivan	Teck Metals Ltd.	\$22,500,000.00	\$22,500,000.00	\$0.00
HB Mine	Teck Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Dankoe	439813 BC Ltd.	\$10,000.00	\$10,000.00	\$0.00
Boss Mountain	Glencore Canada Corp.	\$30,000.00	\$2,434,033.00	\$2,404,033.00
Afton	KGHM Ajax Mining Inc.	\$350,000.00	\$350,000.00	\$0.00
Equity	GoldCorp	\$62,447,000.00	\$62,447,000.00	\$0.00
Cusac	Cusac Gold Mines Ltd.	\$264,444.00	\$627,762.00	\$363,318.00
Mosquito Creek	Mosquito Creek	\$5,000.00	\$437,119.00	\$432,119.00
Caroline	New Carolin Gold Corp.	\$256,250.00	\$199,564.00	\$0.00
Scottie Gold	Red Eye Resources	\$15,000.00	\$15,000.00	\$0.00
Baker	Dupont Canada Ltd.	\$15,606.00	\$165,681.00	\$150,075.00
Goldstream	Bethlehem Resources	\$200,000.00	\$1,048,056.00	\$848,056.00
Venus Mine	United Keno Mines	\$7,000.00	\$7,000.00	\$0.00
Taurus	Cassiar Gold Corp/Inter Taurus	\$10,000.00	\$10,000.00	\$0.00
Diamc	Silence Lake	\$10,000.00	\$10,000.00	\$0.00
Baymag	Baymag Mines Co. Ltd.	\$15,101.71	\$836,048.00	\$820,946.29
Ashlu Gold	Osprey Mining and Exploration	\$10,000.00	\$10,000.00	\$0.00
Four-J/Lussier	Georgia Pacific Canada Ltd.	\$20,000.00	\$20,000.00	\$0.00
Perlite	Perlite Canada Inc.	\$0.00	\$0.00	\$0.00
Union Mine	Pearl Resources Ltd.	\$5,000.00	\$5,000.00	\$0.00
Blackdome	J- Pacific Gold Inc	\$100,000.00	\$100,000.00	\$0.00
Nickel Plate	Barrick Gold Inc.	\$1,671,754.00	\$96,500,000.00	\$94,828,246.00
Cheni/Lawyers	Cheni Gold Mines Ltd	\$15,000.00	\$15,000.00	\$0.00

Johnny Mountain	Skyline Gold Corp.	\$562,310.33	\$319,000.00	\$0.00
Premier	Boliden	\$3,000,000.00	\$15,909,000.00	\$12,909,000.00
Parson Barite	Highwood Res/Sherritt	\$10,000.00	\$53,680.00	\$43,680.00
Moberly Silica	HCA Mountain Minerals			\$0.00
Candorado	Candorado Mines	\$0.00	\$3,000,000.00	\$3,000,000.00
Samatosum	FQM Akubra Inc.	\$7,800,000.00	\$7,276,145.00	\$0.00
South Fork Silica	331670 BC Ltd.	\$1,000.00	\$1,000.00	\$0.00
Barrier Feldspar	Kanspar	\$20,000.00	\$20,000.00	\$0.00
Golden Bear	Goldcorp	\$210,000.00	\$73,200.00	\$0.00
Horse Creek Silca	HiTest Sand Inc.	\$125,000.00	\$125,000.00	\$0.00
Sable/Shasta	Int'l Shasta/Sable Resources Ltd.	\$164,000.00	\$1,110,000.00	\$946,000.00
Snip	Barrick Gold Inc.	\$1,000,000.00	\$2,940,833.00	\$1,940,833.00
CIL	Clayburn Industries	\$1,000.00	\$5,000.00	\$4,000.00
Cirque Mine	Cirque Operating Corp.	\$220,000.00	\$220,000.00	\$0.00
Gypo Pit	Pacific Silica and Rock Quarry	\$2,500.00	\$2,500.00	\$0.00
Eskay Creek	Barrick Gold Corp.	\$3,774,000.00	\$118,514,270.00	\$114,740,270.00
QR	Barkerville Gold Mines	\$2,860,000.00	\$10,250,000.00	\$7,390,000.00
Elk / Siwash	Almaden/Fairfield Minerals	\$150,000.00	\$61,816.00	\$0.00
Mount Polley	Mt Polley Mines Ltd.	\$19,050,011.00	\$29,500,000.00	\$10,449,989.00
Huckleberry	Huckleberry Mines Ltd.	\$26,000,000.00	\$59,000,000.00	\$33,000,000.00
Kemess South	AuRico	\$18,520,000.00	\$17,144,663.00	\$0.00
Bralorne	Bralorne Gold Mines Ltd.	\$115,000.00	\$1,114,607.00	\$999,607.00
Bow mines (Tailings)	Golden Dawn Minerals Inc.	\$50,000.00	\$70,000.00	\$20,000.00
Crystal Graphite	Eagle Graphite Corporation	\$0.00	\$0.00	\$0.00
Ainsworth Mill	Blue Bird Mining	\$5,000.00	\$250,000.00	\$245,000.00
Brittania	BC Government			\$0.00
Quinto Mine	Consolidated/Quinto Mining Corp.	\$70,000.00	\$5,000.00	\$0.00
Blue Bell	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
HB Tailings	Regional Distirct East Kootenay	\$0.00	\$0.00	\$0.00
Churchill Copper	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
Max Molybdenum	Forty Two Metals Inc.	\$730,000.00	\$1,313,403.00	\$583,403.00
New Afton	New Gold Inc.	\$9,500,000.00	\$9,681,190.00	\$181,190.00
Galore Creek	Teck Metals Ltd.	\$1,167,000.00	\$1,167,000.00	\$0.00
Ruby Creek	Adanac Molybdenum Corp.	\$100,000.00	\$100,000.00	\$0.00

Tulsequah	Chieftain Metals Inc.	\$1,200,000.00	\$1,200,000.00	\$0.00
Zip Mill	Huakan International Mining Inc.	\$235,000.00	\$303,558.00	\$68,558.00
Lexington-Grenoble	Huakan International Mining Inc.	\$215,000.00	\$168,232.00	\$0.00
Yellowjacket	EaglePlains	\$150,000.00	\$150,000.00	\$0.00
Mount Milligan	Terrain Metals Corp.	\$30,000,000.00	\$35,171,000.00	\$5,171,000.00
Dome Mountain	Gavin Mines Ltd.	\$579,000.00	\$1,360,000.00	\$781,000.00
Bonanza Ledge	Barkerville Gold Mines	\$960,000.00	\$4,446,000.00	\$3,486,000.00
Treasure Mountain	Huldra Silver Inc.	\$505,100.00	\$505,100.00	\$0.00
Red Chris	Red Chris Operating Corp.	\$12,000,000.00	\$9,774,073.00	\$0.00
Yellow Giant (Tel)	Banks Island Gold Ltd.	\$355,000.00	\$283,700.00	\$0.00

\$892,153,070.51	\$2,133,597,234.18	\$1,262,769,510.00
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\*bonds greater than liability have an undersecure of zero (not minus)

## Mine Security Bonds and Liability Estimates Q & A

### **1. What are you doing to address the underfunded mine security liabilities highlighted by the Auditor General and also in the new report from the Union of BC Indian Chiefs?**

- We have already started work to address this. The ministry holds more security bonds now than it did 10 years ago or even five years ago.
- It's important to recognize that liability estimates at mines are not static, the liability can increase from year to year depending on: mine operations, changes to the mine plan, progressive reclamation work, changes in technology and changes in the parameters of concern (i.e. water treatment for selenium and sulphates).
- Since 2011 the total amount of security held has more than doubled. This is largely a result of water treatment being required at several major coal operations because selenium has emerged as a contaminant of concern and that many coal operations have elevated selenium in their discharge.
- Historically, financial security at the Elk Valley mines was low as it was thought that reclamation liabilities were conventional (i.e. mainly removal of structures, re-sloping, re-vegetation) and that there was low risk of company default. As water quality concerns began to emerge, the ministry began proactively increasing financial securities in 2010, even though the water quality mitigation requirements were not well understood.
- It was not until the approval of the Elk Valley Water Quality Plan in 2014, that the extent of water treatment requirements was defined (i.e. 6 water treatment plants at 4 mines over 20 years, some with multiple phases of water treatment). These liabilities will continue to be assessed and securities reviewed and adjusted over time.
- Following the release of the Auditor General's report, I said we were going to review our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.
- Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

**2. What are the various forms of security for mines held by government?**

- The financial security accepted by MEM, as approved by the Chief Inspector of Mines, may be in the form of cash, treasury bill, Guaranteed Investment Certificates (GIC) held under a safekeeping agreement – a legal agreement that enables the ministry to access the GIC at any time, letter of credit, or Surety Bond. Other forms may be accepted such as an asset agreement but only under certain circumstances.

**3. For some mines, the form of security includes assets. How certain are you that government would be able to liquidate those assets in a timely manner and get full value for them? What are some examples of assets MEM accepts?**

- MEM strictly limits the use of asset agreements and is working with the few companies that now hold asset agreements to replace these with a more suitable form of financial security. (Johnny Mtn, QR, Mt Polley and Huckleberry).
- The majority of the existing asset agreements were established in the mid-90s when such agreements were deemed acceptable by the ministry. One of the asset agreements – Huckleberry – was established in 2014.
- Assets used as security under these agreements include heavy equipment (trucks) and milling equipment. To give you an idea of what some of this equipment is worth, a single haul truck can cost more than \$1.2 million to replace.

**4. How is the value of these assets calculated and by whom?**

- The valuation of the assets is calculated by 3rd party appraisers.

**5. How are the liability estimates for each Mines Act permit calculated and by whom?**

- The mine is required to provide the liability estimate to the ministry and MEM staff then review and evaluate the estimate.
- To protect taxpayers, MEM requires liability estimates to be developed based on what its reclamation costs would be if third-party contractors do the work, as opposed to estimates based on work being done by the mining company itself. This ensures that in the event the company is unable to fulfil its obligations, adequate funds are available to hire contractors to complete the reclamation work.

**6. Are these estimates verified by an independent third-party?**

- MEM inspectors evaluate all liability estimates for mines sites.

**7. The liability estimates for some of these mines seem quite low considering the potential that some will require on-going water treatment for decades. Are the long-term liabilities included in the overall liability estimates?**

- Costing for long term water treatment is done using a phased approach. If water treatment is required immediately and during operations the costing is generally included but for some sites where treatment will not be required for decades after the site closes MEM aims to have full costing in place at closure.

**8. Why have you collected bonds at some mines to cover the full estimated liability amount but not at others?**

- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.
- For example, Teck and Barrick are responsible for 75% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

**9. Is it fair to say that in the case of Teck, Glencore and Barrick, MEM has made judgements that they are safe risks?**

- In the past, judgements were made that large diversified companies posed less of a risk especially when considering conventional reclamation costs. However, several of the Teck, Glencore and Barrick sites now require long term water treatment. Given this, and recognizing the potential risk that these companies may not exist over hundreds of years, MEM has been increasing security bond requirements for these mines.
- In the past several years, security reviews have been focussed on Teck sites (specifically Elk Valley) as these have the largest unfunded liability and Teck has had applications for major expansions. Securities have been reviewed as part of the permitting process.

- One of Glencore's mines (the Bell mine) was reviewed in 2013 when the water treatment plant was permitted. The current security is \$5M, and the mine will have 100% security by November 2017 (\$25.1M) as a condition of its permit.
- The Ministry will review the financial security for Barrick sites in 2016 and 2017.

**10. Does MEM conduct financial liability risk assessments to determine which companies you allow to carry underfunded liabilities for their mine sites?**

- The MEM economist will provide a report to the Chief Inspector, when required, on Company health. This assessment is used primarily used to determine a schedule for bonding if required over a period of time.

**11. Tulsequah Chief Mine has a long-history of environmental concerns related to acid rock drainage. Given the liability estimate for reclamation of this mine is only \$1.2 million, why hasn't the Province simply moved in and addressed the issues?**

- The Tulsequah Chief is an historic mine and operated well before permitting or even acid-rock drainage (ARD) was recognized and understood.
- The current liability of \$1.2 million for the permit holder is based primarily on the surface disturbance at the mine.
- Once the company begins mining operations at the site, as part of the conditions of its permit it will be responsible for addressing the historic environmental issues at the site – establishing water treatment.

**12. Walter Energy filed for bankruptcy in 2015 leaving the future of its three coal mines near Tumbler Ridge in limbo. While the Province holds security for each of these mines, the combined underfunded liability for these mines – Willow Creek, Brule and Wolverine – is more than \$18.3 million. If government gets stuck paying for the reclamation of these sites, who is on the hook for that underfunded liability?**

- As the Mines Act permit holder for Wolverine, Brule and Willow Creek mines, Walter Energy is responsible for all reclamation costs at those sites and the company's chapter 11 filings do not discharge it from this responsibility.
- The company is in the process of trying to sell the three mine sites, but has funds set-aside to start addressing reclamation should it fail to secure a buyer. Progressive reclamation, which would be undertaken if the company is unable to find a buyer, would reduce the amount of underfunded reclamation liability.
- The Province holds security totaling \$20.85 M for the three mine sites. All security remains in good standing.

**13. Given the Walter Energy operations are all coal mines, won't these sites require long-term water treatment?**

- These sites do not require long term active water treatment..
- The company is in the process of trying to sell the three mine sites, but has funds set-aside to start addressing reclamation should it fail to secure a buyer.
- Once a new operator starts, the liability will be reassessed based on the new owner's mine plan and reclamation plan and appropriate bonding collected.

**14. What steps are you taking to reduce the underfunded liability amounts that currently exist for the three Walter Energy mine sites?**

- As the Mines Act permit holder for Wolverine, Brule and Willow Creek mines, Walter Energy is responsible for all reclamation costs at those sites and the company's chapter 11 filings do not discharge it from this responsibility.
- The company is in the process of trying to sell the three mine sites, but has funds set-aside to start addressing reclamation should it fail to secure a buyer.
- Once a new operator starts, the liability will be reassessed based on the new owner's mine plan and reclamation plan and appropriate bonding collected.

**15. Shasta Sable Resources has an underfunded liability of \$946,000 and has not posted any financial statements since 2014. This is a company that the OAG highlighted as having a track record of failing to comply with orders from the Ministry of Energy and Mines. What steps is the ministry taking to ensure the mine returns to compliance and are you taking steps to reduce the mine's underfunded liability?**

- MEM staff are working with Shasta toward bringing the site into full-compliance. There is a plan in place with set deadlines to get the site in full-compliance over the next 12 months.
- Bringing the mine site into -compliance will reduce the potential environmental liabilities at the mine.

**16. Barkerville Gold is a new company. Their \$7 million shortfall at QR must have been agreed to in the past year or to by MEM as the asset changed hands?**

- Barkerville assumed responsibility for all liability when the permit changed.
- The 2014 liability estimate included the need to put a lift on their dam, and other engineering studies. Both have been completed.



**17. Barkerville Gold also has a shortfall at Bonanza Ledge. Is this related to the QR site?**

- No, this is only the Bonanza Ledge site. This estimate as well will be significantly less once the new mine plan is finalized because the company are no longer going to store potentially acid generating rock at surface that would need to be relocated at closure.

**18. What was the rationale for the decision to allow Huckelberry to extend its shortfall in 2014?**

- At the time, the company did not have the financial means to address its shortfall. MEM's economist worked with the company to better understand its situation and the decision was made to accept assets in place of another financial bond. However, the company has committed to replace the asset securities with financial securities moving forward.

**19. Mount Milligan is owned by Thompson Creek but Terrain Metals Corp has the shortfall of \$5 million. Terrain was the previous owner. What is the explanation here?**

- Terrain, the permit holder, is a wholly-owned subsidiary of Thompson Creek. Mt Milligan has recently submitted their Mine Plan update, and MEM will review and at that time will also review the bond.

**20. At the Trend mine, Peace River Coal Ltd is listed as the owner. Is the parent company, Anglo, also legally liable?**

- Peace River, the permit holder, is a wholly-owned subsidiary of Anglo.

**21. Why doesn't MEM increase the security amounts for mines?**

- MEM reviews and updates security amounts as projects plans are reviewed and or in some cases at the discretion of the Chief Inspector of Mines.
- Changes in regulatory requirements and in particular tolerances for water quality protection have placed increased pressures on many companies. MEM seeks to keep stride with these changes and to require increases in bonding over time, however there is a need to keep a balance to ensure companies can remain in operation and implement the costly changes as needed while at the same time be able to provide for additional security.
- For some companies, this balance is easier to achieve than for others and it is reasonable that government takes some risks rather than assume responsibilities for mines that the owners abandon. Having said this, MEM continues to work with these companies to ensure the protection of the workers the public and protection of the environment.

**22. Can MEM increase the security bonds for mines that are currently closed or in care and maintenance?**

- Yes. Security bonds can be evaluated and increased at any time under the discretion of the Chief Inspector, this applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).

**23. Under current legislation, companies are able to provide liability estimates in confidence, meaning this information is not available to the public. Will government address this issue to ensure details of reclamation liabilities and security bonds are publicly available?**

- Following the release of the Auditor General's report, I said we were going to review our policy around mine security bonds and that work is underway. As part of our ongoing work, we are reviewing the confidentiality currently available under the existing legislation.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Monday, May 30, 2016 10:32 AM  
**To:** Merrifield, Katy PREM:EX; Mills, Shane PREM:EX  
**Cc:** Gordon, Matt GCPE:EX; Haslam, David GCPE:EX; Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX  
**Subject:** Wallesz Correspondence  
**Attachments:** ATT00001.htm; ATT00002.htm

Hi Katy,

Here is the complete package with the original incoming added in

Sent from my iPhone



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### OPINION-EDITORIAL

#### **British Columbia is a good neighbour**

**By Bill Bennett**

**Minister of Energy and Mines**

May 27, 2016

(1053 words)

In a recent opinion piece, the Executive Director of the United Southeast Alaska Gillnetters Cynthia Wallesz claims that mining in British Columbia is threatening water, ecosystems, salmon and jobs downstream in southeast Alaska. However, the evidence does not support her claims.

The reality is there is one mine, Brucejack, currently underconstruction in B.C. within the area covered by the trans-boundary waters treaty and this mine is supported by both British Columbia and Alaska. While there are other mining projects proposed for Northwest B.C., these must first complete an extensive environmental review process and obtain an environmental assessment certificate, just as Brucejack did, before being eligible to proceed to the Mines Act permitting stage.

The only other operating mine, Red Chris, in northwest B.C. is more than 130 kilometres (80 miles) and multiple mountain ranges from the Alaska border. I would also point out the tailings storage facility (TSF) at the mine was the subject of three independent reviews, including one by experts retained by the Tahltan First Nation. Additionally, last April, the Tahltan Nation announced that its members had voted 87 per cent in favour of agreeing to work with the company on the Red Chris project. The unique agreement ensures Tahltan oversight of environmental issues surrounding the mine.

Given the scope and scale of the Mount Polley incident, it's understandable that Alaskans have concerns. The protection of our shared trans-boundary waterways is a key concern to people on both sides of the border. We want to be good neighbours and we understand and share the concerns raised by Alaskans. I live in the Rocky Mountains, and like many British Columbians and Alaskans, I have fished and hunted my whole life. I care deeply about the environment, as do all British Columbians.

British Columbians and Alaskans should know that where there are trans-boundary concerns with a proposed mine development in British Columbia, U.S. state and federal agencies are invited to participate in the environmental assessment and permitting processes. Our government works directly with the Alaska government and other interested groups to provide any information that might be of interest. For example, the State of Alaska has been involved in the authorization process for the Tulsequah Chief, Galore Creek, KSM, Red Chris and Brucejackmine projects.

A memorandum of understanding (MOU) signed on Nov. 25, 2015 by Premier Christy Clark and State of Alaska Governor Bill Walker further strengthens cross-border partnerships between British Columbia and Alaska in many areas of common interest, including mining and environmental matters. The MOU formalizes our mutual commitment to protect and enhance our shared environment, including trans-boundary rivers, watersheds and fisheries.

In order to implement the MOU, British Columbia and Alaska are working on a Statement of Cooperation (SOC) to enhance the protection of trans-boundary waters. This proactive approach will ensure that we are working together effectively on trans-boundary water quality, environmental assessments and permitting for mine projects, and reporting on mine discharges, operations and closure.

I am aware of the concerns many Alaskans have with respect to the Tulsequah Chief Mine and the problems that have occurred at this site since it closed more than 50 years ago. This is an old mine that existed long before most jurisdictions had reclamation legislation or bonding. Alaska officials also confirmed in my presence that the mine site is not causing any damage to the Tulsequah River.

That being said, inspectors with the ministries of Environment, Energy and Mines, and the Environmental Assessment Office did find compliance issues at the Tulsequah Chief Mine and the company was ordered to take specific steps to address these. I can confirm that this work is underway and is being monitored by inspection staff.

I take exception to Ms. Wallesz's ill-informed and overly-negative characterization of British Columbia's regulatory agencies and processes. In British Columbia we closely regulate the approval, development and reclamation of all mines in our province. And, contrary to her claims, mines in this province are required to use best available practices and best available technologies in their operations.

Barring the Mount Polley tailings storage facility dam failure, this province has not seen a significant mine-related environmental incident in decades. Further, the number of environmental and health and safety related incidents at mines in British Columbia has continued to decline.

With respect to mine reclamation securities in British Columbia, mining companies in British Columbia are liable for reclamation costs of mine sites. As a condition of the Mines Act, a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.

In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the Ministry of Energy and Mines may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability shortfalls over time, as determined by ministry analysis. As Ms. Wallesz states, I did inform her that British Columbia does not have legislation that specifically governs the provision of compensation around financial losses from water quality contamination. What she fails to recognize is that there is also no U.S. state with laws that require this type of compensation. If and when such claims arise, they are addressed in British Columbia in much the same manner as in Alaska or any state in America – through the legal system.

In British Columbia, we also recognize more can be done to improve mining safety and environmental protection. We agree with the Expert Panel, the Chief Inspector of Mines and the Auditor General's Office that 'business as usual' on mine sites in British Columbia is just not good enough, and that's why we are acting on the combined 43 recommendations from the two investigations and the audit.

We believe the Mt Polley disaster, despite being unprecedented in modern B.C. history and despite the hidden, sub-surface cause of the accident, is evidence that improvements in regulation are necessary to increase protection against the unforeseen. And, we are committed to improving the regulatory oversight and reducing the margin of risk so that such a disaster can never happen again.

