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Submission to the Independent Engineering Investigation and Review Panel on the Mount Polley Mine Disaster

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Thank you for this opportunity to comment on the possible causes of the Mount Polley disaster. Our submission addresses the following concerns:

1. Organizational culture in government and at Mount Polley Mining Company as a causal factor
2. The lack of environmental assessment for Mount Polley and for the incremental expansion of mines, including design changes
3. The consequences of inadequate enforceable regulated standards for mines
4. The need for whistleblower protection
5. The lack of publicly available information from government sources about Mount Polley
6. The need for legislated funds to protect the public from catastrophic failures or abandonment of mine facilities
7. The Mount Polley disaster and the affected communities

1. Organizational Culture at the BC Government and Imperial Metals Corporation

We urge the panel to consider the role of organizational culture in the BC government and at Imperial Metals as casual factors in the Mount Polley Mine disaster.

The BC Ministry of Energy and Mines describes the mining industry as its “client”. On its website it states its purpose as follows: “Unnecessary red tape hinders development and can tie up industry and government resources. In the BC Jobs Plan, the Province committed to work to make regulatory processes more efficient while maintaining high health, safety and environmental standards.”¹ This is a clear statement that “cutting red tape” and making regulation “more efficient” trumps health, safety, and environmental standards. The organizational culture created by these priorities pressures the public servants working in MEM to tailor their work and decisions to meet these goals.

Eugene Rosa, a sociologist from the Thomas F. Foley Institute for Public Policy and Public Service at Washington State University², makes the point that the risk literature about contaminated sites (such as tailings impoundments) is overwhelmingly dominated by the Rational Actor Paradigm (RAP), with its emphasis on individuals and its meagre attention to organizations. He says that effective stewardship of these sites rests on the shoulders of institutions not individuals; in this case, on BC government departments and the mining company.

The RAP treats the individual as an abstract calculating decision-maker, unmindful of social and political concerns and committed to making reasoned judgements. This requires a suspension of historical knowledge and a naiveté about how people actually make decisions, especially in organizational cultures. As Rosa says, humans intend to make rational decisions. However, we often do not. This can be a result of our ignorance or self-interest. But it can also be a result of expectations, imposed by organizations, that conflict with safety: of division of labour, of routinization, of ideological indoctrination, or an unresponsive authority structure.

He states: *“The appropriate strategy for understanding the risks of long term stewardship is to examine the organizations that are charged with that stewardship.”*

The responsible organization will be subject to particular challenges: the atrophy of vigilance in an environment where the need to act is intermittent (maybe spanning decades), the splintering of responsibility amongst different actors (organizational silos, jurisdictional differences, contractor relationships), and structural secrecy (the need to protect the institutional reputation, national security issues, fear of producing panic). It needs to be able to operate flexibly in a crisis, with many redundant features.

Key to understanding what has gone wrong in an organization is to look at how power is exercised: the distribution of choice, prerogatives and resources. These are unfairly distributed within any organization. In organizations that are driven by schedules, place economic concerns over safety and environmental considerations, have insufficient resources to do a job properly, have ineffective communications, and are unresponsive to criticism, the ability to learn by trial and error is almost non-existent. “All organizations reduce the uncertainty of individual actions by imposing expectations, routines and rules of choice on action. Decision-making is, therefore, constrained by premises of permissible choice embedded in the structure and culture of organizations.”³

As a further example, Diane Vaughan, who conducted a thorough analysis of the Challenger accident in 1996, found that the cause of the accident was in the very structure and culture of NASA itself. “The rules of that culture included bureaucratic procedures that permitted the acceptance of engineering performance that did not meet design standards, a structural secrecy where the left hand was out of communication with the right, and the acceptance of risk of serious failure based, not on positivistic foundations, but on a

cultural construction. In short, people were doing their jobs exactly as prescribed by the NASA bureaucracy and culture.”⁴

The regulation of mining in BC crosses many departments of government, each with different mandates and interests.⁵ Cutbacks in staffing in the interests of efficiency, and the structural secrecy that appears to attend mine permitting, create new risks which are exacerbated by the acceptance of exceedances of standards as an acceptable and negotiable norm. These matters will be explored individually later in this submission.

As we wrote on October 24, 2014: *Whether the issues identified in the past are directly related to the spill or not, the response of the BC government to the issues at Mount Polley tells us a lot about how the system of oversight of mining sites works in BC.*

*The situation at Mount Polley is, unfortunately, typical of governments that want to maintain an “open for business” climate and seek to promote compliance with environmental and engineering standards but do little to force companies into concrete action in a timely way.*⁶

2. The lack of environmental assessment for Mount Polley and for the incremental expansion of mines, including design changes

The Mount Polley Mine received a Mine Development Certificate in 1992 and a Project Approval Certificate (M96-07) in 1997. Clearing the site began in 1995 and mine operation in 1997. The mine was placed on care and maintenance in October 2001 and reopened in March 2005. At its initial approval stage (Mine Development Certificate 92-13 on October 6, 1992) only 3 pits were envisioned and the Tailings Storage Facility was planned to be zero water discharge.

The University of Victoria Environmental Law Centre (UVic ELC) examined the documents leading up to the 1992 permit and found that “*during Mount Polley’s mine development assessment process there was extensive discussion about the TSF. Major issues included the location of the TSF, appropriate water conservation within the mine and mill to reduce flow to the TSF, and stipulations for the development of further plans to deal with issues including spill control and monitoring.*”⁷ *Concerns canvassed during the assessment process regarding the TSF did become commitments in the MDC. As all the supporting documents, reports, and meeting minutes that made up the mine development assessment process have not been made available to the public, it is not possible to state whether the full depth of these recommendations made it into the final MDC.*”⁸

In only 13 years of operating mine life since the initial permit, the mine footprint has grown exponentially, and any discussion that took place about potential mine impacts based on the 1990 Feasibility Study is obviated by this growth.

The current permitted 2016 mine plan (if the mine is re-opened) will involve the creation of seven pits: the Boundary Zone Pit, the Wight Pit, the Pond Zone Pit, the Southeast Zone (SEZ) Pit, the Cariboo Pit, the Springer Pit, the Bell Pit, and the C2 Pit, and revised water management strategies, which include dealing a water surplus of over 1.5 million cubic metres/year, and draining the Cariboo Pit to continue to mine it.

Although its permit – 11678 – has been amended a number of times, the mine has never had an Environmental Assessment (EA).⁹ In 1995, the various environmental review processes that stood in for

EA in BC, including the *MDAA*, were brought together under the *Environmental Assessment Act* (EAA); none of them were re-evaluated to see if they met the requirements of the new Act. Mine expansions, no matter how large, are exempt. As with other mines in BC, this expansion exemption creates an incentive for proponents to downplay potential expansions and their environmental impacts during the initial EA and permitting stage.

In 2011, the Auditor General of BC's Report "An Audit of the Environmental Assessment office's oversight of certified projects" ("AGR") identified that EAC conditions and commitments are often written in a manner that does not support enforcement and monitoring. *Commitments often use qualified, vague or unenforceable language, lack clarity on timing of obligations, and lack clarity on how decisions will be made on unresolved issues.*¹⁰

Mine expansions should be subject to EA before permits are granted. This is especially true for older mines that did not receive an environmental assessment before they went into production.

There are a number of other problems with EA for mines that the Panel might consider. These are well described in the brief from the UVic ELC, along with recommendations to improve the process. MiningWatch supports those recommendations.