Our government is leading Canada in making changes to how mining is done, and we will continue to work hard to ensure our policies are the best in the world.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Friday, May 27, 2016 9:10 AM  
**To:** Haslam, David GCPE:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX  
**Subject:** Reply to Wallesz Article

Good Morning David,

MBB would like to respond to yesterday's article by Cynthia Wallesz. Could your shop draft something up, he has asked to weave in the following

- The central claim in the letter is that "B.C.'s mining industry and how it is threatening water, ecosystems, salmon and jobs downstream in southeast Alaska." There is one mine being constructed in the area of BC covered by transboundary waters treaty, Brucejack, which is supported in both BC and Alaska. The only other mine operating is Red Chris which is xxx miles upstream mountain ranges away. This mine received 87% support from the local FN, the Tahltan. The evidence does not support the claim by the letter writer. The other mining projects in NW BC need environment certifs before they can proceed plus Mines Act permitting
- There is a process in place today for BC & Alaska to work together on the permitting and assessments of NW BC mines - provide some details on how this works...
- Yes, Mt Polley was a terrible accident and BC has embraced 42 of 43 recommendations from the two engineering investigations and the AG's audit, but aside from Mt Polley, where is the evidence that BC mines are not using BAT or BAP. BC mines are known around the world's for their excellence and environmental record. No jurisdiction is immune to accidents but one accident doesn't prove the whole jurisdiction is incompetent - one big accident in 100 years of mining - is there a mining jurisdiction anywhere in the US or Canada that hasn't had an accident - the main thing is that BC learns from its accident and improves and that's what we're doing
- As for my email to her, there is no US state that has laws that require state companies to compensate Canada or Canadian companies for harm caused across the border. This is done through the legal system, as my letter states. Her comments in this regard are deliberately misleading.
- The Tulsequah Chief project is a an old mine site from the 19xx's long before most jurisdictions even had reclamation legislation or bonding. Alaska officials in my presence confirmed that no damage is being done to the Tulsequah River from this old mine site but nonetheless, our ministries of Environment and Mines have issued orders that the company is complying with to xxxxxx
- Her slam of "BC's regulatory agencies" is ill-informed and frankly insulting. BC environmental protection and mine oversight has led to decades of safe operation for dozens of mines over the last 50 years. The independent Panel of geotechnical experts said clearly that no number of inspections would have uncovered the subsurface cause of the dam failure at MtPolley - it is wrong and unfair to mischaracterize what happened at Mt Polley as a failure of BC regulatory oversight
- We should explain how financial security is calculated like insurance where risk of a company not reclaiming is in part based on the financial viability of the company - just like a lender or insurer would do and what we are doing to revamp the system
- Provide some detail on MOU, the Letter of Cooperation, and the relationship BC has built with the State of Alaska
- And a personal comment about my background as an outdoors man, fisherman, Hunter and how values of British Columbians and Alaskans are so similar - BC's expect that we will protect Alaska waters and we will

Tristan Denniston

Ministerial Assistant to  
The Honourable Bill Bennett  
Minister of Energy and Mines  
250-387-5896

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Page 225

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Copyright

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Wednesday, May 25, 2016 2:00 PM  
**To:** Bennett, Bill MEM:EX; XT:Bennett, B LP:IN  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** FOR APPROVAL - Revised Media Request: CIM Magazine on OAG report...

Good Afternoon Minister,

We have the following media request on the underfunded liability from the Ministry and C&E.

GCPE has suggested you speak with the reporter.

Please let me know your thoughts.

Regards,  
Tristan

**Reporter:** Kate Sheridan – CIM Magazine - 514-632-1883

**Deadline:** 6 p.m. PT today.

**Request:** I've gone through the report and read the ministry's press release and I have a few clarifying questions about some points: specifically, regarding the \$1 billion gap in the reclamation liability fund noted in the report and a bit more detail about the government's position on keeping compliance and enforcement under MEM. I also wanted to check if there were any more specific timeframes available for acting on the recommendations in the report, and wanted to check on the status of the tailings storage facility portion of the Code review. I understand that the ministry has answered a lot of questions about the report, and the written responses provided are very extensive, but I'm hoping to get a bit more detail on these points. It's an issue our readership undoubtedly cares about, and these seemed to be some of the most crucial points from the report and the responses.

**Recommendation:** Have MBB speak to the reporter, if available.

**Response:** Approved by Peter Robb.

### High level OAG Report Key Messages:

- Government believes that a new, separate compliance and enforcement board will strengthen regulatory oversight of the mining sector.
  - Government will set up within 90 days such a board to create greater integration between the Ministry of Environment and the Ministry of Energy and Mines as well as the Environmental Assessment Office.
- It is clear that 'business as usual' on mine sites in British Columbia is not good enough, and that is why we are implementing all 43 combined recommendations from the Auditor General, the Independent Expert Panel and the Chief Inspector of Mines.
- While we embrace the majority of recommendations in the audit report, we do not believe that government's compliance and enforcement regimes place the environment at risk.



- We believe the Mount Polley disaster, despite being unprecedented in modern B.C. history and despite the hidden, sub-surface cause of the accident, is evidence that improvements in regulation are necessary to increase protection against the unforeseen.
- We are committed to improving regulatory oversight and reducing the margin of risk so that Mount Polley may never happen again.
- In addition, our government is currently reviewing the Health, Safety and Reclamation Code for Mines in B.C.
  - Work on the tailings storage facilities portion is expected to be complete this spring with revisions in place by mid-2016.
  - Government will also work with the Association of Professional Engineers to ensure that recommendations at them are implemented by spring 2017.
- There have been recent changes to the Mines Act which included administrative and monetary penalties as a more flexible and responsive compliance and enforcement tool.
  - The maximum penalties were raised to \$1 million and/or up to three years imprisonment.

**Regarding the \$1 billion gap in the reclamation liability fund noted in the report:**

- Mining companies in British Columbia are liable for reclamation costs of mine sites.
- As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.
- It is important for our government to build greater public confidence in mining so that if a company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unreasonable amount of these costs.
- The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- Statutory decision-makers, not the minister, determine the amount of the security bonds required for each mine. The Ministry of Energy and Mines reviews and updates security amounts as project plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
- The Ministry of Energy and Mines accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector of Mines.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis.
- Following the release of the Auditor General's report, government committed to reviewing its policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- Energy and Mines Minister Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

**A bit more detail about the government's position on keeping compliance and enforcement under MEM:**

- Government believes that a new, separate compliance and enforcement board will strengthen regulatory oversight of the mining sector.
  - Government will set up within 90 days such a board to create greater integration between the Ministry of Environment and the Ministry of Energy and Mines as well as the Environmental Assessment Office.

**I also wanted to check if there were any more specific timeframes available for acting on the recommendations in the report:**

- Government is currently reviewing the Health, Safety and Reclamation Code for Mines in B.C.:
  - Work on the tailings storage facilities portion is expected to be complete this spring with revisions in place by mid-2016.
  - Government will also work with the Association of Professional Engineers to ensure that recommendations at them are implemented by spring 2017.

**Wanted to check on the status of the tailings storage facility portion of the Code review:**

- Government is currently reviewing the Health, Safety and Reclamation Code for Mines in B.C. and expects the tailings storage facility portion of the Code Review to be completed this spring, with revisions expected to be in place by mid-2016.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Wednesday, May 11, 2016 1:51 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX  
**Subject:** Re: Copper Mountain Information

Yes Minister, it's in the front flap

Sent from my iPhone

On May 11, 2016, at 1:49 PM, Bennett, Bill MEM:EX <[Bill.Bennett@gov.bc.ca](mailto:Bill.Bennett@gov.bc.ca)> wrote:

Do I have this in the binder? If not can I plz get it. Thanks

Sent from my BlackBerry 10 smartphone on the TELUS network.

---

**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Wednesday, May 11, 2016 12:25 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX; Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX  
**Subject:** Copper Mountain Information

Hi Minister,

Ahead of the visit to Copper Mountain this week, GCPE have put together some information in case questions arise about either the OAG Report's concerns about reclamation bonding, or concerns raised by First Nations about activities at the mine over the last few years.

Please let me know if you have any questions, concerns or edits before we forward this information.

Thanks,

Eric

### **AUDITOR GENERAL'S REPORT: CONCERNS RAISED ON RECLAMATION BONDING**

The Auditor-General criticized government for failing to publicly disclose that it has not collected enough security deposits from the industry to cover potential mining accidents. The OAG said the shortfall amounts to \$1.2-billion. Minister Bennett promised to take action to ensure that those deposits are collected.

### **KEY MESSAGES**

- The liability the Office of the Auditor General report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- The Ministry of Energy and Mines requires financial security on all Mines Act permits. The security is reviewed and updated as required, generally every five years or when there is a major change in the approved mine plan or reclamation program. This is done so that should,

for whatever reason, a mine not be able to fully fund all reclamation costs, British Columbians will not be the ones covering the costs.

- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The Ministry of Energy and Mines collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances, the Ministry of Energy and Mines has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default.
- The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time. Teck and Barrick Gold Inc. are two such examples. The ministry has made decisions in the past that those companies aren't going anywhere. They've got a huge asset base, and it is not essential to have as much money in the bank with those particular companies.

## **PREVIOUSLY RAISED CONCERNS BY FIRST NATIONS WITH COPPER MOUNTAIN**

Over the past few years, First Nations have raised a few different concerns about operations at the mine. Government continues to work with First Nations, the community and the company to address these concerns in a timely manner.

### **Key Messages**

- Staff with MEM, MOE and MARR continue to work with the company and local First Nations to ensure all concerns are addressed appropriately and in a timely manner.
- This government recognizes the importance of working with First Nations in British Columbia to develop a shared vision for land and resource use.
- Acting in partnership is the best way to provide a meaningful role in land and resource management for First Nations, and to provide for benefit-sharing and new economic opportunities.

### **Background**

#### **December 2014 Tailings Spill**

- At approximately 10:20 p.m. on December 10, 2014, the Chief Inspector of Mines was notified of a tailings spill at Copper Mtn. Mine near Princeton.
- The company did not advise Lower and Upper Similkameen FNs of the spill the night it occurred, but contacted both the next day. The chief and council of both bands were on site the next day.
- Staff with the ministries of Environment, and Energy and Mines were immediately deployed onsite to respond to the spill.
- In response to the spill, the province signed a Letter of Understanding (LOU) with the Upper and Lower Similkameen First Nations outlining the initiatives the province would undertake to determine what caused the spill, what its potential impacts were and what steps could be taken to prevent a similar event in the future.

- An independent contractor, AECOM, was hired to investigate the incident and submitted its report to government and the Upper and Lower Similkameen First Nations in the fall of 2015.
- On March 24, 2016 the Lower Similkameen First Nations, in a letter to Minister of Aboriginal Relations and Reconciliation John Rustad rejecting the report from AECOM and requesting funding to hire a new contractor to review the AECOM report.

#### January 2016 Waste Rock Dump failure

- On January 31, 2016, a waste rock dump on the mine site slumped blocking Copper Mountain road.
- The waste rock slump resulted in a deposit of natural overburden materials (soil, glacial till sediments, and organic debris) in a small non-fish bearing portion of Wolfe Creek which flows into the Similkameen River.
- On February 9, 2016 the Ministry of Environment (MOE) issued a Pollution Abatement Order to Copper Mountain Mine.
- On February 12, 2016 Copper Mountain Mine submitted an Action Plan to MOE proposing measures to recover and manage the landslide overburden materials, and to mitigate and monitor residual risks to the environment.
- Work to remove overburden materials from Wolf Creek was completed on February 26, 2016.
- Re-vegetation of disturbed areas and soil stockpiles are scheduled to be completed over the months of April and May 2016.
- The company continues to undertake water sampling at Wolf Creek.

#### Lower Similkameen Economic Benefits Agreement

- The Lower Similkameen have raised concerns with the province regarding the band's economic benefits agreement.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Monday, May 16, 2016 4:56 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** FOR APPROVAL - Media Request: APTN on UBCIC report...

Good Afternoon Minister,

Please see below for a media request regarding the UBCIC study by economist Robyn Allan. Cara McKenna is looking for a word with regards to this. GCPE has suggested we provide the following.

Please let me know your thoughts.

Regards,  
Tristan

**Reporter:** Cara McKenna – APTN National News

**Deadline:** Noon Tuesday.

**Request:** The Union of B.C. Indian Chiefs issues a study by economist Robyn Allan regarding the OAG report -- I was hoping for a response from Minister Bennett on whether the ministry will be taking this into account as well as the recommendations from the audit.

**Recommendation:** Have GCPE provide information be email.

**Response:** Approved by Nate.

- The liability the Office of the Auditor General and UBCIC reports refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- We have already started work to address this. The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago.
- Since 2011, the total amount of security held has more than doubled. This is largely a result of water treatment being required at several major coal operations because selenium has emerged as a contaminant of concern and that many coal operations have elevated selenium in their discharge.
- Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.
- Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

## **Background for the MO:**

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## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Monday, May 16, 2016 9:25 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Haslam, David GCPE:EX; Lewis, Ted MEM:EX  
**Subject:** FOR APPROVAL - Media Request: CBC PG on UBCIC report...

Good Evening Minister,

Please see below for response to George Baker on the UBCIC Report. It is similar to the APTN one which you approved earlier. Your edits are part of the answer to question one. Question two however, deals with the polluter pays principle and remarks that securities and liabilities go unfounded by the Ministry.

Please let me know your thoughts.

Regards,  
Tristan

**Reporter:** George Baker – CBC Radio Prince George

**Deadline:** ASAP today.

**Request:** Does MEM have a response to the UBCIC report regarding the OAG report? Note the report's author, Robyn Allan, will be on Daybreak North Tuesday morning.

1). What does the ministry make of the claim in the report that "as at March 31, 2014, the Ministry of Energy and Mines had an unfunded liability for site reclamation of \$1.3 billion"?

2). What does the ministry make of this remark "There is no requirement in BC that mining companies undertake an environmental risk assessment that examines the risk and related environmental cost of possible accidents at their mine sites. Neither is there a requirement that companies provide proof to regulators that access to sufficient financial resources, including insurance, exists to meet obligations if an environmental harm event occurs."?

**Recommendation:** Have GCPE provide information by email.

**Response:**

1). *What does the ministry make of the claim in the report that "as at March 31, 2014, the Ministry of Energy and Mines had an unfunded liability for site reclamation of \$1.3 billion"?*

- The liability the Office of the Auditor General and UBCIC reports refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- We have already started work to address this. The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago.

· Since 2011, the total amount of security held has more than doubled. Bottom line – Minister Bennett has said we can do better and government will keep that commitment.

· Financial security is determined by assessing costs of reclamation in the context of a company's ability to pay and financial track record. Much of the shortfall in financial security is due to MEM's determination that total reclamation costs can be borne by a particular company

- Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.
- Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

2). *What does the ministry make of this remark "There is no requirement in BC that mining companies undertake an environmental risk assessment that examines the risk and related environmental cost of possible accidents at their mine sites. Neither is there a requirement that companies provide proof to regulators that access to sufficient financial resources, including insurance, exists to meet obligations if an environmental harm event occurs."?*

- Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- B.C. has a polluter-pay model to ensure those who are responsible for spills are also responsible for cleaning them up. This model is designed to keep the cost of response off of taxpayers.
- The Spill Cost Recovery Regulation sets out the types of costs that government can recover from a responsible party following a spill. This regulation, under the Environmental Management Act, is the legal mechanism for the polluter pays principle in British Columbia.
- The fact is, barring the Mount Polley tailings storage facility dam failure, this province has not seen a significant mine-related environmental incident in decades. Further, the number of environmental and health and safety related incidents at mines in British Columbia has continued to decline.
- There are a number of hard-learned lessons that have come to light as a result of the Mount Polley incident. And while we can't turn back the clock, we are taking action to tackle these issues head-on.
- Government has recently introduced legislation to establish a world-leading provincial spill response regime for British Columbia.
- One component that government is considering in its proposed spills regime is the creation of a fund that would ensure effective response is available if the spiller is unable, unwilling or unidentified.
- Our proposal is not a liability/insurance fund. It is a response and recovery fund to ensure money is immediately available to begin (and complete) a proper response.

- At this time, the mechanisms for establishing this fund have not yet been determined.

**Background for the MO:**

***NEWS RELEASE***

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## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Wednesday, May 25, 2016 2:00 PM  
**To:** Bennett, Bill MEM:EX; XT:Bennett, B LP:IN  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** FOR APPROVAL - Revised Media Request: CIM Magazine on OAG report...

Good Afternoon Minister,

We have the following media request on the underfunded liability from the Ministry and C&E.

GCPE has suggested you speak with the reporter.

Please let me know your thoughts.

Regards,  
Tristan

**Reporter:** Kate Sheridan – CIM Magazine - 514-632-1883

**Deadline:** 6 p.m. PT today.

**Request:** I've gone through the report and read the ministry's press release and I have a few clarifying questions about some points: specifically, regarding the \$1 billion gap in the reclamation liability fund noted in the report and a bit more detail about the government's position on keeping compliance and enforcement under MEM. I also wanted to check if there were any more specific timeframes available for acting on the recommendations in the report, and wanted to check on the status of the tailings storage facility portion of the Code review. I understand that the ministry has answered a lot of questions about the report, and the written responses provided are very extensive, but I'm hoping to get a bit more detail on these points. It's an issue our readership undoubtedly cares about, and these seemed to be some of the most crucial points from the report and the responses.

**Recommendation:** Have MBB speak to the reporter, if available.

**Response:** Approved by Peter Robb.

### High level OAG Report Key Messages:

- Government believes that a new, separate compliance and enforcement board will strengthen regulatory oversight of the mining sector.
  - Government will set up within 90 days such a board to create greater integration between the Ministry of Environment and the Ministry of Energy and Mines as well as the Environmental Assessment Office.
- It is clear that 'business as usual' on mine sites in British Columbia is not good enough, and that is why we are implementing all 43 combined recommendations from the Auditor General, the Independent Expert Panel and the Chief Inspector of Mines.
- While we embrace the majority of recommendations in the audit report, we do not believe that government's compliance and enforcement regimes place the environment at risk.

- We believe the Mount Polley disaster, despite being unprecedented in modern B.C. history and despite the hidden, sub-surface cause of the accident, is evidence that improvements in regulation are necessary to increase protection against the unforeseen.
- We are committed to improving regulatory oversight and reducing the margin of risk so that Mount Polley may never happen again.
- In addition, our government is currently reviewing the Health, Safety and Reclamation Code for Mines in B.C.
  - Work on the tailings storage facilities portion is expected to be complete this spring with revisions in place by mid-2016.
  - Government will also work with the Association of Professional Engineers to ensure that recommendations at them are implemented by spring 2017.
- There have been recent changes to the Mines Act which included administrative and monetary penalties as a more flexible and responsive compliance and enforcement tool.
  - The maximum penalties were raised to \$1 million and/or up to three years imprisonment.

**Regarding the \$1 billion gap in the reclamation liability fund noted in the report:**

- Mining companies in British Columbia are liable for reclamation costs of mine sites.
- As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.
- It is important for our government to build greater public confidence in mining so that if a company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unreasonable amount of these costs.
- The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- Statutory decision-makers, not the minister, determine the amount of the security bonds required for each mine. The Ministry of Energy and Mines reviews and updates security amounts as project plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
- The Ministry of Energy and Mines accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector of Mines.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis.
- Following the release of the Auditor General's report, government committed to reviewing its policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- Energy and Mines Minister Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

**A bit more detail about the government's position on keeping compliance and enforcement under MEM:**

- Government believes that a new, separate compliance and enforcement board will strengthen regulatory oversight of the mining sector.
  - Government will set up within 90 days such a board to create greater integration between the Ministry of Environment and the Ministry of Energy and Mines as well as the Environmental Assessment Office.

**I also wanted to check if there were any more specific timeframes available for acting on the recommendations in the report:**

- Government is currently reviewing the Health, Safety and Reclamation Code for Mines in B.C.:
  - Work on the tailings storage facilities portion is expected to be complete this spring with revisions in place by mid-2016.
  - Government will also work with the Association of Professional Engineers to ensure that recommendations at them are implemented by spring 2017.

**Wanted to check on the status of the tailings storage facility portion of the Code review:**

- Government is currently reviewing the Health, Safety and Reclamation Code for Mines in B.C. and expects the tailings storage facility portion of the Code Review to be completed this spring, with revisions expected to be in place by mid-2016.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Thursday, May 26, 2016 4:17 PM  
**To:** Bennett, Bill MEM:EX; XT:Bennett, B LP:IN  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX  
**Subject:** Two articles - Cynthia Wallez and Justine for your attention

Good Afternoon Minister,

Just wanted to bring two articles to your attention.

The first, by Cynthia Wallesz claims that for two years she's been learning of inadequacies of B.C.'s mining regulatory processes. She references a recent email from you regarding how fishing fleets would be financially compensated if financial losses resulted from real or perceived water quality contamination from B.C.'s projects. Wallesz also mentions the B.C. auditor general's report on mining and urges federal officials on both sides of the border to work together for enforceable solutions that protect our shared waters.

The second, by Justine that says that you were caught off guard when he learned that the province's mining companies are on the hook for less than half the amount that should be set aside to pay for potential cleanup costs.

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## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Thursday, May 5, 2016 2:57 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** FOR APPROVAL - Media Request: Justine and Sophie re. financial security shortfall...

Good Afternoon Minister,

Here are the underfunded liability numbers you had promised to provide Sophie Rosseau and Justine Hunter with from the media avail on Tuesday.

Please let me know your thoughts.

Regards,  
Tristan

**Reporter:** Justine Hunter – Globe & Mail

**Reporter:** Sophie Rousseau – Radio Canada

**Deadline:** ASAP today.

**Request:** Of the \$1.2-billion shortfall referenced, minister said 75 per cent of that is for two companies – Teck and Barrick. Can we get specifics please?

**Recommendation:** Have GCPE provide information be email.

**Response:**

As of March 31, 2014:

Underfunded Liability

Teck: \$737,036,092

Barrick Gold Inc: \$212,082,349

Total: \$949,118,441

Approximately 79% of the \$1.2 billion underfunded liability.

Note:

- The liability the Office of the Auditor General report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- The Ministry of Energy and Mines requires financial security on all Mines Act permits. The security is reviewed and updated as required, generally every five years or when there is a major change in the approved mine plan

or reclamation program. This is done so that should, for whatever reason, a mine not be able to fully fund all reclamation costs, British Columbians will not be the ones covering the costs.

- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The Ministry of Energy and Mines collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances, the Ministry of Energy and Mines has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time. Teck and Barrick Gold Inc. are two such examples. The ministry has made decisions in the past that those companies aren't going anywhere. They've got a huge asset base, and it is not essential to have as much money in the bank with those particular companies.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Wednesday, May 11, 2016 9:01 AM  
**To:** Dalal, Suntanu GCPE:EX  
**Cc:** Lewis, Ted MEM:EX; Wallace-Deering, Eric MEM:EX; Gilmore, Dan GCPE:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX; Robb, Peter L. MEM:EX  
**Subject:** RE: Media Request: CBC Radio on Yellow Giant Mine...