3. The consequences of inadequate enforceable regulated standards for mines

For mining companies, the primary ministry is MEM – the Ministry of Energy and Mines. But mining has serious and long-term effects on the environment, on our social and cultural lives and creates a number of lost opportunity costs. As a result, there are a number of Acts that provide the legislative framework for mining in British Columbia, most of which have their own departments, staff and organizational culture. The *Mines Act* (including the Health, Safety & Reclamation Code & Mineral Exploration Code) is only one of them. The environmental legislation includes: *Environmental Assessment Act*, *Environment & Land Use Act*, *Environment Management Act*, *Forest Act* (including the Forest Practices Code), *Public Health Act*, *Water Act*, *Water Protection Act*, *Wildlife Act*, *Fisheries Act*, and *Fish Protection Act*. There are also *Acts* governing labour standards and practices, taxation and mineral taxes, investment and securities.

There are also federal *Acts*, regulations and departments (*Fisheries Act*, *CEAA*, *CEPA*, *Explosives Act*, *SARA*, *Migratory Birds Convention Act*, etc.) that are brought into play; as well, there are federal trade agreements, taxation laws and investment regulations.

"Mines in British Columbia, after receiving an environmental assessment certificate, are governed by three main documents:

- 1. Waste Discharge Regulation (under the Environmental Management Act, hereafter referred to as the WDR)*
- 2. Mines Act (the Act)*
- 3. Health, Safety, and Reclamation Code (the Code)*

*Each of these documents contains a mix of discretionary and mandatory provisions that will be discussed in more detail below. Broadly, the WMA governs discharges from the mine, the Act lays out the basic permitting and enforcement regime, and the Code contains more detailed requirements regarding design, inspection regimes, and reporting."*¹¹

A memorandum of understanding signed 20 November 2013 between the different BC departments involved in mining impoundment and diversion regulation in BC is an attempt to sort out the conflicting mandates between MEM and the other departments involved in tailings management and discharges, but had the effect of leaving more control over mining issues with the Ministry of Mines.¹²

What was the role of the laws, regulations, policies, and their enforcement, in causing the Mount Polley disaster?

Undermining the Law, published by West Coast Environmental Law in 2001, looked at the state of environmental protection at mines.¹³ It found that; “from 1996 to 2000 the budget for the former Ministry of Environment, Lands and Parks (now Ministry of Water, Land and Air Protection) fell by almost \$40 million, equal to a 20 percent cut.... There are numerous gaps in the records kept and information available on enforcement. As a result, we could not conduct the comprehensive research we had hoped. However, we did gather enough information to draw conclusions about the state of environmental enforcement in BC..”

“In terms of information available, there are numerous inconsistencies. For example, while the Ministry of Water, Land and Air Protection publishes a non-compliance report, listing polluters who are not in compliance with the Waste Management Act, there is no similar reporting on environmental compliance under the Mines Act. As well, our research revealed discrepancies between the number of times problems at mines are noted in regional office investigation files, and whether these mines even appear on the government’s Non-Compliance Report. Our research revealed that in situations where charges for breaking the law are laid against a company, a significant number of those charged never appear before a judge, as the charges are stayed.”

Looking specifically at the Mines Act, the study found: “BC’s Mines Act sets few specific standards for environmental protection and those it does set are vague. Because of this, the standards are difficult to enforce. Officials with the Ministry of Mines have vast discretion in exercising their duties, and there is no independent appeal process to provide accountability for their decisions, such as the Environmental Appeal Board.”

Reviewing the Waste Management Act in 2001, WCEL stated: “The Waste Management Act is BC’s primary environmental law. All mines require a waste management permit that set standards for when, where, and how much a company can discharge. The Act gives the Ministry of Water, Land and Air Protection significant powers of enforcement. But this report shows that the Ministry’s ability to enforce the law has declined dramatically: overworked inspectors now scrape by with few resources, and little ability to follow through once a problem has been identified. In some cases, it appears that the government finds it easier to increase pollution permit levels so that companies otherwise violating the law, will suddenly be in compliance rather than attempting to enforce the law.”

The debate about whether there are adequate inspectors for BC mines continues to this day.

In 2001, there were 10 major metal mines, 7 coal mines, and 45 industrial mineral mines in operation in BC, 2 smelters, and many smaller mining and 58 major exploration projects. By the end of 2010, there are 9 major metal mines and 10 major coal mines, 35 major industrial mineral mines, 2 smelters and numerous smaller mining and exploration operations throughout the province. As well, there were several major operating mine expansions (Quinsam, Endako, MAX Moly and Highland Valley Copper) and four major mines in construction: Copper Mountain, New Afton, Atlin Gold, and Mount Milligan).

Ensuring that the regulations are respected and enforced at these sites is the job of mine inspectors. There were 28 inspectors in 2001 who conducted 2,021 inspections. In 2004, the number dropped to 399 visits. The Chief Inspector of Mines Report for 2012 indicates that by 2012, the number had increased to 1163 visits. We do not know how many inspectors there are currently or were in 2012.¹⁴ What is clear is that there were fewer visits for a greater number of mining projects over this time.

The Government's geotechnical inspection regime was also reduced during the 2000s. The government inspectors, unlike consulting engineers, have the authority under the *Mines Act* to issue *legally binding* orders to the mine operator.¹⁵ Only three geotechnical inspections of mines in the province were conducted in 2010. Two were performed in 2011. A government inspector did not inspect Mount Polley in 2009, 2010, or 2011. The drop in inspections may be related to the reduction in geotechnical inspection staff at the ministry. Between 2004 and 2011 there was only one geotechnical inspector on staff – a reduction from five in 2000. Again, the government inspectors, unlike consulting engineers, have the authority under the *Mines Act* to issue *legally binding* orders to the mine operator.¹⁶

The same problem is evident with dam inspections. Although in BC, tailings dams are regulated under the *Mines Act*,¹⁷ a lack of dam inspectors indicates a lack of expertise in that area. On September 22, 2010, the comptroller of water rights for the BC Ministry of the Environment warned the deputy minister that the province's dam safety inspection program was "understaffed," and there were concerns about the province moving away from "audits" of dams to relying on private operators to self-monitor.¹⁸ In 2001, there were 8.5 full time equivalents; by 2010, there were 5.5 FTEs. There are over 2000 dams, including 98 tailings dams in the province.

Although initially permitted as a zero water discharge mine, from 2007 MPMC (Mount Polley Mining Company, a wholly owned subsidiary of Imperial Metals Corporation) knew it would need to discharge effluent from the tailings impoundment, as it had a water balance in excess of 1.4 million m³ annually, and was having to store excess water in the Cariboo Pit. The Environmental Management Act permit 11678 was most recently amended in June 2013, to increase the amount of effluent discharged to Hazeltine Creek. The permit states: "2.4.4 *The tailings impoundment must provide 1.0 meter of freeboard plus storage for the Probable Maximum Precipitation (PMP)...*"¹⁹ However, On May 24, 2014, MEM responded to an incident at the mine and found that the freeboard (the distance between the water elevation and the crest of the mine) was less than one metre. MEM issued an "advisory" and required daily measures of freeboard. No penalty was imposed.²⁰

The Environmental Law Centre Study and other sources identify a number of other instances where enforcement at Mount Polley has been an issue (selected quotes and paraphrases from their Report):