Approved

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**From:** Dalal, Suntanu GCPE:EX  
**Sent:** Wednesday, May 11, 2016 8:54 AM  
**To:** Denniston, Tristan M MEM:EX  
**Cc:** Lewis, Ted MEM:EX; Wallace-Deering, Eric MEM:EX; Gilmore, Dan GCPE:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX; Robb, Peter L. MEM:EX  
**Subject:** Media Request: CBC Radio on Yellow Giant Mine...

Checking on this media request. Thanks.

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**From:** Dalal, Suntanu GCPE:EX  
**Sent:** Tuesday, May 10, 2016 2:20 PM  
**To:** Denniston, Tristan M MEM:EX  
**Cc:** Lewis, Ted MEM:EX; Wallace-Deering, Eric MEM:EX; Gilmore, Dan GCPE:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX; Robb, Peter L. MEM:EX  
**Subject:** Media Request: CBC Radio on Yellow Giant Mine...

**Reporter:** George Baker – CBC Radio Prince George

**Deadline:** Today.

**Request:** I do need to know whether or not the MEM sent someone to inspect Yellow Giant in the 15 months it operated and if so what dates. (this is a follow-up request – GCPE previously provided information on Friday, May 6 – see Background below)

**Recommendation:** Have GCPE provided information by email.

**Response:**

Ministry of Energy and Mines inspectors visited the Yellow Giant Mine site on the following dates:

- Dec. 18, 2015
- Oct. 14, 2015
- Sept. 3, 2015
- Aug. 5, 2015
- July 15, 2015
- July 9, 2015
- March 19, 2015

- Nov. 27, 2014
- July 15, 2014
- Feb. 12, 2014
- Sept. 6, 2013
- May 28, 2013

Note: Ministry of Environment staff have also visited the site.

**Additional background for the MO:** Information provided to the reporter on Friday, May 6:

- The Ministry of Energy and Mines (MEM) has received the Gitxaala Nation letter dated Feb. 26, 2016.
- In response to concerns expressed in the letter, the ministry has taken a number of proactive and immediate actions, including:
  - Feb. 29, 2016: Met with the Chief, Deputy Chief and manager of Gitxaala Environmental Monitoring Group (GEM) in Prince Rupert, discussing the issue and planning how to move forward. Established commitment to weekly calls between MEM and GEM to increase communication and cooperation at operational level. Committed to meet community Elders to discuss.
  - March 15, 2016: MEM met with and presented issue history and updates to a group of 50 Hereditary and Matriarchal Elders at Prince Rupert. A commitment was made to address immediate concern of the community regarding planned disposal of explosives.
  - Regular update calls to James Witzke, Environmental Assessment Manager of GEM on:
    - March 4, 2016
    - March 11, 2016
    - April 1, 2016
    - April 8, 2016
    - May 3, 2016
  - March 16 to April 1, 2016: Extraordinary collaboration between MEM, Banks Island Gold's receiver and industry to accommodate Gitxaala Nation wishes and remove explosives and dispose them offsite rather than on Banks Island. This was accomplished in very short turnaround time, meeting MEM's commitment to the community. Gitxaala Nation kept fully informed.
  - MEM is acting as a good-faith intermediary between the receiver and Gitxaala Nation. MEM requested meetings between the receiver and Gitxaala Nation on several occasions in order to facilitate communications and solutions.
  - Including GEM in multi-day helicopter visit to Banks Island with MEM technical experts for purposes of hazardous material assessment in preparation for possible site clean-up (scheduled for May 9 to 11).
  - Ongoing discussions within MEM on possible solutions to the immediate concerns about the human health.
- The ministry intends to respond in writing to the issues highlighted in the letter in the future.

Background

- On July 15, 2015, inspectors with the Ministry of Energy and Mines shut down all mining activities at the Yellow Giant Mine on Banks Island, which was operated by Banks Island Gold.
- The shutdown was ordered because the company was not complying with the conditions of their permit, and inspectors determined that continued operation of the mine would lead to detrimental environmental impacts.
- Ministry of Energy and Mines inspectors also issued stop-work orders on July 9, 2015 at two exploration sites on Banks Island operated by Banks Island Gold.

- In addition, Ministry of Environment staff issued a Pollution Abatement Order on July 10, 2015, requiring the company to immediately cease all unauthorized discharges and implement clean-up activities.
- Banks Island Gold filed for bankruptcy on Dec. 31, 2015, as the company could no longer meet its financial obligations with its creditors.
- There is a total of \$420,000 in security held for Banks Island Gold. If reclamation liabilities revert to the Province, this security money will be used to carry-out reclamation and to pay for any ongoing monitoring or maintenance that is required at the Yellow Giant mine site.
- The intent of the Province's reclamation legislation is to ensure that modern mine sites in B.C. do not leave an ongoing legacy or require public funds for clean-up activities.
- The ministry continues to work cooperatively with the company's receiver.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Monday, May 30, 2016 10:23 AM  
**To:** Merrifield, Katy PREM:EX; Mills, Shane PREM:EX  
**Cc:** Lewis, Ted MEM:EX; Haslam, David GCPE:EX; Wallace-Deering, Eric MEM:EX; Gordon, Matt GCPE:EX  
**Subject:** Cynthia Wallesz letter and OpEd  
**Attachments:** Cynthia Wallesz.pdf; ATT00001.htm

Good Morning Katy,

Please see below for original response to Ms. Wallesz from MBB as well as his Op-Ed reply.

Regards,  
Tristan

Sent from my iPhone



### OPINION-EDITORIAL

#### **British Columbia is a good neighbour**

**By Bill Bennett**

**Minister of Energy and Mines**

May 27, 2016

(1053 words)

In a recent opinion piece, the Executive Director of the United Southeast Alaska Gillnetters Cynthia Wallesz claims that mining in British Columbia is threatening water, ecosystems, salmon and jobs downstream in southeast Alaska. However, the evidence does not support her claims.

The reality is there is one mine, Brucejack, currently underconstruction in B.C. within the area covered by the trans-boundary waters treaty and this mine is supported by both British Columbia and Alaska. While there are other mining projects proposed for Northwest B.C., these must first complete an extensive environmental review process and obtain an environmental assessment certificate, just as Brucejack did, before being eligible to proceed to the Mines Act permitting stage.

The only other operating mine, Red Chris, in northwest B.C. is more than 130 kilometres (80 miles) and multiple mountain ranges from the Alaska border. I would also point out the tailings storage facility (TSF) at the mine was the subject of three independent reviews, including one by experts retained by the Tahltan First Nation. Additionally, last April, the Tahltan Nation announced that its members had voted 87 per cent in favour of agreeing to work with the company on the Red Chris project. The unique agreement ensures Tahltan oversight of environmental issues surrounding the mine.

Given the scope and scale of the Mount Polley incident, it's understandable that Alaskans have concerns. The protection of our shared trans-boundary waterways is a key concern to people on both sides of the border. We want to be good neighbours and we understand and share the concerns raised by Alaskans. I live in the Rocky Mountains, and like many British Columbians and Alaskans, I have fished and hunted my whole life. I care deeply about the environment, as do all British Columbians.

British Columbians and Alaskans should know that where there are trans-boundary concerns with a proposed mine development in British Columbia, U.S. state and federal agencies are invited to participate in the environmental assessment and permitting processes. Our government works directly with the Alaska

government and other interested groups to provide any information that might be of interest. For example, the State of Alaska has been involved in the authorization process for the Tulsequah Chief, Galore Creek, KSM, Red Chris and Brucejackmine projects.

A memorandum of understanding (MOU) signed on Nov. 25, 2015 by Premier Christy Clark and State of Alaska Governor Bill Walker further strengthens cross-border partnerships between British Columbia and Alaska in many areas of common interest, including mining and environmental matters. The MOU formalizes our mutual commitment to protect and enhance our shared environment, including trans-boundary rivers, watersheds and fisheries.

In order to implement the MOU, British Columbia and Alaska are working on a Statement of Cooperation (SOC) to enhance the protection of trans-boundary waters. This proactive approach will ensure that we are working together effectively on trans-boundary water quality, environmental assessments and permitting for mine projects, and reporting on mine discharges, operations and closure.

I am aware of the concerns many Alaskans have with respect to the Tulsequah Chief Mine and the problems that have occurred at this site since it closed more than 50 years ago. This is an old mine that existed long before most jurisdictions had reclamation legislation or bonding. Alaska officials also confirmed in my presence that the mine site is not causing any damage to the Tulsequah River.

That being said, inspectors with the ministries of Environment, Energy and Mines, and the Environmental Assessment Office did find compliance issues at the Tulsequah Chief Mine and the company was ordered to take specific steps to address these. I can confirm that this work is underway and is being monitored by inspection staff.

I take exception to Ms. Wallesz's ill-informed and overly-negative characterization of British Columbia's regulatory agencies and processes. In British Columbia we closely regulate the approval, development and reclamation of all mines in our province. And, contrary to her claims, mines in this province are required to use best available practices and best available technologies in their operations.

Barring the Mount Polley tailings storage facility dam failure, this province has not seen a significant mine-related environmental incident in decades. Further, the number of environmental and health and safety related incidents at mines in British Columbia has continued to decline.

With respect to mine reclamation securities in British Columbia, mining companies in British Columbia are liable for reclamation costs of mine sites. As a condition of the Mines Act, a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.

In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the Ministry of Energy and Mines may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability shortfalls over time, as determined by ministry analysis. As Ms. Wallesz states, I did inform her that British Columbia does not have legislation that specifically governs the provision of compensation around financial losses from water quality contamination. What she fails to recognize is that there is also no U.S. state with laws that require this type of compensation. If and when such claims arise, they are addressed in British Columbia in much the same manner as in Alaska or any state in America – through the legal system.

In British Columbia, we also recognize more can be done to improve mining safety and environmental protection. We agree with the Expert Panel, the Chief Inspector of Mines and the Auditor General's Office that 'business as usual' on mine sites in British Columbia is just not good enough, and that's why we are acting on the combined 43 recommendations from the two investigations and the audit.

We believe the Mt Polley disaster, despite being unprecedented in modern B.C. history and despite the hidden, sub-surface cause of the accident, is evidence that improvements in regulation are necessary to increase protection against the unforeseen. And, we are committed to improving the regulatory oversight and reducing the margin of risk so that such a disaster can never happen again.

Our government is leading Canada in making changes to how mining is done, and we will continue to work hard to ensure our policies are the best in the world.



**Firth, Janet MEM:EX**

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**From:** Minister, MEM MEM:EX  
**Sent:** Tuesday, May 10, 2016 9:31 AM  
**To:** 'usag.alaska@gmail.com'  
**Cc:** Minister, ENV ENV:EX  
**Subject:** RE: Financial Assurances

Ref.: 94384

Ms. Cynthia Wallesz  
Executive Director  
United Southeast Alaska Gillnetters

Email: [usag.alaska@gmail.com](mailto:usag.alaska@gmail.com)

pc: [ENV.Minister@gov.bc.ca](mailto:ENV.Minister@gov.bc.ca)

Dear Ms. Wallesz:

Thank you for your March 29, 2016 follow-up email to our roundtable discussion in Juneau, Alaska on August 26, 2015.

As you may be aware, the Province of British Columbia and the State of Alaska signed a Memorandum of Understanding (MOU) on November 25, 2015 which formalizes our mutual commitment to protect and enhance our shared environment, including transboundary rivers, watersheds and fisheries. In order to implement the MOU, British Columbia and Alaska are working on a Statement of Cooperation (SOC) to enhance the protection of transboundary waters. This proactive approach will ensure that we are working together effectively on transboundary water quality, environmental assessments and permitting for mine projects, and reporting on mine discharges, operations and closure.

In response to the tailings storage facility (TSF) breach at Mount Polley mine, British Columbia is taking action to strengthen regulation of the mining industry in the Province. Changes specific to requirements for TSFs in the Health, Safety and Reclamation Code for Mines in British Columbia are anticipated to be implemented this year, including the introduction of a requirement for independent technical review boards. The Government is committed to implementing all recommendations from the Independent Expert Engineering Review Panel and Chief Inspector of Mines' investigations into the cause of the breach, and we have introduced changes to the *Mines Act* to enable administrative monetary penalties. The Province will also be posting all mine permits, inspection reports, annual dam safety inspections and annual reclamation reports online to ensure that the public has access to this information.

With respect to your specific question around financial losses from water quality contamination, British Columbia does not have legislation that specifically governs the provision of compensation in the circumstances you have identified. In such an event, compensation would need to be handled by agreement with the person or operators causing the pollution or through other means.

Protecting the water quality of transboundary watersheds is important to British Columbia, and we take seriously the further development of the strong working relationship with Alaska to address concerns being raised.

Thank you, again, for writing.

Sincerely,

Bill Bennett  
Minister of Energy and Mines

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Thursday, May 26, 2016 8:10 AM  
**To:** Mills, Shane PREM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX; Gordon, Matt GCPE:EX  
**Subject:** Reclamation security  
**Attachments:** Mine Reclamation Security-Summary\_FINAL\_May 18\_2016.pdf; ATT00001.htm

Good Morning Shane,

Please see below for reclamation KMs. Please also note that this was specifically given to Justine in a follow up of a scrum for orphan mines and Britannia

### Response:

#### **1. How many mines permitted in B.C. since 1969 have British Columbians had to cover the remediation costs for?**

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

MEM generally works on the historic sites with health and safety concerns (ie filling In/caving open holes) and FLNRO or MOE (contaminated sites) works on historic mines with contamination issues (ie Britannia).

The Province began its environmental remediation work at Britannia Mine in 2001 after a financial settlement was reached with the former mine operators. The former operators contributed \$30 million toward the cleanup cost and provincial funding provided an additional \$45.9 million. To date, the Province has spent in excess of \$61.15 million on remediation at Britannia.

Britannia Mine, was once the largest copper producer in the British Commonwealth covering about 9,000 acres. Britannia Mine began production of copper ore over 100 years ago and closed for good in 1974.

Sent from my iPhone

KMs

- Mining companies in British Columbia are liable for reclamation costs of mine sites.
- As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.

- It is important for our government to build greater public confidence in mining so that if a company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unreasonable amount of these costs.
- The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- Statutory decision-makers, not the minister, determine the amount of the security bonds required for each mine. The Ministry of Energy and Mines reviews and updates security amounts as project plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
- The Ministry of Energy and Mines accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis.
- Following the release of the Auditor General's report, government committed to reviewing its policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- Minister of Energy and Mines Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

**2014 Mine Reclamation Securities in BC for Metal and Coal Mines**

Mine	Owner (2014)	Total Bond Amount	Liability Estimate	Differential
<b>COAL MINE PERMITS</b>				
Elk Valley (Elkview, Fording, Greenhills, Coal Mtn, Greenhills)	Teck Coal Ltd.	\$384,460,000.00	\$925,358,035.00	\$540,898,035.00
Sage Creek	Sage Creek Coal Ltd.	\$1,000.00	\$1,000.00	\$0.00
Tent Mountain	Luscar	\$58,500.00	\$58,500.00	\$0.00
Sukunka Coal	Tailsman Energy Inc.	\$50,000.00	\$67,500.00	\$17,500.00
Mt Speiker	Canadian Natural Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Benson Mt.	Netherlands Pacific Mining Co. Ltd.	\$5,000.00	\$5,000.00	\$0.00
Willow Creek	Walter Energy	\$6,000,000.00	\$11,987,574.00	\$5,987,574.00
Quintette	Teck Coal Ltd.	\$20,083,200.00	\$30,070,900.00	\$9,987,700.00
Bullmoose	Teck Coal Ltd.	\$1,000,000.00	\$1,000,000.00	\$0.00
Benson Mt.	Wolf Mountain Coal Ltd.	\$20,000.00	\$20,000.00	\$0.00
Mt Klappan	Fortune Coal Ltd.	\$306,900.00	\$123,050.00	\$0.00
Quinsam Coal Mine	Hillsborough Resouces Ltd.	\$7,281,000.00	\$7,281,000.00	\$0.00
Basin Coal	Coalmont Energy Corp.	\$276,547.00	\$559,500.00	\$282,953.00
Brule	Walter Energy	\$3,350,000.00	\$14,683,875.00	\$11,333,875.00
Wolverine	Walter Energy	\$11,500,000.00	\$12,498,812.00	\$998,812.00
Trend	Peace River Coal Ltd.	\$43,900,000.00	\$111,300,000.00	\$67,400,000.00
<b>METAL MINE PERMITS</b>				
Endako	Thompson Creek Mining Co.	\$15,345,700.00	\$44,560,000.00	\$29,214,300.00
Pinchi	Teck Metals Ltd.	\$2,000,000.00	\$2,000,000.00	\$0.00
Granisle	Glencore Canada Corp.	\$161,522.00	\$4,253,690.00	\$4,092,168.00
Red Mountain	Ministry of Energy and Mines	\$464,991.08	\$464,991.08	\$0.00
Island Copper	BHP Billiton	\$4,208,076.10	\$4,637,000.00	\$428,923.90
Kitsault	Avanti Kitsault Mine Ltd.	\$740,000.00	\$270,000.00	\$0.00
Highland Valley Copper	Teck Highland Valley Copper	\$18,250,000.00	\$204,395,357.00	\$186,145,357.00
Brenda	Glencore Canada Corp.	\$5,000,000.00	\$27,333,333.00	\$22,333,333.00
Cassiar	Cassiar-Jade Contracting Inc.	\$600,000.00	\$1,530,000.00	\$930,000.00
Myra Falls Operation	Nyrstar	\$78,254,733.00	\$118,760,133.00	\$40,505,400.00

Copper Mountain	Copper Mountain Mines Ltd.	\$11,500,500.00	\$12,765,873.00	\$1,265,373.00
Gallowai Bul River	R.H. Stanfield	\$491,511.19	\$498,228.00	\$6,716.81
Bell Mine	Glencore Canada Corp.	\$1,000,000.00	\$45,440,833.00	\$44,440,833.00
Taseko Mines Ltd.	Gibraltar Mines Ltd.	\$45,638,329.00	\$29,800,000.00	\$0.00
Alwin Mine	Dekalb	\$6,000.00	\$6,000.00	\$0.00
Giant Nickel	Barrick Gold Inc.	\$27,000.00	\$600,000.00	\$573,000.00
Silvan/Hickey	Slocan/Klondike Gold Corp	\$75,000.00	\$185,333.00	\$110,333.00
Craigmont	Huldra Silver Corp.	\$700,000.00	\$706,000.00	\$6,000.00
Dolly Varden Mine	Dolly Varden	\$6,000.00	\$6,000.00	\$0.00
Beaverdell	Teck Resources Ltd.	\$5,000.00	\$10,000.00	\$5,000.00
Mt Copeland	KRC Operators	\$3,484.10	\$3,484.10	\$0.00
Sullivan	Teck Metals Ltd.	\$22,500,000.00	\$22,500,000.00	\$0.00
HB Mine	Teck Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Dankoe	439813 BC Ltd.	\$10,000.00	\$10,000.00	\$0.00
Boss Mountain	Glencore Canada Corp.	\$30,000.00	\$2,434,033.00	\$2,404,033.00
Afton	KGHM Ajax Mining Inc.	\$350,000.00	\$350,000.00	\$0.00
Equity	GoldCorp	\$62,447,000.00	\$62,447,000.00	\$0.00
Cusac	Cusac Gold Mines Ltd.	\$264,444.00	\$627,762.00	\$363,318.00
Mosquito Creek	Mosquito Creek	\$5,000.00	\$437,119.00	\$432,119.00
Caroline	New Carolin Gold Corp.	\$256,250.00	\$199,564.00	\$0.00
Scottie Gold	Red Eye Resources	\$15,000.00	\$15,000.00	\$0.00
Baker	Dupont Canada Ltd.	\$15,606.00	\$165,681.00	\$150,075.00
Goldstream	Bethlehem Resources	\$200,000.00	\$1,048,056.00	\$848,056.00
Venus Mine	United Keno Mines	\$7,000.00	\$7,000.00	\$0.00
Taurus	Cassiar Gold Corp/Inter Taurus	\$10,000.00	\$10,000.00	\$0.00
Diamc	Silence Lake	\$10,000.00	\$10,000.00	\$0.00
Baymag	Baymag Mines Co. Ltd.	\$15,101.71	\$836,048.00	\$820,946.29
Ashlu Gold	Osprey Mining and Exploration	\$10,000.00	\$10,000.00	\$0.00
Four-J/Lussier	Georgia Pacific Canada Ltd.	\$20,000.00	\$20,000.00	\$0.00
Perlite	Perlite Canada Inc.	\$0.00	\$0.00	\$0.00
Union Mine	Pearl Resources Ltd.	\$5,000.00	\$5,000.00	\$0.00
Blackdome	J- Pacific Gold Inc	\$100,000.00	\$100,000.00	\$0.00
Nickel Plate	Barrick Gold Inc.	\$1,671,754.00	\$96,500,000.00	\$94,828,246.00
Cheni/Lawyers	Cheni Gold Mines Ltd	\$15,000.00	\$15,000.00	\$0.00