- ***The Mine Development Certificate (MDC):*** *the MDC states: "Nothing in the summary of commitments and requirements inhibits the parties in continuing to negotiate and refine the conditions of permits."*²¹ *Thus these MDC requirements are negotiable guidelines, despite being a central part of the conditions upon which the Mount Polley Mine, including the TSF, was deemed acceptable by the Ministers.*²²
- ***Annual TSF inspections arising from the Mines Act and the Health, Safety and Reclamation Code:*** Only two of Mount Polley's annual inspection reports are available to the public (2009 and 2010).
- ***Broken Piezometers:*** In 2009, KP (Knight Piésold) reported 32% of the piezometers used to measure pressure on the structure were no longer reporting data.²³ These instruments were embedded in the embankments and the tailings. The report goes on to cite the 2006 DSR completed by AMEC. In 2006, the number of piezometers was considered sufficient, but there was "little

redundancy” in the system. It was suggested that lost instruments should be replaced.²⁴ In 2009, KP concluded by stating that MPMC was in the process of developing a plan to replace the lost instruments.²⁵ By the 2010 report this had increased to 40%. It was finally made a condition of the permit on August 15, 2011.²⁶ The only public information that the problem was dealt with is a press statement from MPMC on October 2, 2014, which says a “significant instrumentation program was carried out in 2011 with the installation of 23 peizometers and 3 inclinometers. Two additional inclinometers were installed in 2012.”²⁷ **Two questions remain: how long did the problem persist before it was fixed? Why did these gauges not detect the problem that lead to the failure of the dam?**

- **Creation of effective tailings beaches.** A 2008 geotechnical inspection by the Ministry of Energy Mines and Petroleum Resources noted inconsistent deposition of the tailings at Mount Polley.²⁸ At that time, KP recommended MPMC maintain tailings beaches between 10 and 20 meters in width around the entire structure. The 2009 and 2010 KP reports recommended the continued dispersal of tailings around the TSF to further develop tailings beaches and manage the location of the tailings pond.²⁹ The 2010 report notes that the single point dispersal of tailings –the production of an overly large tailings beach at one point of the TSF –has led to the “migration” of the supernatant pond up against the embankments on the opposite side of the TSF.³⁰ There is no further public information about the situation. **What was done to enforce the 2008 finding about the tailings beaches? An order to disperse the tailings was never included in the mine’s permit.**
- **Dam classification.** The 2010 report also raised concerns respecting Mount Polley’s TSF dam classification. During the 2006 DSR, AMEC reclassified the TSF from “high” to “low” under the 1999 CDA guidelines. This change was the result of excluding from consideration the estimated cost of a breach to the mine owner.³¹ The TSF classification was ‘significant’ at the time of the 2010 inspection. The 2007 CDA Guidelines require a “Dam Breach and Inundation Analysis” which was to consider *both* “sunny-day” failures, and “flood-induced” failures. The analysis includes mapping of inundation areas to estimate possible consequences of the breach. These maps should also be used for emergency planning.³² The classification of a dam should be “determined by the highest potential consequences,” and based on the scenario that would result in the worst consequences.³³ In their 2010 report, Knight Piésold recommended an inundation analysis, considering the factors described above, be performed in 2011 to determine whether the “significant” classification was appropriate. This was recommended because the environmental impacts from a theoretical dam breach had not been evaluated at that time. An analysis of whether loss to fish and wildlife habitat would result from a dam breach could have changed Mount Polley’s dam classification to “high” or “very high.” Further, KP suggested this inundation analysis should be incorporated into the Emergency Preparedness and Response Plan.³⁴ *The Code notes that only dams with a failure consequence of “high” and “very high” are required to have an Emergency Preparedness Plan. There is no requirement for dams classified as low or significant to have such a plan. Though, this is not to say a plan was not mandated as a part of their permit at the Chief Inspector’s discretion. See: Health, Safety, and Reclamation Code for Mines in British Columbia, BC Reg 313/2008, s 10.6.8, at 10-13.*³⁵ **How might a change in dam classification have prevented the disaster?**

4. The need for whistleblower protection

On November 20, 2014, Saanich North MLA Gary Holman introduced a private member’s bill – the *Whistle Blowers Protection Act* – to ensure that the Mount Polley enquiry can get all the evidence it needs to carry out a proper investigation. The need for this protection is set out in a letter from Mark Haddock of the Environmental Law Centre at UVic to Premier Clark:³⁶

However, there is a key missing piece that the Panel does not have the power to influence – protection against disciplinary action for providing crucial information to the panel. The Panel’s investigation will only be as good as the information and evidence that it becomes aware of.