Johnny Mountain	Skyline Gold Corp.	\$562,310.33	\$319,000.00	\$0.00
Premier	Boliden	\$3,000,000.00	\$15,909,000.00	\$12,909,000.00
Parson Barite	Highwood Res/Sherritt	\$10,000.00	\$53,680.00	\$43,680.00
Moberly Silica	HCA Mountain Minerals			\$0.00
Candorado	Candorado Mines	\$0.00	\$3,000,000.00	\$3,000,000.00
Samatosum	FQM Akubra Inc.	\$7,800,000.00	\$7,276,145.00	\$0.00
South Fork Silica	331670 BC Ltd.	\$1,000.00	\$1,000.00	\$0.00
Barrier Feldspar	Kanspar	\$20,000.00	\$20,000.00	\$0.00
Golden Bear	Goldcorp	\$210,000.00	\$73,200.00	\$0.00
Horse Creek Silca	HiTest Sand Inc.	\$125,000.00	\$125,000.00	\$0.00
Sable/Shasta	Int'l Shasta/Sable Resources Ltd.	\$164,000.00	\$1,110,000.00	\$946,000.00
Snip	Barrick Gold Inc.	\$1,000,000.00	\$2,940,833.00	\$1,940,833.00
CIL	Clayburn Industries	\$1,000.00	\$5,000.00	\$4,000.00
Cirque Mine	Cirque Operating Corp.	\$220,000.00	\$220,000.00	\$0.00
Gypo Pit	Pacific Silica and Rock Quarry	\$2,500.00	\$2,500.00	\$0.00
Eskay Creek	Barrick Gold Corp.	\$3,774,000.00	\$118,514,270.00	\$114,740,270.00
QR	Barkerville Gold Mines	\$2,860,000.00	\$10,250,000.00	\$7,390,000.00
Elk / Siwash	Almaden/Fairfield Minerals	\$150,000.00	\$61,816.00	\$0.00
Mount Polley	Mt Polley Mines Ltd.	\$19,050,011.00	\$29,500,000.00	\$10,449,989.00
Huckleberry	Huckleberry Mines Ltd.	\$26,000,000.00	\$59,000,000.00	\$33,000,000.00
Kemess South	AuRico	\$18,520,000.00	\$17,144,663.00	\$0.00
Bralorne	Bralorne Gold Mines Ltd.	\$115,000.00	\$1,114,607.00	\$999,607.00
Bow mines (Tailings)	Golden Dawn Minerals Inc.	\$50,000.00	\$70,000.00	\$20,000.00
Crystal Graphite	Eagle Graphite Corporation	\$0.00	\$0.00	\$0.00
Ainsworth Mill	Blue Bird Mining	\$5,000.00	\$250,000.00	\$245,000.00
Brittania	BC Government			\$0.00
Quinto Mine	Consolidated/Quinto Mining Corp.	\$70,000.00	\$5,000.00	\$0.00
Blue Bell	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
HB Tailings	Regional Distirct East Kootenay	\$0.00	\$0.00	\$0.00
Churchill Copper	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
Max Molybdenum	Forty Two Metals Inc.	\$730,000.00	\$1,313,403.00	\$583,403.00
New Afton	New Gold Inc.	\$9,500,000.00	\$9,681,190.00	\$181,190.00
Galore Creek	Teck Metals Ltd.	\$1,167,000.00	\$1,167,000.00	\$0.00
Ruby Creek	Adanac Molybdenum Corp.	\$100,000.00	\$100,000.00	\$0.00

Tulsequah	Chieftain Metals Inc.	\$1,200,000.00	\$1,200,000.00	\$0.00
Zip Mill	Huakan International Mining Inc.	\$235,000.00	\$303,558.00	\$68,558.00
Lexington-Grenoble	Huakan International Mining Inc.	\$215,000.00	\$168,232.00	\$0.00
Yellowjacket	EaglePlains	\$150,000.00	\$150,000.00	\$0.00
Mount Milligan	Terrain Metals Corp.	\$30,000,000.00	\$35,171,000.00	\$5,171,000.00
Dome Mountain	Gavin Mines Ltd.	\$579,000.00	\$1,360,000.00	\$781,000.00
Bonanza Ledge	Barkerville Gold Mines	\$960,000.00	\$4,446,000.00	\$3,486,000.00
Treasure Mountain	Huldra Silver Inc.	\$505,100.00	\$505,100.00	\$0.00
Red Chris	Red Chris Operating Corp.	\$12,000,000.00	\$9,774,073.00	\$0.00
Yellow Giant (Tel)	Banks Island Gold Ltd.	\$355,000.00	\$283,700.00	\$0.00

\$892,153,070.51	\$2,133,597,234.18	\$1,262,769,510.00
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\*bonds greater than liability have an undersecure of zero (not minus)



## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Tuesday, May 24, 2016 3:18 PM  
**To:** Haslam, David GCPE:EX; Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX  
**Cc:** Dalal, Suntanu GCPE:EX; Plummer, Glen GCPE:EX; Robb, Peter L. MEM:EX; Hoffman, Al MEM:EX; Gordon, Matt GCPE:EX  
**Subject:** RE: Media Request\_Kamloops Infonews\_Mine Reclamation Security

Approved

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**From:** Haslam, David GCPE:EX  
**Sent:** Tuesday, May 24, 2016 1:41 PM  
**To:** Wallace-Deering, Eric MEM:EX; Denniston, Tristan M MEM:EX; Lewis, Ted MEM:EX  
**Cc:** Dalal, Suntanu GCPE:EX; Plummer, Glen GCPE:EX; Robb, Peter L. MEM:EX; Hoffman, Al MEM:EX; Gordon, Matt GCPE:EX  
**Subject:** FW: Media Request\_Kamloops Infonews\_Mine Reclamation Security

Hi all – The reporter is writing Kamloops angle on the OAG report. Note the info I sent to him on Friday (list of mines and fact sheet).

**Reporter:** Brendan Kergin - 250.819.6089 – Kamloops infonews.ca

**Deadline:** 3 pm

**Request:** Following up on information sent last week (see attached list and fact sheet below). I'm looking for a bit more information on the nuts and bolts of how this works in laymens' terms. How is the money held? Who is holding it? Also, is it used for insurance purposes in case of disasters or smaller incidents (like Mount Polly)? What about financially unstable mines that may go out of business before reaching the end of the mine's expected life For Highland Valley Copper, why such a discrepancy? Is there any sort of estimate for a fund for Ajax Mine? If not, when might one be made?

**Recommendation:** GCPE email reporter.

**Response:** Approved by ?.

**How is the money held and who is holding it?**

The funding is held by the Ministry of Finance on behalf of the Ministry of Energy and Mines (MEM). The total reclamation security held is published each year in the Chief Inspector of Mines Annual Report. The Province currently holds \$1.07 billion in securities (March 2016).

Security bonding is not the only method by which government manages risk. Of even greater importance is the regulatory practice of requiring mining companies to manage and reduce their environmental liabilities through the development of detailed environmental protection and reclamation plans prior to mining, annual monitoring and reporting, and progressive reclamation through the life of mine.

**Is it used for insurance purposes in case of disasters or smaller incidents (like Mount Polly)?**

Financial security is meant to cover the costs of reclamation, closure and ongoing monitoring and management requirements for a mine, in the event that a company defaulted on its obligations.

The security does not cover the costs of failure or clean-up of disasters. Mine companies remain responsible for these costs.

**What about financially unstable mines that may go out of business before reaching the end of the mine's expected life.**

Security bonds can be evaluated and increased at any time by the Chief Inspector of Mines. This applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

**For Highland Valley Copper, why such a discrepancy?**

It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.

Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.

For example, Teck (which owns Highland Valley Copper) and Barrick are responsible for 69% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

**Is there any sort of estimate for a fund for Ajax Mine? If not, when might one be made?**

The Ajax Mine is currently in the Environmental Assessment process. A liability cost estimate is required at the Mines Act permitting stage. The application for a Mines Act permit has not yet been submitted. Financial security requirements are established by the Chief Inspector of Mines as a condition of a Mines Act permit.

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**From:** Haslam, David GCPE:EX

**Sent:** Friday, May 20, 2016 12:19 PM

**To:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX

**Cc:** Gilmore, Dan GCPE:EX; Plummer, Glen GCPE:EX; Suric, Michelle J GCPE:EX

**Subject:** Media Request\_Kamloops Infonews\_Mine Reclamation Security

Hi all – Kamloops Infonews reporter Brendan Kergin requested the list. No questions at this time. Provided attached and info below.

- Mining companies in British Columbia are liable for reclamation costs of mine sites.

- As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.
- It is important for our government to build greater public confidence in mining so that if a company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unreasonable amount of these costs.
- The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- Statutory decision-makers, not the minister, determine the amount of the security bonds required for each mine. The Ministry of Energy and Mines reviews and updates security amounts as project plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
- The Ministry of Energy and Mines accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis.
- Following the release of the Auditor General's report, government committed to reviewing its policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- Minister of Energy and Mines Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Thursday, May 5, 2016 2:57 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** FOR APPROVAL - Media Request: Justine and Sophie re. financial security shortfall...

Good Afternoon Minister,

Here are the underfunded liability numbers you had promised to provide Sophie Rosseau and Justine Hunter with from the media avail on Tuesday.

Please let me know your thoughts.

Regards,  
Tristan

**Reporter:** Justine Hunter – Globe & Mail

**Reporter:** Sophie Rousseau – Radio Canada

**Deadline:** ASAP today.

**Request:** Of the \$1.2-billion shortfall referenced, minister said 75 per cent of that is for two companies – Teck and Barrick. Can we get specifics please?

**Recommendation:** Have GCPE provide information be email.

**Response:**

As of March 31, 2014:

Underfunded Liability

Teck: \$737,036,092

Barrick Gold Inc: \$212,082,349

Total: \$949,118,441

Approximately 79% of the \$1.2 billion underfunded liability.

Note:

- The liability the Office of the Auditor General report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- The Ministry of Energy and Mines requires financial security on all Mines Act permits. The security is reviewed and updated as required, generally every five years or when there is a major change in the approved mine plan

or reclamation program. This is done so that should, for whatever reason, a mine not be able to fully fund all reclamation costs, British Columbians will not be the ones covering the costs.

- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The Ministry of Energy and Mines collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances, the Ministry of Energy and Mines has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time. Teck and Barrick Gold Inc. are two such examples. The ministry has made decisions in the past that those companies aren't going anywhere. They've got a huge asset base, and it is not essential to have as much money in the bank with those particular companies.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Monday, May 16, 2016 5:32 PM  
**To:** Dalal, Suntanu GCPE:EX  
**Cc:** Lewis, Ted MEM:EX; Wallace-Deering, Eric MEM:EX; Haslam, David GCPE:EX; Gilmore, Dan GCPE:EX; Plummer, Glen GCPE:EX; Robb, Peter L. MEM:EX; Amann-Blake, Nathaniel MEM:EX  
**Subject:** RE: Media Request: APTN on UBCIC report...

Approved with highlighted edits

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**From:** Dalal, Suntanu GCPE:EX  
**Sent:** Monday, May 16, 2016 4:03 PM  
**To:** Denniston, Tristan M MEM:EX  
**Cc:** Lewis, Ted MEM:EX; Wallace-Deering, Eric MEM:EX; Haslam, David GCPE:EX; Gilmore, Dan GCPE:EX; Plummer, Glen GCPE:EX; Robb, Peter L. MEM:EX; Amann-Blake, Nathaniel MEM:EX  
**Subject:** Media Request: APTN on UBCIC report...

**Reporter:** Cara McKenna – APTN National News

**Deadline:** Noon Tuesday.

**Request:** The Union of B.C. Indian Chiefs issues a study by economist Robyn Allan regarding the OAG report -- I was hoping for a response from Minister Bennett on whether the ministry will be taking this into account as well as the recommendations from the audit.

**Recommendation:** Have GCPE provide information be email.

**Response:** Approved by Nate.

- The liability the Office of the Auditor General and UBCIC reports refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- We have already started work to address this. The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago.
- Since 2011, the total amount of security held has more than doubled. Bottom line – Minister Bennett has said we can do better and government will keep that commitment.
- Financial security is determined by assessing costs of reclamation in the context of a company's ability to pay and financial track record. Much of the shortfall in financial security is due to MEM's determination that total reclamation costs can be borne by a particular company
- Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.

- Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.
- .

## **Background for the MO:**

### ***NEWS RELEASE***

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Page 270 to/à Page 271

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## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Monday, May 16, 2016 9:50 PM  
**To:** Dalal, Suntanu GCPE:EX  
**Cc:** Amann-Blake, Nathaniel MEM:EX; Plummer, Glen GCPE:EX; Lewis, Ted MEM:EX; Wallace-Deering, Eric MEM:EX; Haslam, David GCPE:EX; Gilmore, Dan GCPE:EX; Robb, Peter L. MEM:EX  
**Subject:** Re: For Review and Approval: Media Request: CBC PG on UBCIC report...

Approved

Sent from my iPhone

On May 16, 2016, at 6:42 PM, Dalal, Suntanu GCPE:EX <[Suntanu.Dalal@gov.bc.ca](mailto:Suntanu.Dalal@gov.bc.ca)> wrote:

For the response to q1 I've made the same edit from the APTN request.

Suntanu Dalal  
Media Relations  
Ministry of Energy and Mines  
250 952-0628

On May 16, 2016, at 5:40 PM, Robb, Peter L. MEM:EX <[Peter.Robb@gov.bc.ca](mailto:Peter.Robb@gov.bc.ca)> wrote:

approved

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**From:** Dalal, Suntanu GCPE:EX  
**Sent:** Monday, May 16, 2016 4:21 PM  
**To:** Amann-Blake, Nathaniel MEM:EX; Robb, Peter L. MEM:EX  
**Cc:** Bose, Sara MEM:EX; Plummer, Glen GCPE:EX; Howe, Diane J MEM:EX; Hoffman, Al MEM:EX  
**Subject:** For Review and Approval: Media Request: CBC PG on UBCIC report...  
Nate/Peter,  
Response to Question 1 is the same as for the APTN request Nate just approved.  
Response to Question 2 is all from MOE except for the first bullet.  
OK with you?  
**Reporter:** George Baker – CBC Radio Prince George  
**Deadline:** ASAP today.  
**Request:** Does MEM have a response to the UBCIC report regarding the OAG report? Note the report's author, Robyn Allan, will be on Daybreak North Tuesday morning.  
1). What does the ministry make of the claim in the report that "as at March 31, 2014, the Ministry of Energy and Mines had an unfunded liability for site reclamation of \$1.3 billion"?  
2). What does the ministry make of this remark "There is no requirement in BC that mining companies undertake an environmental risk assessment that examines the risk and related environmental cost of possible accidents at their mine sites. Neither is there a requirement that companies provide proof to regulators that

access to sufficient financial resources, including insurance, exists to meet obligations if an environmental harm event occurs."?

**Recommendation:** Have GCPE provide information by email.

**Response:**

*1). What does the ministry make of the claim in the report that "as at March 31, 2014, the Ministry of Energy and Mines had an unfunded liability for site reclamation of \$1.3 billion"?*

- ? The liability the Office of the Auditor General and UBCIC reports refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- ? We have already started work to address this. The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago.

· Since 2011, the total amount of security held has more than doubled. Bottom line – Minister Bennett has said we can do better and government will keep that commitment.

· Financial security is determined by assessing costs of reclamation in the context of a company's ability to pay and financial track record. Much of the shortfall in financial security is due to MEM's determination that total reclamation costs can be borne by a particular company

- ? Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.
- ? Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- ? There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.
- ? Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

*2). What does the ministry make of this remark "There is no requirement in BC that mining companies undertake an environmental risk assessment that examines the risk and related environmental cost of possible accidents at their mine sites. Neither is there a requirement that companies provide proof to regulators that access to sufficient financial resources, including insurance, exists to meet obligations if an environmental harm event occurs."?*

- ? Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- ? B.C. has a polluter-pay model to ensure those who are responsible for spills are also responsible for cleaning them up. This model is designed to keep the cost of response off of taxpayers.
- ? The Spill Cost Recovery Regulation sets out the types of costs that government can recover from a responsible party following a spill. This regulation, under the Environmental Management Act, is the legal mechanism for the polluter pays principle in British Columbia.
- ? The fact is, barring the Mount Polley tailings storage facility dam failure, this province has not seen a significant mine-related environmental incident in

decades. Further, the number of environmental and health and safety related incidents at mines in British Columbia has continued to decline.

- ? There are a number of hard-learned lessons that have come to light as a result of the Mount Polley incident. And while we can't turn back the clock, we are taking action to tackle these issues head-on.
- ? Government has recently introduced legislation to establish a world-leading provincial spill response regime for British Columbia.
- ? One component that government is considering in its proposed spills regime is the creation of a fund that would ensure effective response is available if the spiller is unable, unwilling or unidentified.
- ? Our proposal is not a liability/insurance fund. It is a response and recovery fund to ensure money is immediately available to begin (and complete) a proper response.
- ? At this time, the mechanisms for establishing this fund have not yet been determined.

### **Background for the MO:**

### ***NEWS RELEASE***

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## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Wednesday, May 25, 2016 5:04 PM  
**To:** Bennett, Bill MEM:EX; XT:Bennett, B LP:IN  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** RE: FOR APPROVAL - Revised Media Request: CIM Magazine on OAG report...

Good Evening Minister,

I have highlighted the new information below and provided the original for your reference as well. Note, that the majority of the changes are in the reclamation liability section and the messaging in the first part has been tightened up to reflect recent KMs.

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Good Afternoon Minister,

We have the following media request on the underfunded liability from the Ministry and C&E.

GCPE has suggested you speak with the reporter.

Please let me know your thoughts.

Regards,  
Tristan

**Reporter:** Kate Sheridan – CIM Magazine - 514-632-1883

**Deadline:** 6 p.m. PT today.

**Request:** I've gone through the report and read the ministry's press release and I have a few clarifying questions about some points: specifically, regarding the \$1 billion gap in the reclamation liability fund noted in the report and a bit more detail about the government's position on keeping compliance and enforcement under MEM. I also wanted to check if there were any more specific timeframes available for acting on the recommendations in the report, and wanted to check on the status of the tailings storage facility portion of the Code review. I understand that the ministry has answered a lot of questions about the report, and the written responses provided are very extensive, but I'm hoping to get a bit more detail on these points. It's an issue our readership undoubtedly cares about, and these seemed to be some of the most crucial points from the report and the responses.

**Recommendation:** Have MBB speak to the reporter, if available.

**Response:** Approved by Peter Robb.

### High level OAG Report Key Messages:

- Government believes that a new, separate compliance and enforcement board will strengthen regulatory oversight of the mining sector.

- Government will set up within 90 days such a board to create greater integration between the Ministry of Environment and the Ministry of Energy and Mines as well as the Environmental Assessment Office.
- It is clear that ‘business as usual’ on mine sites in British Columbia is not good enough, and that is why we are implementing all 43 combined recommendations from the Auditor General, the Independent Expert Panel and the Chief Inspector of Mines.
- While we embrace the majority of recommendations in the audit report, we do not believe that government’s compliance and enforcement regimes place the environment at risk.
- We believe the Mount Polley disaster, despite being unprecedented in modern B.C. history and despite the hidden, sub-surface cause of the accident, is evidence that improvements in regulation are necessary to increase protection against the unforeseen.
- We are committed to improving regulatory oversight and reducing the margin of risk so that Mount Polley may never happen again.
- In addition, our government is currently reviewing the Health, Safety and Reclamation Code for Mines in B.C.
  - Work on the tailings storage facilities portion is expected to be complete this spring with revisions in place by mid-2016.
  - Government will also work with the Association of Professional Engineers to ensure that recommendations at them are implemented by spring 2017.
- There have been recent changes to the Mines Act which included administrative and monetary penalties as a more flexible and responsive compliance and enforcement tool.
  - The maximum penalties were raised to \$1 million and/or up to three years imprisonment.

**Regarding the \$1 billion gap in the reclamation liability fund noted in the report:**

- Mining companies in British Columbia are liable for reclamation costs of mine sites.
- As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.
- It is important for our government to build greater public confidence in mining so that if a company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unreasonable amount of these costs.
- The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- Statutory decision-makers, not the minister, determine the amount of the security bonds required for each mine. The Ministry of Energy and Mines reviews and updates security amounts as project plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
- The Ministry of Energy and Mines accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector of Mines.
- In some situations, such as mine sites where the company’s financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis.

- Following the release of the Auditor General's report, government committed to reviewing its policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- Energy and Mines Minister Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

**A bit more detail about the government's position on keeping compliance and enforcement under MEM:**

- Government believes that a new, separate compliance and enforcement board will strengthen regulatory oversight of the mining sector.
  - Government will set up within 90 days such a board to create greater integration between the Ministry of Environment and the Ministry of Energy and Mines as well as the Environmental Assessment Office.

**I also wanted to check if there were any more specific timeframes available for acting on the recommendations in the report:**

- Government is currently reviewing the Health, Safety and Reclamation Code for Mines in B.C.:
  - Work on the tailings storage facilities portion is expected to be complete this spring with revisions in place by mid-2016.
  - Government will also work with the Association of Professional Engineers to ensure that recommendations at them are implemented by spring 2017.

**Wanted to check on the status of the tailings storage facility portion of the Code review:**

- Government is currently reviewing the Health, Safety and Reclamation Code for Mines in B.C. and expects the tailings storage facility portion of the Code Review to be completed this spring, with revisions expected to be in place by mid-2016.

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**Reporter:** Kate Sheridan – CIM Magazine - 514-632-1883

**Deadline:** Friday.

**Request:** I've gone through the report and read the ministry's press release and I have a few clarifying questions about some points: specifically, regarding the \$1 billion gap in the reclamation liability fund noted in the report and a bit more detail about the government's position on keeping compliance and enforcement under MEM. I also wanted to check if there were any more specific timeframes available for acting on the recommendations in the report, and wanted to check on the status of the tailings storage facility portion of the Code review. I understand that the ministry has answered a lot of questions about the report, and the written responses provided are very extensive, but I'm hoping to get a bit more detail on these points. It's an issue our

readership undoubtedly cares about, and these seemed to be some of the most crucial points from the report and the responses.

**Recommendation:** Have MBB speak to the reporter, if available.

**Response:** Approved by Peter Robb.

**High level OAG Report Key Messages:**

- We are accepting all recommendations made by the report with the exception of one, which we will seriously consider.
- It is clear that ‘business as usual’ on mine sites in British Columbia is not good enough, and that is why we are implementing all 43 combined recommendations from the Auditor General, the Independent Expert Panel and the Chief Inspector of Mines.
- While we embrace the majority of recommendations in the audit report we do not believe that government’s compliance and enforcement regimes place the environment at risk.
- Government does not at this time agree with the OAG’s main recommendation to reorganize compliance and enforcement into a separate ministry or agency.
- We believe the Mt Polley disaster, despite being unprecedented in modern B.C. history and despite the hidden, sub-surface cause of the accident, is evidence that improvements in regulation are necessary to increase protection against the unforeseen.
- We are committed to improving regulatory oversight and reducing the margin of risk so that Mount Polley may never happen again.
- Government does however, believe that a new, separate compliance and enforcement board will strengthen regulatory oversight of the mining sector.
  - Government will set up within 90 days such a board to create greater integration between the Ministry of Environment and the Ministry of Energy and Mines as well as the EAO.
- In addition, our Government is currently reviewing the Health, Safety and Reclamation Code for Mines in BC.
  - Work on the tailings storage facilities portion is expected to be complete this spring with revisions in place by mid-2016.
  - Government will also work with the Association of Professional Engineers to ensure that recommendations at them are implemented by Spring 2017.
- There have been recent changes to the Mines Act which included administrative and monetary penalties as a more flexible and responsive Compliance and Enforcement tool.
  - The maximum penalties were raised to \$1 million and/or up to three years imprisonment.

**Regarding the \$1 billion gap in the reclamation liability fund noted in the report:**

- The liability the Office of the Auditor General report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- We have already started work to address this. The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago.
- Since 2011, the total amount of security held has more than doubled. Bottom line – I have said we can do better and government will keep that commitment.
- Financial security is determined by assessing costs of reclamation in the context of a company’s ability to pay and financial track record. Much of the shortfall in financial security is due to the ministry’s determination that total reclamation costs can be borne by a particular company.



- Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.
- Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

**A bit more detail about the government's position on keeping compliance and enforcement under MEM:**

- We do not, at this time, agree with the Office of the Auditor General's main recommendation to reorganize the Ministry of Energy and Mines compliance and enforcement programs into a separate ministry or agency.
- However, we agree that a new, separate compliance and enforcement board will strengthen government's regulatory oversight of the mining sector and will, within 90 days (from the May 3, 2016 release of the OAG report), set up a mining compliance and enforcement board.
- This board will create greater integration between the Ministry of Energy and Mines and the Ministry of Environment, as well as with the Environmental Assessment Office.

**I also wanted to check if there were any more specific timeframes available for acting on the recommendations in the report:**

- Government is currently reviewing the Health, Safety and Reclamation Code for Mines in BC.
  - Work on the tailings storage facilities portion is expected to be complete this spring with revisions in place by mid-2016.
  - Government will also work with the Association of Professional Engineers to ensure that recommendations at them are implemented by Spring 2017.

**Wanted to check on the status of the tailings storage facility portion of the Code review:**

- Government is currently reviewing the Health, Safety and Reclamation Code for Mines in BC and expects the tailings storage facility portion of the Code Review to be completed this spring, with revisions expected to be in place by mid-2016.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Thursday, April 28, 2016 3:14 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Lewis, Ted MEM:EX; Haslam, David GCPE:EX; Wallace-Deering, Eric MEM:EX  
**Subject:** FYI - media request - Juneau Empire - Tulsequah Chief Mine clean up

**Good Afternoon Minister,**

MOE is lead but flipping by you FYI. We've included messaging to the last question, highlighted below.

**Reporter:** Lisa Phu, Juneau Empire [lisa.phu@juneauempire.com](mailto:lisa.phu@juneauempire.com) 907-523-2246

**Deadline:** 6pm

**Request:** Questions re: Chieftain Metals

**Response:**

Back in Nov. BC officials told Chieftain Metals to clean up the Tulsequah Chief Mine (<http://www.cbc.ca/news/canada/north/tulsequah-chief-mine-inspection-1.3323686>). The company was given 90 days to submit a plan. Did the company ever submit one?

- A plan was submitted to address non-compliance with the EA Certificate, MEM permit and EMA permit.

If so, what is the plan and where is Chieftain at in regards to the clean up?

- In regards to the EMA permit, Chieftain has submitted further assessment work to MOE and MEM this year:
  - An updated geochemical source assessment of ARD loadings.
  - A review of ARD mitigation work completed to date and evaluation of possible ARD mitigation strategies for future implementation
  - A summary of the water treatment plant optimization study undertaken
  - A review of estimated costs for ARD mitigation strategies presented.
  - An updated monitoring plan, and summary of latest water quality data

If not, what is your office doing about it? How is your office enforcing the clean up order? Are there fines, penalties?

- MOE has been working with MEM to consider further orders by the Chief Inspector. MOE is considering the submitted monitoring plan update and may impose additional monitoring for 2016 above what is indicated in the plan. The requirement for the treatment plant authorised in the permit was based on the company moving forward with development of the property, and the plant was intended to treat effluent generated as a result of that development. Options for ordering site clean-up may be considered in the future if there is no indication that the project is going to proceed.

Who ultimately is responsible for cleaning up the BC mine? Chieftain recently defaulted on a \$4 million payment towards a loan (<http://www.chieftainmetals.com/2016/04/06/chieftain-metals-corp-provides-update-on-corporate-debt/>). With its financial issues, it doesn't appear that cleaning up is a top priority. Will the BC gov take responsibility for cleaning it up?

- Companies are legally required to reclaim all lands they disturb by mining, or through exploration.
- In 1969, B.C. became one of the first provinces in Canada to enact reclamation legislation, and today B.C. is known throughout the world for our reclamation practices.

- The intent of reclamation legislation is to ensure that mining operations in B.C. do not leave an ongoing legacy or require public funds for clean-up activities.
- The Province requires companies to post a reclamation security as part of Mines Act permit authorizations.
- Because these securities are intended to reflect the reclamation liability for a mine or exploration site, they are determined by inspectors of mines on a site-by-site basis and may change over the life of a mining operation.
- This security is returned only once the site has been reclaimed to a satisfactory level and there are no ongoing monitoring or maintenance requirements.
- If a mine site has not been reclaimed properly, the security money may be used to complete the reclamation work.
- If the security was not enough to cover the costs of reclamation, outstanding liability would be reverted to the Province.

**Michelle Suric, MA**  
**Public Affairs Officer**

Ministry of Energy & Mines | Government of British Columbia

☎ 250.952.0173 office | 778.677.8570 mobile

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**From:** Haslam, David GCPE:EX

**Sent:** Thursday, April 28, 2016 11:22 AM

**To:** Gilmore, Dan GCPE:EX; Wallace-Deering, Eric MEM:EX

**Cc:** Denniston, Tristan M MEM:EX; Lewis, Ted MEM:EX; Suric, Michelle J GCPE:EX

**Subject:** RE: media request - Juneau Empire - Tulsequah Chief Mine clean up

Dan – what's the answer to this question. :

Who ultimately is responsible for cleaning up the BC mine?

Chieftain recently defaulted on a \$4 million payment towards a loan

(<http://www.chieftainmetals.com/2016/04/06/chieftain-metals-corp-provides-update-on-corporate-debt/>). With its financial issues, it doesn't appear that cleaning up is a top priority. Will the BC gov take responsibility for cleaning it up?

---

**From:** Gilmore, Dan GCPE:EX

**Sent:** Thursday, April 28, 2016 11:20 AM

**To:** Wallace-Deering, Eric MEM:EX

**Cc:** Denniston, Tristan M MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX; Suric, Michelle J GCPE:EX

**Subject:** FW: media request - Juneau Empire - Tulsequah Chief Mine clean up

Eric,

As discussed, MOE is lead but flipping by you FYI. Nate reviewed from our perspective and has approved.

reporter: Lisa Phu, Juneau Empire [lisa.phu@juneauempire.com](mailto:lisa.phu@juneauempire.com) 907-523-2246

deadline: 6pm

request: Questions re: Chieftain Metals

Response:

Back in Nov. BC officials told Chieftain Metals to clean up the Tulsequah Chief Mine (<http://www.cbc.ca/news/canada/north/tulsequah-chief-mine-inspection-1.3323686>). The company was given 90 days to submit a plan. Did the company ever submit one?

A plan was submitted to address non-compliance with the EA Certificate, MEM permit and EMA permit.

If so, what is the plan and where is Chieftain at in regards to the clean up?

In regards to the EMA permit, Chieftain has submitted further assessment work to MOE and MEM this year:

- o An updated geochemical source assessment of ARD loadings.
- o A review of ARD mitigation work completed to date and evaluation of possible ARD mitigation strategies for future implementation
- o A summary of the water treatment plant optimization study undertaken
- o A review of estimated costs for ARD mitigation strategies presented.
- o An updated monitoring plan, and summary of latest water quality data

It not, what is your office doing about it?

How is your office enforcing the clean up order? Are there fines, penalties?

MOE has been working with MEM to consider further orders by the Chief Inspector. MOE is considering the submitted monitoring plan update and may impose additional monitoring for 2016 above what is indicated in the plan. The requirement for the treatment plant authorised in the permit was based on the company moving forward with development of the property, and the plant was intended to treat effluent generated as a result of that development. Options for ordering site clean-up may be considered in the future if there is no indication that the project is going to proceed.

Who ultimately is responsible for cleaning up the BC mine?

Chieftain recently defaulted on a \$4 million payment towards a loan

(<http://www.chieftainmetals.com/2016/04/06/chieftain-metals-corp-provides-update-on-corporate-debt/>). With its financial issues, it doesn't appear that cleaning up is a top priority. Will the BC gov take responsibility for cleaning it up?

Cheers,

Dan

Dan Gilmore  
Communications Manager  
Ministry of Energy and Mines  
Office: 250-952-0667  
Cell: 250-213-2302

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**From:** Amann-Blake, Nathaniel MEM:EX

**Sent:** Thursday, April 28, 2016 9:30 AM

**To:** Gilmore, Dan GCPE:EX

**Cc:** Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Howe, Diane J MEM:EX

**Subject:** RE: media request - Juneau Empire - Tulsequah Chief Mine clean up

Looks good. we will likely be asked amount of bond. Diane, what do we hold for Chieftain?

---

**From:** Gilmore, Dan GCPE:EX  
**Sent:** Thursday, April 28, 2016 8:50 AM  
**To:** Amann-Blake, Nathaniel MEM:EX  
**Cc:** Robb, Peter L. MEM:EX; Haslam, David GCPE:EX  
**Subject:** FW: media request - Juneau Empire - Tulsequah Chief Mine clean up

Hi Nate,

MOE tried running this by Al and Diane but got out of office replies but regardless, discussed with David so running this by you as we are leading talks with Alaska. MBB may also want to be involved but need your okay before I send it up to the MO. Aiming to get this to the reporter by 1 pm if possible. It is currently waiting for Mark Z to review but Jennifer McGuire has reviewed and approved so it is unlikely to change.

Cheers,  
Dan

Dan Gilmore  
Communications Manager  
Ministry of Energy and Mines  
Office: 250-952-0667  
Cell: 250-213-2302 **From:** Karn, David GCPE:EX  
**Sent:** Wednesday, April 27, 2016 5:42 PM  
**To:** Zacharias, Mark ENV:EX  
**Cc:** McGuire, Jennifer ENV:EX; Cotton, Brian GCPE:EX; Smith, Curtis ENV:EX  
**Subject:** Media request - Juneau Empire - Chieftain Metals

Mark,

Response provided by Doug Hill. Jennifer McGuire and MEM.

reporter: Lisa Phu, Juneau Empire [lisa.phu@juneauempire.com](mailto:lisa.phu@juneauempire.com) **907-523-2246**

deadline: 6pm

request: Questions re: Chieftain Metals

Response:

Back in Nov. BC officials told Chieftain Metals to clean up the Tulsequah Chief Mine (<http://www.cbc.ca/news/canada/north/tulsequah-chief-mine-inspection-1.3323686>). The company was given 90 days to submit a plan. Did the company ever submit one?

A plan was submitted to address non-compliance with the EA Certificate, MEM permit and EMA permit.

If so, what is the plan and where is Chieftain at in regards to the clean up?

In regards to the EMA permit, Chieftain has submitted further assessment work to MOE and MEM this year:

- o An updated geochemical source assessment of ARD loadings.
- o A review of ARD mitigation work completed to date and evaluation of possible ARD mitigation strategies for future implementation
- o A summary of the water treatment plant optimization study undertaken

- o A review of estimated costs for ARD mitigation strategies presented.
- o An updated monitoring plan, and summary of latest water quality data

It not, what is your office doing about it?

How is your office enforcing the clean up order? Are there fines, penalties?

MOE has been working with MEM to consider further orders by the Chief Inspector. MOE is considering the submitted monitoring plan update and may impose additional monitoring for 2016 above what is indicated in the plan. The requirement for the treatment plant authorised in the permit was based on the company moving forward with development of the property, and the plant was intended to treat effluent generated as a result of that development. Options for ordering site clean-up may be considered in the future if there is no indication that the project is going to proceed.

Who ultimately is responsible for cleaning up the BC mine?

Chieftain recently defaulted on a \$4 million payment towards a loan

(<http://www.chieftainmetals.com/2016/04/06/chieftain-metals-corp-provides-update-on-corporate-debt/>). With its financial issues, it doesn't appear that cleaning up is a top priority. Will the BC gov take responsibility for cleaning it up?

The Ministry of Energy and Mines holds the bond for reclamation

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Wednesday, May 11, 2016 1:51 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX  
**Subject:** Re: Copper Mountain Information

Yes Minister, it's in the front flap

Sent from my iPhone

On May 11, 2016, at 1:49 PM, Bennett, Bill MEM:EX <[Bill.Bennett@gov.bc.ca](mailto:Bill.Bennett@gov.bc.ca)> wrote:

Do I have this in the binder? If not can I plz get it. Thanks

Sent from my BlackBerry 10 smartphone on the TELUS network.

---

**From:** Wallace-Deering, Eric MEM:EX  
**Sent:** Wednesday, May 11, 2016 12:25 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX; Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX  
**Subject:** Copper Mountain Information

Hi Minister,

Ahead of the visit to Copper Mountain this week, GCPE have put together some information in case questions arise about either the OAG Report's concerns about reclamation bonding, or concerns raised by First Nations about activities at the mine over the last few years.

Please let me know if you have any questions, concerns or edits before we forward this information.

Thanks,

Eric

### **AUDITOR GENERAL'S REPORT: CONCERNS RAISED ON RECLAMATION BONDING**

The Auditor-General criticized government for failing to publicly disclose that it has not collected enough security deposits from the industry to cover potential mining accidents. The OAG said the shortfall amounts to \$1.2-billion. Minister Bennett promised to take action to ensure that those deposits are collected.

### **KEY MESSAGES**

- The liability the Office of the Auditor General report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- The Ministry of Energy and Mines requires financial security on all Mines Act permits. The security is reviewed and updated as required, generally every five years or when there is a major change in the approved mine plan or reclamation program. This is done so that should,

for whatever reason, a mine not be able to fully fund all reclamation costs, British Columbians will not be the ones covering the costs.

- There are many factors in determining the appropriate security bond for mines and the OAG findings present an over-simplified view of that process.
- It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The Ministry of Energy and Mines collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.
- Under some circumstances, the Ministry of Energy and Mines has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default.
- The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time. Teck and Barrick Gold Inc. are two such examples. The ministry has made decisions in the past that those companies aren't going anywhere. They've got a huge asset base, and it is not essential to have as much money in the bank with those particular companies.

## **PREVIOUSLY RAISED CONCERNS BY FIRST NATIONS WITH COPPER MOUNTAIN**

Over the past few years, First Nations have raised a few different concerns about operations at the mine. Government continues to work with First Nations, the community and the company to address these concerns in a timely manner.

### **Key Messages**

- Staff with MEM, MOE and MARR continue to work with the company and local First Nations to ensure all concerns are addressed appropriately and in a timely manner.
- This government recognizes the importance of working with First Nations in British Columbia to develop a shared vision for land and resource use.
- Acting in partnership is the best way to provide a meaningful role in land and resource management for First Nations, and to provide for benefit-sharing and new economic opportunities.

### **Background**

#### **December 2014 Tailings Spill**

- At approximately 10:20 p.m. on December 10, 2014, the Chief Inspector of Mines was notified of a tailings spill at Copper Mtn. Mine near Princeton.
- The company did not advise Lower and Upper Similkameen FNs of the spill the night it occurred, but contacted both the next day. The chief and council of both bands were on site the next day.
- Staff with the ministries of Environment, and Energy and Mines were immediately deployed onsite to respond to the spill.
- In response to the spill, the province signed a Letter of Understanding (LOU) with the Upper and Lower Similkameen First Nations outlining the initiatives the province would undertake to determine what caused the spill, what its potential impacts were and what steps could be taken to prevent a similar event in the future.



- An independent contractor, AECOM, was hired to investigate the incident and submitted its report to government and the Upper and Lower Similkameen First Nations in the fall of 2015.
- On March 24, 2016 the Lower Similkameen First Nations, in a letter to Minister of Aboriginal Relations and Reconciliation John Rustad rejecting the report from AECOM and requesting funding to hire a new contractor to review the AECOM report.

#### January 2016 Waste Rock Dump failure

- On January 31, 2016, a waste rock dump on the mine site slumped blocking Copper Mountain road.
- The waste rock slump resulted in a deposit of natural overburden materials (soil, glacial till sediments, and organic debris) in a small non-fish bearing portion of Wolfe Creek which flows into the Similkameen River.
- On February 9, 2016 the Ministry of Environment (MOE) issued a Pollution Abatement Order to Copper Mountain Mine.
- On February 12, 2016 Copper Mountain Mine submitted an Action Plan to MOE proposing measures to recover and manage the landslide overburden materials, and to mitigate and monitor residual risks to the environment.
- Work to remove overburden materials from Wolf Creek was completed on February 26, 2016.
- Re-vegetation of disturbed areas and soil stockpiles are scheduled to be completed over the months of April and May 2016.
- The company continues to undertake water sampling at Wolf Creek.

#### Lower Similkameen Economic Benefits Agreement

- The Lower Similkameen have raised concerns with the province regarding the band's economic benefits agreement.

## Frankl, Dave MEM:EX

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**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Robb, Peter L. MEM:EX; Haslam, David GCPE:EX; Plummer, Glen GCPE:EX  
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### **Key Messages**

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## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Friday, May 27, 2016 11:50 AM  
**To:** Haslam, David GCPE:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Plummer, Glen GCPE:EX; Gilmore, Dan GCPE:EX  
**Subject:** RE: Reply to Wallesz Article  
**Attachments:** Cynthia Wallesz.pdf

Good Morning Glen,

Please see attached from the Minister to Ms. Wallesz for your reference.

Regards,  
Tristan

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**From:** Haslam, David GCPE:EX  
**Sent:** Friday, May 27, 2016 9:21 AM  
**To:** Denniston, Tristan M MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Plummer, Glen GCPE:EX; Gilmore, Dan GCPE:EX  
**Subject:** RE: Reply to Wallesz Article

On it.

---

**From:** Denniston, Tristan M MEM:EX  
**Sent:** Friday, May 27, 2016 9:10 AM  
**To:** Haslam, David GCPE:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX  
**Subject:** Reply to Wallesz Article

Good Morning David,

MBB would like to respond to yesterday's article by Cynthia Wallesz. Could your shop draft something up, he has asked to weave in the following

- The central claim in the letter is that "B.C.'s mining industry and how it is threatening water, ecosystems, salmon and jobs downstream in southeast Alaska." There is one mine being constructed in the area of BC covered by transboundary waters treaty, Brucejack, which is supported in both BC and Alaska. The only other mine operating is Red Chris which is xxx miles upstream mountain ranges away. This mine received 87% support from the local FN, the Tahltan. The evidence does not support the claim by the letter writer. The other mining projects in NW BC need environment certifs before they can proceed plus Mines Act permitting
- There is a process in place today for BC & Alaska to work together on the permitting and assessments of NW BC mines - provide some details on how this works...
- Yes, Mt Polley was a terrible accident and BC has embraced 42 of 43 recommendations from the two engineering investigations and the AG's audit, but aside from Mt Polley, where is the evidence that BC mines are not using BAT or BAP. BC mines are known around the world's for their excellence and environmental record. No jurisdiction is immune to accidents but one accident doesn't prove the whole jurisdiction is incompetent - one big accident in 100 years of mining - is there a mining jurisdiction anywhere in the US or

Canada that hasn't had an accident - the main thing is that BC learns from its accident and improves and that's what we're doing

- As for my email to her, there is no US state that has laws that require state companies to compensate Canada or Canadian companies for harm caused across the border. This is done through the legal system, as my letter states. Her comments in this regard are deliberately misleading.
- The Tulsequah Chief project is a an old mine site from the 19xx's long before most jurisdictions even had reclamation legislation or bonding. Alaska officials in my presence confirmed that no damage is being done to the Tulsequah River from this old mine site but nonetheless, our ministries of Environment and Mines have issued orders that the company is complying with to xxxxxxx
- Her slam of "BC's regulatory agencies" is ill-informed and frankly insulting. BC environmental protection and mine oversight has led to decades of safe operation for dozens of mines over the last 50 years. The independent Panel of geotechnical experts said clearly that no number of inspections would have uncovered the subsurface cause of the dam failure at MtPolley - it is wrong and unfair to mischaracterize what happened at Mt Polley as a failure of BC regulatory oversight
- We should explain how financial security is calculated like insurance where risk of a company not reclaiming is in part based on the financial viability of the company - just like a lender or insurer would do and what we are doing to revamp the system
- Provide some detail on MOU, the Letter of Cooperation, and the relationship BC has built with the State of Alaska
- And a personal comment about my background as an outdoors man, fisherman, Hunter and how values of British Columbians and Alaskans are so similar - BC's expect that we will protect Alaska waters and we will

**Tristan Denniston**

Ministerial Assistant to  
The Honourable Bill Bennett  
Minister of Energy and Mines  
250-387-5896

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Page 296

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Copyright

**Firth, Janet MEM:EX**

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**From:** Minister, MEM MEM:EX  
**Sent:** Tuesday, May 10, 2016 9:31 AM  
**To:** 'usag.alaska@gmail.com'  
**Cc:** Minister, ENV ENV:EX  
**Subject:** RE: Financial Assurances

Ref.: 94384

Ms. Cynthia Wallesz  
Executive Director  
United Southeast Alaska Gillnetters

Email: [usag.alaska@gmail.com](mailto:usag.alaska@gmail.com)

pc: [ENV.Minister@gov.bc.ca](mailto:ENV.Minister@gov.bc.ca)

Dear Ms. Wallesz:

Thank you for your March 29, 2016 follow-up email to our roundtable discussion in Juneau, Alaska on August 26, 2015.

As you may be aware, the Province of British Columbia and the State of Alaska signed a Memorandum of Understanding (MOU) on November 25, 2015 which formalizes our mutual commitment to protect and enhance our shared environment, including transboundary rivers, watersheds and fisheries. In order to implement the MOU, British Columbia and Alaska are working on a Statement of Cooperation (SOC) to enhance the protection of transboundary waters. This proactive approach will ensure that we are working together effectively on transboundary water quality, environmental assessments and permitting for mine projects, and reporting on mine discharges, operations and closure.

In response to the tailings storage facility (TSF) breach at Mount Polley mine, British Columbia is taking action to strengthen regulation of the mining industry in the Province. Changes specific to requirements for TSFs in the Health, Safety and Reclamation Code for Mines in British Columbia are anticipated to be implemented this year, including the introduction of a requirement for independent technical review boards. The Government is committed to implementing all recommendations from the Independent Expert Engineering Review Panel and Chief Inspector of Mines' investigations into the cause of the breach, and we have introduced changes to the *Mines Act* to enable administrative monetary penalties. The Province will also be posting all mine permits, inspection reports, annual dam safety inspections and annual reclamation reports online to ensure that the public has access to this information.

With respect to your specific question around financial losses from water quality contamination, British Columbia does not have legislation that specifically governs the provision of compensation in the circumstances you have identified. In such an event, compensation would need to be handled by agreement with the person or operators causing the pollution or through other means.

Protecting the water quality of transboundary watersheds is important to British Columbia, and we take seriously the further development of the strong working relationship with Alaska to address concerns being raised.



Thank you, again, for writing.

Sincerely,

Bill Bennett  
Minister of Energy and Mines

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Wednesday, May 25, 2016 5:04 PM  
**To:** Bennett, Bill MEM:EX; XT:Bennett, B LP:IN  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** RE: FOR APPROVAL - Revised Media Request: CIM Magazine on OAG report...

Good Evening Minister,

I have highlighted the new information below and provided the original for your reference as well. Note, that the majority of the changes are in the reclamation liability section and the messaging in the first part has been tightened up to reflect recent KMs.

---

Good Afternoon Minister,

We have the following media request on the underfunded liability from the Ministry and C&E.

GCPE has suggested you speak with the reporter.

Please let me know your thoughts.

Regards,  
Tristan

**Reporter:** Kate Sheridan – CIM Magazine - 514-632-1883

**Deadline:** 6 p.m. PT today.

**Request:** I've gone through the report and read the ministry's press release and I have a few clarifying questions about some points: specifically, regarding the \$1 billion gap in the reclamation liability fund noted in the report and a bit more detail about the government's position on keeping compliance and enforcement under MEM. I also wanted to check if there were any more specific timeframes available for acting on the recommendations in the report, and wanted to check on the status of the tailings storage facility portion of the Code review. I understand that the ministry has answered a lot of questions about the report, and the written responses provided are very extensive, but I'm hoping to get a bit more detail on these points. It's an issue our readership undoubtedly cares about, and these seemed to be some of the most crucial points from the report and the responses.

**Recommendation:** Have MBB speak to the reporter, if available.

**Response:** Approved by Peter Robb.

### High level OAG Report Key Messages:

- Government believes that a new, separate compliance and enforcement board will strengthen regulatory oversight of the mining sector.

- Government will set up within 90 days such a board to create greater integration between the Ministry of Environment and the Ministry of Energy and Mines as well as the Environmental Assessment Office.
- It is clear that ‘business as usual’ on mine sites in British Columbia is not good enough, and that is why we are implementing all 43 combined recommendations from the Auditor General, the Independent Expert Panel and the Chief Inspector of Mines.
- While we embrace the majority of recommendations in the audit report, we do not believe that government’s compliance and enforcement regimes place the environment at risk.
- We believe the Mount Polley disaster, despite being unprecedented in modern B.C. history and despite the hidden, sub-surface cause of the accident, is evidence that improvements in regulation are necessary to increase protection against the unforeseen.
- We are committed to improving regulatory oversight and reducing the margin of risk so that Mount Polley may never happen again.
- In addition, our government is currently reviewing the Health, Safety and Reclamation Code for Mines in B.C.
  - Work on the tailings storage facilities portion is expected to be complete this spring with revisions in place by mid-2016.
  - Government will also work with the Association of Professional Engineers to ensure that recommendations at them are implemented by spring 2017.
- There have been recent changes to the Mines Act which included administrative and monetary penalties as a more flexible and responsive compliance and enforcement tool.
  - The maximum penalties were raised to \$1 million and/or up to three years imprisonment.

**Regarding the \$1 billion gap in the reclamation liability fund noted in the report:**

- Mining companies in British Columbia are liable for reclamation costs of mine sites.
- As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.
- It is important for our government to build greater public confidence in mining so that if a company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unreasonable amount of these costs.
- The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- Statutory decision-makers, not the minister, determine the amount of the security bonds required for each mine. The Ministry of Energy and Mines reviews and updates security amounts as project plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
- The Ministry of Energy and Mines accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector of Mines.
- In some situations, such as mine sites where the company’s financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis.

- Following the release of the Auditor General's report, government committed to reviewing its policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- Energy and Mines Minister Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

**A bit more detail about the government's position on keeping compliance and enforcement under MEM:**

- Government believes that a new, separate compliance and enforcement board will strengthen regulatory oversight of the mining sector.
  - Government will set up within 90 days such a board to create greater integration between the Ministry of Environment and the Ministry of Energy and Mines as well as the Environmental Assessment Office.

**I also wanted to check if there were any more specific timeframes available for acting on the recommendations in the report:**

- Government is currently reviewing the Health, Safety and Reclamation Code for Mines in B.C.:
  - Work on the tailings storage facilities portion is expected to be complete this spring with revisions in place by mid-2016.
  - Government will also work with the Association of Professional Engineers to ensure that recommendations at them are implemented by spring 2017.

**Wanted to check on the status of the tailings storage facility portion of the Code review:**

- Government is currently reviewing the Health, Safety and Reclamation Code for Mines in B.C. and expects the tailings storage facility portion of the Code Review to be completed this spring, with revisions expected to be in place by mid-2016.

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**Reporter:** Kate Sheridan – CIM Magazine - 514-632-1883

**Deadline:** Friday.

**Request:** I've gone through the report and read the ministry's press release and I have a few clarifying questions about some points: specifically, regarding the \$1 billion gap in the reclamation liability fund noted in the report and a bit more detail about the government's position on keeping compliance and enforcement under MEM. I also wanted to check if there were any more specific timeframes available for acting on the recommendations in the report, and wanted to check on the status of the tailings storage facility portion of the Code review. I understand that the ministry has answered a lot of questions about the report, and the written responses provided are very extensive, but I'm hoping to get a bit more detail on these points. It's an issue our

readership undoubtedly cares about, and these seemed to be some of the most crucial points from the report and the responses.

**Recommendation:** Have MBB speak to the reporter, if available.

**Response:** Approved by Peter Robb.

**High level OAG Report Key Messages:**

- We are accepting all recommendations made by the report with the exception of one, which we will seriously consider.
- It is clear that ‘business as usual’ on mine sites in British Columbia is not good enough, and that is why we are implementing all 43 combined recommendations from the Auditor General, the Independent Expert Panel and the Chief Inspector of Mines.
- While we embrace the majority of recommendations in the audit report we do not believe that government’s compliance and enforcement regimes place the environment at risk.
- Government does not at this time agree with the OAG’s main recommendation to reorganize compliance and enforcement into a separate ministry or agency.
- We believe the Mt Polley disaster, despite being unprecedented in modern B.C. history and despite the hidden, sub-surface cause of the accident, is evidence that improvements in regulation are necessary to increase protection against the unforeseen.
- We are committed to improving regulatory oversight and reducing the margin of risk so that Mount Polley may never happen again.
- Government does however, believe that a new, separate compliance and enforcement board will strengthen regulatory oversight of the mining sector.
  - Government will set up within 90 days such a board to create greater integration between the Ministry of Environment and the Ministry of Energy and Mines as well as the EAO.
- In addition, our Government is currently reviewing the Health, Safety and Reclamation Code for Mines in BC.
  - Work on the tailings storage facilities portion is expected to be complete this spring with revisions in place by mid-2016.
  - Government will also work with the Association of Professional Engineers to ensure that recommendations at them are implemented by Spring 2017.
- There have been recent changes to the Mines Act which included administrative and monetary penalties as a more flexible and responsive Compliance and Enforcement tool.
  - The maximum penalties were raised to \$1 million and/or up to three years imprisonment.

**Regarding the \$1 billion gap in the reclamation liability fund noted in the report:**

- The liability the Office of the Auditor General report refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- We have already started work to address this. The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago.
- Since 2011, the total amount of security held has more than doubled. Bottom line – I have said we can do better and government will keep that commitment.
- Financial security is determined by assessing costs of reclamation in the context of a company’s ability to pay and financial track record. Much of the shortfall in financial security is due to the ministry’s determination that total reclamation costs can be borne by a particular company.

- Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.
- Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

**A bit more detail about the government's position on keeping compliance and enforcement under MEM:**

- We do not, at this time, agree with the Office of the Auditor General's main recommendation to reorganize the Ministry of Energy and Mines compliance and enforcement programs into a separate ministry or agency.
- However, we agree that a new, separate compliance and enforcement board will strengthen government's regulatory oversight of the mining sector and will, within 90 days (from the May 3, 2016 release of the OAG report), set up a mining compliance and enforcement board.
- This board will create greater integration between the Ministry of Energy and Mines and the Ministry of Environment, as well as with the Environmental Assessment Office.

**I also wanted to check if there were any more specific timeframes available for acting on the recommendations in the report:**

- Government is currently reviewing the Health, Safety and Reclamation Code for Mines in BC.
  - Work on the tailings storage facilities portion is expected to be complete this spring with revisions in place by mid-2016.
  - Government will also work with the Association of Professional Engineers to ensure that recommendations at them are implemented by Spring 2017.

**Wanted to check on the status of the tailings storage facility portion of the Code review:**

- Government is currently reviewing the Health, Safety and Reclamation Code for Mines in BC and expects the tailings storage facility portion of the Code Review to be completed this spring, with revisions expected to be in place by mid-2016.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Tuesday, May 24, 2016 2:56 PM  
**To:** Bennett, Bill MEM:EX; XT:Bennett, B LP:IN  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** 3 of 4 FOR APPROVAL - Media Request\_Kamloops Infonews\_Mine Reclamation Security  
**Attachments:** Mine Reclamation Security-Summary\_FINAL\_May 18\_2016.pdf

Good Afternoon Minister,

The reporter is writing Kamloops angle on the OAG report. Note the info below that GCPE sent to him on Friday (list of mines and fact sheet).

**Reporter:** Brendan Kergin - 250.819.6089 – Kamloops infonews.ca

**Request:** Following up on information sent last week (see attached list and fact sheet below). I'm looking for a bit more information on the nuts and bolts of how this works in laymens' terms. How is the money held? Who is holding it? Also, is it used for insurance purposes in case of disasters or smaller incidents (like Mount Polly)? What about financially unstable mines that may go out of business before reaching the end of the mine's expected life For Highland Valley Copper, why such a discrepancy? Is there any sort of estimate for a fund for Ajax Mine? If not, when might one be made?

**Recommendation:** GCPE email reporter.

**Response:**

**How is the money held and who is holding it?**

The funding is held by the Ministry of Finance on behalf of the Ministry of Energy and Mines (MEM). The total reclamation security held is published each year in the Chief Inspector of Mines Annual Report. The Province currently holds \$1.07 billion in securities (March 2016).

Security bonding is not the only method by which government manages risk. Of even greater importance is the regulatory practice of requiring mining companies to manage and reduce their environmental liabilities through the development of detailed environmental protection and reclamation plans prior to mining, annual monitoring and reporting, and progressive reclamation though the life of mine.

**Is it used for insurance purposes in case of disasters or smaller incidents (like Mount Polly)?**

Financial security is meant to cover the costs of reclamation, closure and ongoing monitoring and management requirements for a mine, in the event that a company defaulted on its obligations.

The security does not cover the costs of failure or clean-up of disasters. Mine companies remain responsible for these costs.

**What about financially unstable mines that may go out of business before reaching the end of the mine's expected life.**

Security bonds can be evaluated and increased at any time by the Chief Inspector of Mines. This applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

**For Highland Valley Copper, why such a discrepancy?**

It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.

Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.

For example, Teck (which owns Highland Valley Copper) and Barrick are responsible for 69% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

**Is there any sort of estimate for a fund for Ajax Mine? If not, when might one be made?**

The Ajax Mine is currently in the Environmental Assessment process. A liability cost estimate is required at the Mines Act permitting stage. The application for a Mines Act permit has not yet been submitted. Financial security requirements are established by the Chief Inspector of Mines as a condition of a Mines Act permit.

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**From:** Haslam, David GCPE:EX

**Sent:** Friday, May 20, 2016 12:19 PM

**To:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX

**Cc:** Gilmore, Dan GCPE:EX; Plummer, Glen GCPE:EX; Suric, Michelle J GCPE:EX

**Subject:** Media Request\_Kamloops Infonews\_Mine Reclamation Security

Hi all – Kamloops Infonews reporter Brendan Kergin requested the list. No questions at this time. Provided attached and info below.

- Mining companies in British Columbia are liable for reclamation costs of mine sites.
- As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.



- It is important for our government to build greater public confidence in mining so that if a company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unreasonable amount of these costs.
- The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- Statutory decision-makers, not the minister, determine the amount of the security bonds required for each mine. The Ministry of Energy and Mines reviews and updates security amounts as project plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
- The Ministry of Energy and Mines accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis.
- Following the release of the Auditor General's report, government committed to reviewing its policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- Minister of Energy and Mines Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

**2014 Mine Reclamation Securities in BC for Metal and Coal Mines**

Mine	Owner (2014)	Total Bond Amount	Liability Estimate	Differential
<b>COAL MINE PERMITS</b>				
Elk Valley (Elkview, Fording, Greenhills, Coal Mtn, Greenhills)	Teck Coal Ltd.	\$384,460,000.00	\$925,358,035.00	\$540,898,035.00
Sage Creek	Sage Creek Coal Ltd.	\$1,000.00	\$1,000.00	\$0.00
Tent Mountain	Luscar	\$58,500.00	\$58,500.00	\$0.00
Sukunka Coal	Tailsman Energy Inc.	\$50,000.00	\$67,500.00	\$17,500.00
Mt Speiker	Canadian Natural Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Benson Mt.	Netherlands Pacific Mining Co. Ltd.	\$5,000.00	\$5,000.00	\$0.00
Willow Creek	Walter Energy	\$6,000,000.00	\$11,987,574.00	\$5,987,574.00
Quintette	Teck Coal Ltd.	\$20,083,200.00	\$30,070,900.00	\$9,987,700.00
Bullmoose	Teck Coal Ltd.	\$1,000,000.00	\$1,000,000.00	\$0.00
Benson Mt.	Wolf Mountain Coal Ltd.	\$20,000.00	\$20,000.00	\$0.00
Mt Klappan	Fortune Coal Ltd.	\$306,900.00	\$123,050.00	\$0.00
Quinsam Coal Mine	Hillsborough Resouces Ltd.	\$7,281,000.00	\$7,281,000.00	\$0.00
Basin Coal	Coalmont Energy Corp.	\$276,547.00	\$559,500.00	\$282,953.00
Brule	Walter Energy	\$3,350,000.00	\$14,683,875.00	\$11,333,875.00
Wolverine	Walter Energy	\$11,500,000.00	\$12,498,812.00	\$998,812.00
Trend	Peace River Coal Ltd.	\$43,900,000.00	\$111,300,000.00	\$67,400,000.00
<b>METAL MINE PERMITS</b>				
Endako	Thompson Creek Mining Co.	\$15,345,700.00	\$44,560,000.00	\$29,214,300.00
Pinchi	Teck Metals Ltd.	\$2,000,000.00	\$2,000,000.00	\$0.00
Granisle	Glencore Canada Corp.	\$161,522.00	\$4,253,690.00	\$4,092,168.00
Red Mountain	Ministry of Energy and Mines	\$464,991.08	\$464,991.08	\$0.00
Island Copper	BHP Billiton	\$4,208,076.10	\$4,637,000.00	\$428,923.90
Kitsault	Avanti Kitsault Mine Ltd.	\$740,000.00	\$270,000.00	\$0.00
Highland Valley Copper	Teck Highland Valley Copper	\$18,250,000.00	\$204,395,357.00	\$186,145,357.00
Brenda	Glencore Canada Corp.	\$5,000,000.00	\$27,333,333.00	\$22,333,333.00
Cassiar	Cassiar-Jade Contracting Inc.	\$600,000.00	\$1,530,000.00	\$930,000.00
Myra Falls Operation	Nyrstar	\$78,254,733.00	\$118,760,133.00	\$40,505,400.00

Copper Mountain	Copper Mountain Mines Ltd.	\$11,500,500.00	\$12,765,873.00	\$1,265,373.00
Gallowai Bul River	R.H. Stanfield	\$491,511.19	\$498,228.00	\$6,716.81
Bell Mine	Glencore Canada Corp.	\$1,000,000.00	\$45,440,833.00	\$44,440,833.00
Taseko Mines Ltd.	Gibraltar Mines Ltd.	\$45,638,329.00	\$29,800,000.00	\$0.00
Alwin Mine	Dekalb	\$6,000.00	\$6,000.00	\$0.00
Giant Nickel	Barrick Gold Inc.	\$27,000.00	\$600,000.00	\$573,000.00
Silvan/Hickey	Slocan/Klondike Gold Corp	\$75,000.00	\$185,333.00	\$110,333.00
Craigmont	Huldra Silver Corp.	\$700,000.00	\$706,000.00	\$6,000.00
Dolly Varden Mine	Dolly Varden	\$6,000.00	\$6,000.00	\$0.00
Beaverdell	Teck Resources Ltd.	\$5,000.00	\$10,000.00	\$5,000.00
Mt Copeland	KRC Operators	\$3,484.10	\$3,484.10	\$0.00
Sullivan	Teck Metals Ltd.	\$22,500,000.00	\$22,500,000.00	\$0.00
HB Mine	Teck Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Dankoe	439813 BC Ltd.	\$10,000.00	\$10,000.00	\$0.00
Boss Mountain	Glencore Canada Corp.	\$30,000.00	\$2,434,033.00	\$2,404,033.00
Afton	KGHM Ajax Mining Inc.	\$350,000.00	\$350,000.00	\$0.00
Equity	GoldCorp	\$62,447,000.00	\$62,447,000.00	\$0.00
Cusac	Cusac Gold Mines Ltd.	\$264,444.00	\$627,762.00	\$363,318.00
Mosquito Creek	Mosquito Creek	\$5,000.00	\$437,119.00	\$432,119.00
Caroline	New Carolin Gold Corp.	\$256,250.00	\$199,564.00	\$0.00
Scottie Gold	Red Eye Resources	\$15,000.00	\$15,000.00	\$0.00
Baker	Dupont Canada Ltd.	\$15,606.00	\$165,681.00	\$150,075.00
Goldstream	Bethlehem Resources	\$200,000.00	\$1,048,056.00	\$848,056.00
Venus Mine	United Keno Mines	\$7,000.00	\$7,000.00	\$0.00
Taurus	Cassiar Gold Corp/Inter Taurus	\$10,000.00	\$10,000.00	\$0.00
Diamc	Silence Lake	\$10,000.00	\$10,000.00	\$0.00
Baymag	Baymag Mines Co. Ltd.	\$15,101.71	\$836,048.00	\$820,946.29
Ashlu Gold	Osprey Mining and Exploration	\$10,000.00	\$10,000.00	\$0.00
Four-J/Lussier	Georgia Pacific Canada Ltd.	\$20,000.00	\$20,000.00	\$0.00
Perlite	Perlite Canada Inc.	\$0.00	\$0.00	\$0.00
Union Mine	Pearl Resources Ltd.	\$5,000.00	\$5,000.00	\$0.00
Blackdome	J- Pacific Gold Inc	\$100,000.00	\$100,000.00	\$0.00
Nickel Plate	Barrick Gold Inc.	\$1,671,754.00	\$96,500,000.00	\$94,828,246.00
Cheni/Lawyers	Cheni Gold Mines Ltd	\$15,000.00	\$15,000.00	\$0.00

Johnny Mountain	Skyline Gold Corp.	\$562,310.33	\$319,000.00	\$0.00
Premier	Boliden	\$3,000,000.00	\$15,909,000.00	\$12,909,000.00
Parson Barite	Highwood Res/Sherritt	\$10,000.00	\$53,680.00	\$43,680.00
Moberly Silica	HCA Mountain Minerals			\$0.00
Candorado	Candorado Mines	\$0.00	\$3,000,000.00	\$3,000,000.00
Samatosum	FQM Akubra Inc.	\$7,800,000.00	\$7,276,145.00	\$0.00
South Fork Silica	331670 BC Ltd.	\$1,000.00	\$1,000.00	\$0.00
Barrier Feldspar	Kanspar	\$20,000.00	\$20,000.00	\$0.00
Golden Bear	Goldcorp	\$210,000.00	\$73,200.00	\$0.00
Horse Creek Silca	HiTest Sand Inc.	\$125,000.00	\$125,000.00	\$0.00
Sable/Shasta	Int'l Shasta/Sable Resources Ltd.	\$164,000.00	\$1,110,000.00	\$946,000.00
Snip	Barrick Gold Inc.	\$1,000,000.00	\$2,940,833.00	\$1,940,833.00
CIL	Clayburn Industries	\$1,000.00	\$5,000.00	\$4,000.00
Cirque Mine	Cirque Operating Corp.	\$220,000.00	\$220,000.00	\$0.00
Gypo Pit	Pacific Silica and Rock Quarry	\$2,500.00	\$2,500.00	\$0.00
Eskay Creek	Barrick Gold Corp.	\$3,774,000.00	\$118,514,270.00	\$114,740,270.00
QR	Barkerville Gold Mines	\$2,860,000.00	\$10,250,000.00	\$7,390,000.00
Elk / Siwash	Almaden/Fairfield Minerals	\$150,000.00	\$61,816.00	\$0.00
Mount Polley	Mt Polley Mines Ltd.	\$19,050,011.00	\$29,500,000.00	\$10,449,989.00
Huckleberry	Huckleberry Mines Ltd.	\$26,000,000.00	\$59,000,000.00	\$33,000,000.00
Kemess South	AuRico	\$18,520,000.00	\$17,144,663.00	\$0.00
Bralorne	Bralorne Gold Mines Ltd.	\$115,000.00	\$1,114,607.00	\$999,607.00
Bow mines (Tailings)	Golden Dawn Minerals Inc.	\$50,000.00	\$70,000.00	\$20,000.00
Crystal Graphite	Eagle Graphite Corporation	\$0.00	\$0.00	\$0.00
Ainsworth Mill	Blue Bird Mining	\$5,000.00	\$250,000.00	\$245,000.00
Brittania	BC Government			\$0.00
Quinto Mine	Consolidated/Quinto Mining Corp.	\$70,000.00	\$5,000.00	\$0.00
Blue Bell	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
HB Tailings	Regional Distirct East Kootenay	\$0.00	\$0.00	\$0.00
Churchill Copper	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
Max Molybdenum	Forty Two Metals Inc.	\$730,000.00	\$1,313,403.00	\$583,403.00
New Afton	New Gold Inc.	\$9,500,000.00	\$9,681,190.00	\$181,190.00
Galore Creek	Teck Metals Ltd.	\$1,167,000.00	\$1,167,000.00	\$0.00
Ruby Creek	Adanac Molybdenum Corp.	\$100,000.00	\$100,000.00	\$0.00

Tulsequah	Chieftain Metals Inc.	\$1,200,000.00	\$1,200,000.00	\$0.00
Zip Mill	Huakan International Mining Inc.	\$235,000.00	\$303,558.00	\$68,558.00
Lexington-Grenoble	Huakan International Mining Inc.	\$215,000.00	\$168,232.00	\$0.00
Yellowjacket	EaglePlains	\$150,000.00	\$150,000.00	\$0.00
Mount Milligan	Terrain Metals Corp.	\$30,000,000.00	\$35,171,000.00	\$5,171,000.00
Dome Mountain	Gavin Mines Ltd.	\$579,000.00	\$1,360,000.00	\$781,000.00
Bonanza Ledge	Barkerville Gold Mines	\$960,000.00	\$4,446,000.00	\$3,486,000.00
Treasure Mountain	Huldra Silver Inc.	\$505,100.00	\$505,100.00	\$0.00
Red Chris	Red Chris Operating Corp.	\$12,000,000.00	\$9,774,073.00	\$0.00
Yellow Giant (Tel)	Banks Island Gold Ltd.	\$355,000.00	\$283,700.00	\$0.00

\$892,153,070.51	\$2,133,597,234.18	\$1,262,769,510.00
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\*bonds greater than liability have an undersecure of zero (not minus)

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Thursday, May 5, 2016 2:56 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** FOR APPROVAL - Media Request: Banks Island Gold...  
**Attachments:** witzke letter.pdf; Communications with Gitxaala in 2016.docx; Banks Island Gold Summary of Discussions.docx

Good Afternoon Minister,  
Here is the piece regarding Banks Island Gold and the Ministry response to James Witzke and the Gitxaala Environmental Monitoring.  
Please let me know your thoughts.

Regards,  
Tristan

**Reporter:** George Baker – CBC Radio Prince George

**Deadline:** Today.

**Request:** I am wondering if the ministry ever responded to the Gitxaala First Nation's letter (PDF letter attached) sent to Howard Davies on Feb. 26, 2016? If so, what was that response to the concerns raised by the Gitxaala and what actions are being taken on Banks Island to clean up the mess created by Banks Island Gold?

**Reporter:** Shannon Lough – The Northern View

**Deadline:** Friday.

**Request:** I'm writing a story today on the provincial government's response to the Gitxaala Nation and their concerns about the lack of communication with them regarding the clean-up of Banks Island after the Banks Island Gold Mine shut down due to contamination.

- Have you responded to the letter from James Witzke from the Gitxaala Environmental Monitoring?
- What are the next steps in dealing with the contamination?
- Now that the company has filed for bankruptcy, how will the ministry take responsibility for the clean-up?

**Recommendation:** Have GCPE provide information by email.

**Response:** Approved by Al Hoffman. Information on MEM actions to-date provided by MEM regional director Howard Davies. "Background on the issue" comes from the current Banks Island IN. GCPE intends to provide both pieces of information to the reporters.

- The Ministry of Energy and Mines (MEM) has received the Gitxaala Nation letter dated Feb. 26, 2016. (Note: PDF letter attached)
- In response to concerns expressed in the letter, the ministry has taken a number of proactive and immediate actions, including:
  - Feb. 29, 2016: Met with the Chief, Deputy Chief and manager of Gitxaala Environmental Monitoring Group (GEM) in Prince Rupert, discussing the issue and planning how to move forward. Established commitment to weekly calls between MEM and GEM to increase communication and cooperation at operational level. Committed to meet community Elders to discuss.
  - March 15, 2016: MEM met with and presented issue history and updates to a group of 50 Hereditary and Matriarchal Elders at Prince Rupert. A commitment was made to address immediate concern of the community regarding planned disposal of explosives.
  - Regular update calls to James Witzke, Environmental Assessment Manager of GEM on:
    - March 4, 2016
    - March 11, 2016
    - April 1, 2016

- April 8, 2016
- May 3, 2016
- March 16 to April 1, 2016: Extraordinary collaboration between MEM, Banks Island Gold's receiver and industry to accommodate Gitxaala Nation wishes and remove explosives and dispose them offsite rather than on Banks Island. This was accomplished in very short turnaround time, meeting MEM's commitment to the community. Gitxaala Nation kept fully informed.
- MEM is acting as a good-faith intermediary between the receiver and Gitxaala Nation. MEM requested meetings between the receiver and Gitxaala Nation on several occasions in order to facilitate communications and solutions.
- Including GEM in multi-day helicopter visit to Banks Island with MEM technical experts for purposes of hazardous material assessment in preparation for possible site clean-up (scheduled for May 9 to 11).
- Ongoing discussions within MEM on possible solutions to the immediate concerns about the human health.
- The ministry intends to respond in writing to the issues in the letter in the future.

Background on the issue (for the reporter, messaging comes from the current IN):

- On July 15, 2015, inspectors with the Ministry of Energy and Mines shut down all mining activities at the Yellow Giant Mine on Banks Island, which was operated by Banks Island Gold.
- The shutdown was ordered because the company was not complying with the conditions of their permit, and inspectors determined that continued operation of the mine would lead to detrimental environmental impacts.
- Ministry of Energy and Mines inspectors also issued stop-work orders on July 9, 2015 at two exploration sites on Banks Island operated by Banks Island Gold.
- In addition, Ministry of Environment staff issued a Pollution Abatement Order on July 10, 2015, requiring the company to immediately cease all unauthorized discharges and implement clean-up activities.
- Banks Island Gold filed for bankruptcy on Dec. 31, 2015, as the company could no longer meet its financial obligations with its creditors.
- There is a total of \$420,000 in security held for Banks Island Gold. If reclamation liabilities revert to the Province, this security money will be used to carry-out reclamation and to pay for any ongoing monitoring or maintenance that is required at the Yellow Giant mine site.
- The intent of the Province's reclamation legislation is to ensure that modern mine sites in B.C. do not leave an ongoing legacy or require public funds for clean-up activities.
- The ministry continues to work cooperatively with the company's receiver.

**Additional background for the MO only:** Full details provided by regional staff (Howard Davies) that the bullets above were pulled from.

s.14,s.16

Actions taken proactively and immediately included:

- February 29<sup>th</sup>: Meeting with the Chief, Deputy Chief and manager of Gitxaala Environmental Monitoring Group (GEM) in Prince Rupert, discussing the issue and planning how to move forward. Established commitment to weekly calls between MEM and GEM to increase communication and cooperation at operational level. Committed to meet community Elders to discuss.
- March 15<sup>th</sup>: MEM voluntarily met with and presented issue history and updates to group of 50 Hereditary and Matriarchal Elders at Prince Rupert. Commitment made to address immediate concern of community regarding planned disposal of explosives.
- Regular update calls to James Witzke, Environmental Assessment Manager of GEM on:
  - March 4<sup>rd</sup>
  - March 11<sup>th</sup>
  - April 1<sup>st</sup>
  - April 8<sup>th</sup>
  - May 3<sup>rd</sup>
- March 16<sup>th</sup> to April 1<sup>st</sup>: Extraordinary collaboration between MEM, Receiver and industry to accommodate Gitxaala First Nation wishes and remove explosives and dispose of offsite rather than on Banks Island. Accomplished in very short turnaround time, meeting commitment to the community. Gitxaala kept fully informed.
- MEM acting as good faith intermediary between Receiver and Gitxaala First Nation (something we are not required to do). Requested meeting between Receivers and GFN on several occasions in order to facilitate communications and solutions.
- MEM has offered to help in review programs the Gitxaala have solicited consultants for a human health impact study, although we have stated that this does not mean we can help in the program itself – we help where we can even if a little
- Including GEM in multi-day helicopter visit to Banks Island with MEM technical experts for purposes of hazardous material assessment in preparation for possible site cleanup (planned before this was raised in the house and scheduled for May 9<sup>th</sup> to 11<sup>th</sup>)
- Ongoing internal discussions within MEM on possible solutions to the immediate concerns about the human health impact and the longer term reclamation

s.16,s.17

I also attach (two) letters from Cheryl MacKenzie, FLNRO FN advisor to MEM, with more supporting details of communications. These are not for external release but to demonstrate what has been done.



Page 314 to/à Page 322

Withheld pursuant to/removed as

s.16

Page 323 to/à Page 324

Withheld pursuant to/removed as

s.14;s.16

**February 29<sup>th</sup>, 2016**

*Clifford White, Clarence Innes, Sam Lewis, James Witzke, Elin, Mark Ignas, Cheryl MacKenzie, Howard Davies*

Would like us to suspend permitting process – engage in a meaningful consultative process

Concerns around remediation

Interested in co-management

How much is the bond? - they have all the manpower necessary to do remediation, and they would like to do the work.

Questions/Comments:

1. How many mineral claims are in the area? Which permits have expired?
2. Would like to have one member accompanying mine manager.
  - a. ATM Gitxaala member has been hired as part of mine security
3. Should be directly involved in discussion in the future.
  - a. Why are they not involved in call today between Diane and Receiver?
4. How is it impacting human health? Is it safe to harvest?
  - a. Can't afford to wait until receivership is done
  - b. Need to know what is going to be done in the interim?
5. Huge gap in communications. Needs updating
6. Main contamination around exploration sites
  - a. ~\$30 000 from permit bonding not going to cut it
  - b. Gitxaala have already spent \$150 000 on various aspects of the disaster
    - i. This is where the capacity funding request comes from
7. Expectation is that it will be remediated to natural state, and they want BC to pay the difference
8. Expect to be consulted and included on all decisions
9. Discuss co-management system for any mining projects moving forward
10. Need immediate remediation plan to resolve food supply issue
  - a. Also long-term monitoring plan
11. Confirm exact responsibilities of receiver

Want to be engaged in overall development from beginning to end

Want to know how on-going monitoring will be continued into the future?  
s.16

Generally support LNG development

Who decides which creditors get paid?

- Why can't some of the value be put towards remediation?

Will not engage in any further MEM permits until a co-management agreement is in place

They would be very happy to see the permits pulled – what would that mean?

Would like to see inclusion into permits of Gitxaala as 3<sup>rd</sup> party monitor

- However, they would need to be train, informed and allowed on-site

Survey Bay – Bob mine site there is previous contamination from last mine

**To Do:**

Where does RA negotiation stand? (Contact Heinz Dyck, Steve Carr, Corrina Dillar)

Is there any WG funding available to go towards remediation?

Confirm exact responsibilities of receiver

Prepare presentation for March 15<sup>th</sup> to hereditary chiefs

Explore possibilities of co-management

Develop communication plan

What is possibility of providing capacity funding to the Gitxaala?

**March 2, 2016**

*Cheryl MacKenzie, Howard Davies, Robert Leece*

s.16,s.17

Meeting with Steve Carr to discuss issues

No ECDA offered with regards to BIG – was thoughts around it prior to bankruptcy

Have raised co-management issues before with Province of British Columbia

- Perhaps not an appetite provincially to do so
- Discuss tool options with Linda Robertson (Tricia Morris MARR or Ben Morton)

In order to apply for funding, we would need a mandate from the NR Board, and these people could help determine what options we have available.

**To Do:**

Further discussions with Tricia, Ben, Steve or Rob around capacity funding

March 4, 2016

Cheryl MacKenzie, Howard Davies, James Witzke

Permitting – currently a no-registration reserve over Banks Island

- Can't be staked for the time being
- If claims expire, would necessitate consultation prior to re-instatement
- Mineral titles and lease all under name of BIG, and they also hold permit

Transfer of BIG

- Receiver has a copy of receivership order
- Can "request" transfer of lease or title, but it would be subject to consultation
- Also, if permit transferred or amended
- Would delay process through consultation as it would be on the deep end of the spectrum
- BIG wanted to convert Mineral title to Lease
- FTI has not requested this conversion at the moment, but if they did it would mean consultation

Communications protocol

- What is their vision? A formal agreement
- Can commit to in the short term, to communication on all issues

Co-management – this is a much larger issue, and not sure what to do in the meantime

Remediation plan

- Getting a monitor onsite
- Not planning on waiting until receivership complete, as that wouldn't work, however it is a factor in the discussions
- Will commit full bond \$\$ to remediation, however not likely to pay to have report finished

James response

s.16,s.17

**To do:**

Could remediation be phases so that if more \$\$ becomes available, it could be utilized

- Can they provide us with a budget and a plan for remediation?

Howard will explore other funding opportunities for this

## **March 7, 2016**

*Hailey, Dana, Al Hoffman, Jen, Cheryl, Howard Davies*

BIG in receivership – have appointed mine manager

- However they don't seem to entirely understand responsibilities
- Explosives on site

FTI and MCC visited site on Tuesday

- Interested in a guarantee of transfer of permit to new owner
- Diane suggest that there is no guarantee, and consultation would have to have occurred
- Want to work with FN on remediation
- Concern at the moment is explosives
- Need to get someone in to assess site and prepare a plan to get it out
- Tailings near Bob could get pumped or they could start doing it again.

Remediation on mine site would have to progress as if it were a mine

## **March 11, 2016**

Cheryl MacKenzie, Howard Davies, James Witzke

Reclamation bond – will have to find out how tendering process works

Receiver – have started removal process

- James asked if we had any intention of checking on them, monitoring process
- Possibility of a site visit, and if MEM goes, invite Gitxaala

Ongoing monitoring

- Speaking with Neil Bailey to see what is possible, but not in the next week or so
- Gitxaala wants to be updated with regards to this and the results if it occurs
- James would like to put timelines on these process
  - o What are the next steps?
  - o Worried about the season, and time
- Not waiting for receiver to string it along
  - o Will likely impose timelines
  - o Howard trying to accelerate clean-up process
  - o Yet can't remove liability from receiver
  - o Wants to detach it from receivership process if possible
- James believes that it is very unlikely that receiver is going to want to touch exploration sites

Co-management plan

- James agrees that it is bigger picture, however wants a commitment to at least engage in the process
- Can we commit to developing something for Banks Island, in the event that someone wants to purchase it?
- And then elevate the co-management mining discussion to MARR for the rest

**To Do:**

Investigate the possibility of co-management plan with MARR

- Who would negotiate this? Is it done on a case-by-case basis?

Institute communication plan for Banks Island

- Set it up so that information is provided to them rather than them having to reach out to us
- James agrees that these weekly meetings are a good start
- Howard wants the ability to reach out as needed as well

**March 14, 2016**

*Dana, Cheryl MacKenzie, Neil Bailey, Howard Davies, Cheryl Pocklington*

Narrowing down the non-compliance list to provide to crown for prosecutions

MEnv is doing the same

Have the pumps started running again, to avoid further releases into the environment?

- Who would know this?

Receiver is looking at completing Action Plan by Keystone Environment

s.16

Explosives and status is currently unknown

Receiver's barge is trying to go out tomorrow

- Pull out concentrate, generators, trucks
- Explosives (Orica is indifferent) for optics, would prefer to have them removed

Looking for a buyer – have started the process

- Sent out information to prospective buyers
- If they get further interest, proponent should get in contact with Diane/Howard
- Want some assurance that there will be a mining prospect, then they would be more interested in completing remediation
- Is there any way to smooth the process through consultation co-management?

Orica suggests that they would be happy to start pumps up again, but they're under a "stop work" order

- Neil says that no, they are allowed to pump

s.16

- They may just start doing it themselves, however they would wish to be paid for information

Start getting meeting minutes sent around with Action Items on it

**March 15, 2016**

*Meeting with Hereditary chiefs, Howard Davies, Cheryl MacKenzie*

Clifford White opened meeting by stating that there was absolutely no consultation on this

Province previously reminded about environmental degradation – weren't paying attention

- Holding province responsible for clean-up

- No further mining permits in area, however they do understand now, why this permit is being left open

Clint asked who authorized the province to permit our lands

Don't want explosive disposal to take place – prefer to have them moved offsite

Why don't you do any monitoring of these sites?

- Yes they do spot checks, but they can't be there all the time

In April they were told not to eat the seafood

s.16

Doug wondered if they (BIG) still has permit, can they be held liable?

- Why reroute the discharge from the pits? Hasn't the damage already been done?
- Yes, but the rerouting is to keep it from getting worse (HD)
- Are the resources safe to harvest?

Ken Innes – certified Environmental Monitor (working with GEM)

- Did monitoring on BI and for Coast Guard
- GEM asked BI to hire him as monitor, but they said no and hired 2 young ladies

s.16

- Investment such as this is good money for our people
- Doesn't trust BIG employee to hold explosive key
- Doesn't support co-management, it is their land
- Need more trained environmental monitors
- Pumping directly into streams, we are lucky it wasn't worse

s.16

- Reclamation bond
- Co-management without their participation is not okay – from now on, they need to be involved
- Use this as a lesson to learn to work together in the future
- Closing of this mine has had negative impact on communities

Larry Bolton – thank you for your presentation

- Halibut fishing saw damage from previous company, didn't clean up their site



- Damage has already been done
- s.16

Janet – how would you feel if mining company came into your house to drill?

- 1960 mine desecrated ground, it has been going on for so long

Clarence Innes – they are affected financially as well because they don't trust government to do the right thing

- Compensation is a real need
- s.22

#### Summary of comments

1. Barge out explosives rather than explode
2. Find out if it is safe to eat the food
3. Work towards full remediation
4. No further permitting without discussion
5. s.16

Training environmental monitors

## **Frankl, Dave MEM:EX**

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Monday, May 16, 2016 5:37 PM  
**To:** Mills, Shane LASS:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Koolsbergen, Nick GCPE:EX; Gordon, Matt GCPE:EX; Haslam, David GCPE:EX  
**Subject:** UBCIC report

**Good Afternoon Shane,**

**Please see below for our messaging on the UBCIC Report.**

- The liability the Office of the Auditor General and UBCIC reports refers to is the responsibility of the mining companies, not government. Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs.
- We have already started work to address this. The Ministry of Energy and Mines holds more security bonds now than it did 10 years ago or even five years ago.
- Since 2011, the total amount of security held has more than doubled. Bottom line – Minister Bennett has said we can do better and government will keep that commitment.
- Financial security is determined by assessing costs of reclamation in the context of a company's ability to pay and financial track record. Much of the shortfall in financial security is due to MEM's determination that total reclamation costs can be borne by a particular company
- Following the release of the Auditor General's report, government committed to reviewing our policy around mine security bonds and that work is underway.
- Based on our initial cross-jurisdictional scan, we know that finding the right balance around mine security bonds is a challenge that other jurisdictions are also working to address.
- There are almost as many different models for how mine security bonds are managed as there are jurisdictions. Some models require 100% security bonds to cover standard reclamation costs, but assess long-term water treatment separately. Others have different standards for the types of security bonds they will accept.
- Our goal with examining how other jurisdictions address this issue is to find best practices that we can apply here in British Columbia so that we can have a world-leading regulatory framework.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Tuesday, May 24, 2016 3:18 PM  
**To:** Haslam, David GCPE:EX; Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX  
**Cc:** Dalal, Suntanu GCPE:EX; Plummer, Glen GCPE:EX; Robb, Peter L. MEM:EX; Hoffman, Al MEM:EX; Gordon, Matt GCPE:EX  
**Subject:** RE: Media Request\_Kamloops Infonews\_Mine Reclamation Security

Approved

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**From:** Haslam, David GCPE:EX  
**Sent:** Tuesday, May 24, 2016 1:41 PM  
**To:** Wallace-Deering, Eric MEM:EX; Denniston, Tristan M MEM:EX; Lewis, Ted MEM:EX  
**Cc:** Dalal, Suntanu GCPE:EX; Plummer, Glen GCPE:EX; Robb, Peter L. MEM:EX; Hoffman, Al MEM:EX; Gordon, Matt GCPE:EX  
**Subject:** FW: Media Request\_Kamloops Infonews\_Mine Reclamation Security

Hi all – The reporter is writing Kamloops angle on the OAG report. Note the info I sent to him on Friday (list of mines and fact sheet).

**Reporter:** Brendan Kergin - 250.819.6089 – Kamloops infonews.ca

**Deadline:** 3 pm

**Request:** Following up on information sent last week (see attached list and fact sheet below). I'm looking for a bit more information on the nuts and bolts of how this works in laymens' terms. How is the money held? Who is holding it? Also, is it used for insurance purposes in case of disasters or smaller incidents (like Mount Polly)? What about financially unstable mines that may go out of business before reaching the end of the mine's expected life For Highland Valley Copper, why such a discrepancy? Is there any sort of estimate for a fund for Ajax Mine? If not, when might one be made?

**Recommendation:** GCPE email reporter.

**Response:** Approved by ?.

**How is the money held and who is holding it?**

The funding is held by the Ministry of Finance on behalf of the Ministry of Energy and Mines (MEM). The total reclamation security held is published each year in the Chief Inspector of Mines Annual Report. The Province currently holds \$1.07 billion in securities (March 2016).

Security bonding is not the only method by which government manages risk. Of even greater importance is the regulatory practice of requiring mining companies to manage and reduce their environmental liabilities through the development of detailed environmental protection and reclamation plans prior to mining, annual monitoring and reporting, and progressive reclamation through the life of mine.

**Is it used for insurance purposes in case of disasters or smaller incidents (like Mount Polly)?**

Financial security is meant to cover the costs of reclamation, closure and ongoing monitoring and management requirements for a mine, in the event that a company defaulted on its obligations.

The security does not cover the costs of failure or clean-up of disasters. Mine companies remain responsible for these costs.

**What about financially unstable mines that may go out of business before reaching the end of the mine's expected life.**

Security bonds can be evaluated and increased at any time by the Chief Inspector of Mines. This applies to mines that are closed (either in care and maintenance or reclaimed but with long term obligations remaining).

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

**For Highland Valley Copper, why such a discrepancy?**

It's important to understand that Mines Act permit holders are responsible for all costs associated with the mine including reclamation and remediation costs. The ministry collects a security bond to ensure it is the permit holder that addresses reclamation costs, not the taxpayers.

Under some circumstances the ministry has accepted less than full security for a mine site. This includes mine sites where the company's financial strength exceeds the estimated liability and the company is considered a low risk to default. The ministry continues to review the liability status of mine sites and to reduce bonding liability short-falls over time.

For example, Teck (which owns Highland Valley Copper) and Barrick are responsible for 69% of the under-funded liability that currently exists in B.C. Both companies have strong financial foundations and a proven track-record for undertaking and completing reclamation works at their mine sites.

**Is there any sort of estimate for a fund for Ajax Mine? If not, when might one be made?**

The Ajax Mine is currently in the Environmental Assessment process. A liability cost estimate is required at the Mines Act permitting stage. The application for a Mines Act permit has not yet been submitted. Financial security requirements are established by the Chief Inspector of Mines as a condition of a Mines Act permit.

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**From:** Haslam, David GCPE:EX

**Sent:** Friday, May 20, 2016 12:19 PM

**To:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Denniston, Tristan M MEM:EX

**Cc:** Gilmore, Dan GCPE:EX; Plummer, Glen GCPE:EX; Suric, Michelle J GCPE:EX

**Subject:** Media Request\_Kamloops Infonews\_Mine Reclamation Security

Hi all – Kamloops Infonews reporter Brendan Kergin requested the list. No questions at this time. Provided attached and info below.

- Mining companies in British Columbia are liable for reclamation costs of mine sites.

- As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.
- It is important for our government to build greater public confidence in mining so that if a company defaults on reclamation and clean-up costs of a mine site, British Columbians are not left on the hook for an unreasonable amount of these costs.
- The action government has taken over the past decade to strengthen our environmental regulation has increased the amount of reclamation security mining companies need to post.
- Statutory decision-makers, not the minister, determine the amount of the security bonds required for each mine. The Ministry of Energy and Mines reviews and updates security amounts as project plans are reviewed and, in some cases, at the discretion of the Chief Inspector of Mines.
- Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
- The Ministry of Energy and Mines accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.
- In some situations, such as mine sites where the company's financial strength materially exceeds the estimated liability, the ministry may accept less than full security. The ministry reviews the liability status of such mine sites and reduces bonding liability short-falls over time, as determined by ministry analysis.
- Following the release of the Auditor General's report, government committed to reviewing its policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- Minister of Energy and Mines Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Thursday, May 26, 2016 8:10 AM  
**To:** Mills, Shane PREM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX; Gordon, Matt GCPE:EX  
**Subject:** Reclamation security  
**Attachments:** Mine Reclamation Security-Summary\_FINAL\_May 18\_2016.pdf; ATT00001.htm

Good Morning Shane,

Please see below for reclamation KMs. Please also note that this was specifically given to Justine in a follow up of a scrum for orphan mines and Britannia

### Response:

#### **1. How many mines permitted in B.C. since 1969 have British Columbians had to cover the remediation costs for?**

It is estimated that less than \$5 million has been spent by government on land remediation costs on mines permitted since 1969, primarily on orphaned mines – mines abandoned by the owner/operator.

MEM generally works on the historic sites with health and safety concerns (ie filling In/caving open holes) and FLNRO or MOE (contaminated sites) works on historic mines with contamination issues (ie Britannia).

The Province began its environmental remediation work at Britannia Mine in 2001 after a financial settlement was reached with the former mine operators. The former operators contributed \$30 million toward the cleanup cost and provincial funding provided an additional \$45.9 million. To date, the Province has spent in excess of \$61.15 million on remediation at Britannia.

Britannia Mine, was once the largest copper producer in the British Commonwealth covering about 9,000 acres. Britannia Mine began production of copper ore over 100 years ago and closed for good in 1974.

Sent from my iPhone

KMs

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- As a condition of the Mines Act (Sections 10.4 and 10.5), a financial security is required for all or part of the outstanding costs associated with the mine reclamation and the protection of land, watercourses and cultural resources.

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- Since 2011, the total amount of reclamation security held by the Ministry of Energy and Mines has more than doubled and the ministry now holds four times more in reclamation securities than it did in 2001.
- The Ministry of Energy and Mines accepts several forms of financial security. These include the forms allowed under the Bonding Act (Certified Cheques, Irrevocable Standby Letters of Credit, Guaranteed Investment Certificates with up to three-year terms backed by a Safekeeping Agreement, and Surety Bonds), and monies placed in the reclamation fund. Companies cannot remove or access the posted security without the approval of the Chief Inspector.
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- Following the release of the Auditor General's report, government committed to reviewing its policy around reclamation security and that work is underway.
- Ministry of Energy and Mines staff are examining how jurisdictions in Canada and abroad deal with the issue.
- Initial research shows that Auditor Generals in provinces such as Ontario, Alberta and Nova Scotia have also identified the amount of security governments hold from mining companies for reclamation as an issue.
- Minister of Energy and Mines Bill Bennett has directed staff to have a "concrete" plan in place by early 2017, which will likely include legislative changes to ensure the public has access to this information.

**2014 Mine Reclamation Securities in BC for Metal and Coal Mines**

Mine	Owner (2014)	Total Bond Amount	Liability Estimate	Differential
<b>COAL MINE PERMITS</b>				
Elk Valley (Elkview, Fording, Greenhills, Coal Mtn, Greenhills)	Teck Coal Ltd.	\$384,460,000.00	\$925,358,035.00	\$540,898,035.00
Sage Creek	Sage Creek Coal Ltd.	\$1,000.00	\$1,000.00	\$0.00
Tent Mountain	Luscar	\$58,500.00	\$58,500.00	\$0.00
Sukunka Coal	Tailsman Energy Inc.	\$50,000.00	\$67,500.00	\$17,500.00
Mt Speiker	Canadian Natural Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Benson Mt.	Netherlands Pacific Mining Co. Ltd.	\$5,000.00	\$5,000.00	\$0.00
Willow Creek	Walter Energy	\$6,000,000.00	\$11,987,574.00	\$5,987,574.00
Quintette	Teck Coal Ltd.	\$20,083,200.00	\$30,070,900.00	\$9,987,700.00
Bullmoose	Teck Coal Ltd.	\$1,000,000.00	\$1,000,000.00	\$0.00
Benson Mt.	Wolf Mountain Coal Ltd.	\$20,000.00	\$20,000.00	\$0.00
Mt Klappan	Fortune Coal Ltd.	\$306,900.00	\$123,050.00	\$0.00
Quinsam Coal Mine	Hillsborough Resouces Ltd.	\$7,281,000.00	\$7,281,000.00	\$0.00
Basin Coal	Coalmont Energy Corp.	\$276,547.00	\$559,500.00	\$282,953.00
Brule	Walter Energy	\$3,350,000.00	\$14,683,875.00	\$11,333,875.00
Wolverine	Walter Energy	\$11,500,000.00	\$12,498,812.00	\$998,812.00
Trend	Peace River Coal Ltd.	\$43,900,000.00	\$111,300,000.00	\$67,400,000.00
<b>METAL MINE PERMITS</b>				
Endako	Thompson Creek Mining Co.	\$15,345,700.00	\$44,560,000.00	\$29,214,300.00
Pinchi	Teck Metals Ltd.	\$2,000,000.00	\$2,000,000.00	\$0.00
Granisle	Glencore Canada Corp.	\$161,522.00	\$4,253,690.00	\$4,092,168.00
Red Mountain	Ministry of Energy and Mines	\$464,991.08	\$464,991.08	\$0.00
Island Copper	BHP Billiton	\$4,208,076.10	\$4,637,000.00	\$428,923.90
Kitsault	Avanti Kitsault Mine Ltd.	\$740,000.00	\$270,000.00	\$0.00
Highland Valley Copper	Teck Highland Valley Copper	\$18,250,000.00	\$204,395,357.00	\$186,145,357.00
Brenda	Glencore Canada Corp.	\$5,000,000.00	\$27,333,333.00	\$22,333,333.00
Cassiar	Cassiar-Jade Contracting Inc.	\$600,000.00	\$1,530,000.00	\$930,000.00
Myra Falls Operation	Nyrstar	\$78,254,733.00	\$118,760,133.00	\$40,505,400.00



Copper Mountain	Copper Mountain Mines Ltd.	\$11,500,500.00	\$12,765,873.00	\$1,265,373.00
Gallowai Bul River	R.H. Stanfield	\$491,511.19	\$498,228.00	\$6,716.81
Bell Mine	Glencore Canada Corp.	\$1,000,000.00	\$45,440,833.00	\$44,440,833.00
Taseko Mines Ltd.	Gibraltar Mines Ltd.	\$45,638,329.00	\$29,800,000.00	\$0.00
Alwin Mine	Dekalb	\$6,000.00	\$6,000.00	\$0.00
Giant Nickel	Barrick Gold Inc.	\$27,000.00	\$600,000.00	\$573,000.00
Silvan/Hickey	Slocan/Klondike Gold Corp	\$75,000.00	\$185,333.00	\$110,333.00
Craigmont	Huldra Silver Corp.	\$700,000.00	\$706,000.00	\$6,000.00
Dolly Varden Mine	Dolly Varden	\$6,000.00	\$6,000.00	\$0.00
Beaverdell	Teck Resources Ltd.	\$5,000.00	\$10,000.00	\$5,000.00
Mt Copeland	KRC Operators	\$3,484.10	\$3,484.10	\$0.00
Sullivan	Teck Metals Ltd.	\$22,500,000.00	\$22,500,000.00	\$0.00
HB Mine	Teck Resources Ltd.	\$10,000.00	\$10,000.00	\$0.00
Dankoe	439813 BC Ltd.	\$10,000.00	\$10,000.00	\$0.00
Boss Mountain	Glencore Canada Corp.	\$30,000.00	\$2,434,033.00	\$2,404,033.00
Afton	KGHM Ajax Mining Inc.	\$350,000.00	\$350,000.00	\$0.00
Equity	GoldCorp	\$62,447,000.00	\$62,447,000.00	\$0.00
Cusac	Cusac Gold Mines Ltd.	\$264,444.00	\$627,762.00	\$363,318.00
Mosquito Creek	Mosquito Creek	\$5,000.00	\$437,119.00	\$432,119.00
Caroline	New Carolin Gold Corp.	\$256,250.00	\$199,564.00	\$0.00
Scottie Gold	Red Eye Resources	\$15,000.00	\$15,000.00	\$0.00
Baker	Dupont Canada Ltd.	\$15,606.00	\$165,681.00	\$150,075.00
Goldstream	Bethlehem Resources	\$200,000.00	\$1,048,056.00	\$848,056.00
Venus Mine	United Keno Mines	\$7,000.00	\$7,000.00	\$0.00
Taurus	Cassiar Gold Corp/Inter Taurus	\$10,000.00	\$10,000.00	\$0.00
Diamc	Silence Lake	\$10,000.00	\$10,000.00	\$0.00
Baymag	Baymag Mines Co. Ltd.	\$15,101.71	\$836,048.00	\$820,946.29
Ashlu Gold	Osprey Mining and Exploration	\$10,000.00	\$10,000.00	\$0.00
Four-J/Lussier	Georgia Pacific Canada Ltd.	\$20,000.00	\$20,000.00	\$0.00
Perlite	Perlite Canada Inc.	\$0.00	\$0.00	\$0.00
Union Mine	Pearl Resources Ltd.	\$5,000.00	\$5,000.00	\$0.00
Blackdome	J- Pacific Gold Inc	\$100,000.00	\$100,000.00	\$0.00
Nickel Plate	Barrick Gold Inc.	\$1,671,754.00	\$96,500,000.00	\$94,828,246.00
Cheni/Lawyers	Cheni Gold Mines Ltd	\$15,000.00	\$15,000.00	\$0.00

Johnny Mountain	Skyline Gold Corp.	\$562,310.33	\$319,000.00	\$0.00
Premier	Boliden	\$3,000,000.00	\$15,909,000.00	\$12,909,000.00
Parson Barite	Highwood Res/Sherritt	\$10,000.00	\$53,680.00	\$43,680.00
Moberly Silica	HCA Mountain Minerals			\$0.00
Candorado	Candorado Mines	\$0.00	\$3,000,000.00	\$3,000,000.00
Samatosum	FQM Akubra Inc.	\$7,800,000.00	\$7,276,145.00	\$0.00
South Fork Silica	331670 BC Ltd.	\$1,000.00	\$1,000.00	\$0.00
Barrier Feldspar	Kanspar	\$20,000.00	\$20,000.00	\$0.00
Golden Bear	Goldcorp	\$210,000.00	\$73,200.00	\$0.00
Horse Creek Silca	HiTest Sand Inc.	\$125,000.00	\$125,000.00	\$0.00
Sable/Shasta	Int'l Shasta/Sable Resources Ltd.	\$164,000.00	\$1,110,000.00	\$946,000.00
Snip	Barrick Gold Inc.	\$1,000,000.00	\$2,940,833.00	\$1,940,833.00
CIL	Clayburn Industries	\$1,000.00	\$5,000.00	\$4,000.00
Cirque Mine	Cirque Operating Corp.	\$220,000.00	\$220,000.00	\$0.00
Gypo Pit	Pacific Silica and Rock Quarry	\$2,500.00	\$2,500.00	\$0.00
Eskay Creek	Barrick Gold Corp.	\$3,774,000.00	\$118,514,270.00	\$114,740,270.00
QR	Barkerville Gold Mines	\$2,860,000.00	\$10,250,000.00	\$7,390,000.00
Elk / Siwash	Almaden/Fairfield Minerals	\$150,000.00	\$61,816.00	\$0.00
Mount Polley	Mt Polley Mines Ltd.	\$19,050,011.00	\$29,500,000.00	\$10,449,989.00
Huckleberry	Huckleberry Mines Ltd.	\$26,000,000.00	\$59,000,000.00	\$33,000,000.00
Kemess South	AuRico	\$18,520,000.00	\$17,144,663.00	\$0.00
Bralorne	Bralorne Gold Mines Ltd.	\$115,000.00	\$1,114,607.00	\$999,607.00
Bow mines (Tailings)	Golden Dawn Minerals Inc.	\$50,000.00	\$70,000.00	\$20,000.00
Crystal Graphite	Eagle Graphite Corporation	\$0.00	\$0.00	\$0.00
Ainsworth Mill	Blue Bird Mining	\$5,000.00	\$250,000.00	\$245,000.00
Brittania	BC Government			\$0.00
Quinto Mine	Consolidated/Quinto Mining Corp.	\$70,000.00	\$5,000.00	\$0.00
Blue Bell	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
HB Tailings	Regional Distirct East Kootenay	\$0.00	\$0.00	\$0.00
Churchill Copper	Teck Resources Ltd.	\$0.00	\$0.00	\$0.00
Max Molybdenum	Forty Two Metals Inc.	\$730,000.00	\$1,313,403.00	\$583,403.00
New Afton	New Gold Inc.	\$9,500,000.00	\$9,681,190.00	\$181,190.00
Galore Creek	Teck Metals Ltd.	\$1,167,000.00	\$1,167,000.00	\$0.00
Ruby Creek	Adanac Molybdenum Corp.	\$100,000.00	\$100,000.00	\$0.00

Tulsequah	Chieftain Metals Inc.	\$1,200,000.00	\$1,200,000.00	\$0.00
Zip Mill	Huakan International Mining Inc.	\$235,000.00	\$303,558.00	\$68,558.00
Lexington-Grenoble	Huakan International Mining Inc.	\$215,000.00	\$168,232.00	\$0.00
Yellowjacket	EaglePlains	\$150,000.00	\$150,000.00	\$0.00
Mount Milligan	Terrain Metals Corp.	\$30,000,000.00	\$35,171,000.00	\$5,171,000.00
Dome Mountain	Gavin Mines Ltd.	\$579,000.00	\$1,360,000.00	\$781,000.00
Bonanza Ledge	Barkerville Gold Mines	\$960,000.00	\$4,446,000.00	\$3,486,000.00
Treasure Mountain	Huldra Silver Inc.	\$505,100.00	\$505,100.00	\$0.00
Red Chris	Red Chris Operating Corp.	\$12,000,000.00	\$9,774,073.00	\$0.00
Yellow Giant (Tel)	Banks Island Gold Ltd.	\$355,000.00	\$283,700.00	\$0.00

\$892,153,070.51	\$2,133,597,234.18	\$1,262,769,510.00
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\*bonds greater than liability have an undersecure of zero (not minus)

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Thursday, May 5, 2016 2:56 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** FOR APPROVAL - Media Request: Banks Island Gold...

Good Afternoon Minister,  
Here is the piece regarding Banks Island Gold and the Ministry response to James Witzke and the Gitxaala Environmental Monitoring.  
Please let me know your thoughts.

Regards,  
Tristan

**Reporter:** George Baker – CBC Radio Prince George

**Deadline:** Today.

**Request:** I am wondering if the ministry ever responded to the Gitxaala First Nation's letter (PDF letter attached) sent to Howard Davies on Feb. 26, 2016? If so, what was that response to the concerns raised by the Gitxaala and what actions are being taken on Banks Island to clean up the mess created by Banks Island Gold?

**Reporter:** Shannon Lough – The Northern View

**Deadline:** Friday.

**Request:** I'm writing a story today on the provincial government's response to the Gitxaala Nation and their concerns about the lack of communication with them regarding the clean-up of Banks Island after the Banks Island Gold Mine shut down due to contamination.

- Have you responded to the letter from James Witzke from the Gitxaala Environmental Monitoring?
- What are the next steps in dealing with the contamination?
- Now that the company has filed for bankruptcy, how will the ministry take responsibility for the clean-up?

**Recommendation:** Have GCPE provide information by email.

**Response:** Approved by Al Hoffman. Information on MEM actions to-date provided by MEM regional director Howard Davies. "Background on the issue" comes from the current Banks Island IN. GCPE intends to provide both pieces of information to the reporters.

- The Ministry of Energy and Mines (MEM) has received the Gitxaala Nation letter dated Feb. 26, 2016. (Note: PDF letter attached)
- In response to concerns expressed in the letter, the ministry has taken a number of proactive and immediate actions, including:
  - Feb. 29, 2016: Met with the Chief, Deputy Chief and manager of Gitxaala Environmental Monitoring Group (GEM) in Prince Rupert, discussing the issue and planning how to move forward. Established commitment to weekly calls between MEM and GEM to increase communication and cooperation at operational level. Committed to meet community Elders to discuss.
  - March 15, 2016: MEM met with and presented issue history and updates to a group of 50 Hereditary and Matriarchal Elders at Prince Rupert. A commitment was made to address immediate concern of the community regarding planned disposal of explosives.
  - Regular update calls to James Witzke, Environmental Assessment Manager of GEM on:
    - March 4, 2016
    - March 11, 2016
    - April 1, 2016
    - April 8, 2016
    - May 3, 2016

- March 16 to April 1, 2016: Extraordinary collaboration between MEM, Banks Island Gold's receiver and industry to accommodate Gitxaala Nation wishes and remove explosives and dispose them offsite rather than on Banks Island. This was accomplished in very short turnaround time, meeting MEM's commitment to the community. Gitxaala Nation kept fully informed.
- MEM is acting as a good-faith intermediary between the receiver and Gitxaala Nation. MEM requested meetings between the receiver and Gitxaala Nation on several occasions in order to facilitate communications and solutions.
- Including GEM in multi-day helicopter visit to Banks Island with MEM technical experts for purposes of hazardous material assessment in preparation for possible site clean-up (scheduled for May 9 to 11).
- Ongoing discussions within MEM on possible solutions to the immediate concerns about the human health.
- The ministry intends to respond in writing to the issues in the letter in the future.

**Background on the issue** (for the reporter, messaging comes from the current IN):

- On July 15, 2015, inspectors with the Ministry of Energy and Mines shut down all mining activities at the Yellow Giant Mine on Banks Island, which was operated by Banks Island Gold.
- The shutdown was ordered because the company was not complying with the conditions of their permit, and inspectors determined that continued operation of the mine would lead to detrimental environmental impacts.
- Ministry of Energy and Mines inspectors also issued stop-work orders on July 9, 2015 at two exploration sites on Banks Island operated by Banks Island Gold.
- In addition, Ministry of Environment staff issued a Pollution Abatement Order on July 10, 2015, requiring the company to immediately cease all unauthorized discharges and implement clean-up activities.
- Banks Island Gold filed for bankruptcy on Dec. 31, 2015, as the company could no longer meet its financial obligations with its creditors.
- There is a total of \$420,000 in security held for Banks Island Gold. If reclamation liabilities revert to the Province, this security money will be used to carry-out reclamation and to pay for any ongoing monitoring or maintenance that is required at the Yellow Giant mine site.
- The intent of the Province's reclamation legislation is to ensure that modern mine sites in B.C. do not leave an ongoing legacy or require public funds for clean-up activities.
- The ministry continues to work cooperatively with the company's receiver.

**Additional background for the MO only:** Full details provided by regional staff (Howard Davies) that the bullets above were pulled from.

s.14,s.16

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Withheld pursuant to/removed as

s.14;s.16;s.13;s.17

## Frankl, Dave MEM:EX

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**From:** Denniston, Tristan M MEM:EX  
**Sent:** Tuesday, May 10, 2016 3:02 PM  
**To:** Bennett, Bill MEM:EX  
**Cc:** Wallace-Deering, Eric MEM:EX; Lewis, Ted MEM:EX; Haslam, David GCPE:EX  
**Subject:** FOR APPROVAL - Media Request: CBC Radio on Yellow Giant Mine...

Good Afternoon Minister,

George Baker from CBC Radio in PG is requesting information as to whether Yellow Giant was inspected during the 15 months it was open. GCPE has recommended they respond to this one with the information below. It includes background from the initial request as well as the 12 dates that the site was visited.

Please let me know your thoughts.

Regards,  
Tristan

**Reporter:** George Baker – CBC Radio Prince George

**Deadline:** Today.

**Request:** I do need to know whether or not the MEM sent someone to inspect Yellow Giant in the 15 months it operated and if so what dates. (this is a follow-up request – GCPE previously provided information on Friday, May 6 – see Background below)

**Recommendation:** Have GCPE provided information by email.

**Response:**

Ministry of Energy and Mines inspectors visited the Yellow Giant Mine site on the following dates:

- Dec. 18, 2015
- Oct. 14, 2015
- Sept. 3, 2015
- Aug. 5, 2015
- July 15, 2015
- July 9, 2015
- March 19, 2015
- Nov. 27, 2014
- July 15, 2014
- Feb. 12, 2014
- Sept. 6, 2013
- May 28, 2013

Note: Ministry of Environment staff have also visited the site.

**Additional background for the MO:** Information provided to the reporter on Friday, May 6:  
s.13,s.16

### Background

- On July 15, 2015, inspectors with the Ministry of Energy and Mines shut down all mining activities at the Yellow Giant Mine on Banks Island, which was operated by Banks Island Gold.
- The shutdown was ordered because the company was not complying with the conditions of their permit, and inspectors determined that continued operation of the mine would lead to detrimental environmental impacts.
- Ministry of Energy and Mines inspectors also issued stop-work orders on July 9, 2015 at two exploration sites on Banks Island operated by Banks Island Gold.
- In addition, Ministry of Environment staff issued a Pollution Abatement Order on July 10, 2015, requiring the company to immediately cease all unauthorized discharges and implement clean-up activities.
- Banks Island Gold filed for bankruptcy on Dec. 31, 2015, as the company could no longer meet its financial obligations with its creditors.
- There is a total of \$420,000 in security held for Banks Island Gold. If reclamation liabilities revert to the Province, this security money will be used to carry-out reclamation and to pay for any ongoing monitoring or maintenance that is required at the Yellow Giant mine site.



- The intent of the Province's reclamation legislation is to ensure that modern mine sites in B.C. do not leave an ongoing legacy or require public funds for clean-up activities.
- The ministry continues to work cooperatively with the company's receiver.