The key issue is this: much of the critical evidence surrounding the Ministry of Energy and Mines’ and the Ministry of Environment’s regulatory oversight is in the hands and minds of civil servants. Yet these civil servants are answerable to – and may be disciplined or dismissed by – the Minister and other high officials whose own actions (or inactions) may come into question.

Similarly, much of the critical evidence relating to the management, operation, maintenance, surveillance and monitoring of the Mount Polley Mine is in the hands of the Mount Polley Mine employees. ...As it stands today, both government and company employees may well be reluctant to bring forward information, for fear of dismissal or discipline. Union employees, members of United Steelworkers, have access to the rights enshrined in their collective agreement. Non-union excluded employees do not. For all employees the lack of information and the silence from government investigators creates an atmosphere that discourages any worker from coming forward.

Mining Watch Canada fully supports this request for whistleblower protection and MLA Holman’s private member’s bill.

5. The lack of publicly available information from government sources about Mount Polley

In 2011, the BC Auditor-General³⁷ reported on compliance with Environmental Certificates and found:

“Oversight of proponent self-monitoring: The majority of environmental assessment certificates contain a condition requiring proponents to submit periodic compliance reports. This is referred to as “proponent self-monitoring.” Staff at the EAO review the self-monitoring report when it is submitted. We noted that compliance reports are not always submitted. If the report appears to be complete, it is accepted as proof of compliance. When questions arise, staff contact the proponent by phone or email.

The EAO does not formally track certified project conditions and commitments for compliance.... The EAO’s oversight of certified projects is not sufficient to ensure that potential significant adverse effects are avoided or mitigated.”

This statement holds doubly true for older mining projects like Mount Polley that have not had an Environmental Assessment. There is nothing about this mine on either the CEAA or EPIC websites and the original commitments regarding the 1992 Mine Development Permit are not available. Many documents that should be in the public domain about Mount Polley operations cannot be found: all but the 2009 and 2010 Dam Safety reviews, data on the number of mine inspectors and geotechnical engineers working for BC at the time of the disaster, the permit amendments and accompanying documentation for each dam raise. Up until November 24, 2014, details of on-going remediation work were only available on the Mount Polley Updates site³⁸.

6. *The need for legislated funds to protect the public from catastrophic failures or abandonment of mine facilities*

The lack of any kind of industry supported “emergency fund” for catastrophic events in the mining industry might be a contributor to the on- going disaster.

We ask the Panel to consider the utility of establishing an “Unforeseen Events Fund” similar to that in Saskatchewan.

The Saskatchewan Institutional Control Plan (ICP) was established in 2007 to manage and monitor mine sites (mostly uranium) once decommissioning has been complete. The ICP applies to decommissioned mine and mill sites on provincial Crown land. One component of the ICP, the Unforeseen Events Fund will pay for events such as damage from tornados, fire, floods and earthquake.

It is established through operator contributions of 10-20% of their total contribution to the Monitoring and Maintenance Fund. The Unforeseen Events Fund monies are invested in bonds to target a specific return. The money in this fund is not tracked by individual site contributions and can be drawn on for contingencies at any of the registered sites.

“A financial assurance requirement has been implemented to minimize the ICPs financial risk during the initials years while the Unforeseen Events Fund is building value. In negotiation with industry, while implementing a condition to reduce its risk, the province also took steps to minimize the impact on good corporate citizens through acceptance of corporate guarantees... A good corporate citizen is defined as one with a credit rating of BBB (low) or higher.”³⁹

The amount of financial assurance must be equal to the cost of “a maximum failure event” at the site, or “such reduced amount agreed to by the Minister.” The assurance will be reviewed every five years.

7. *The Mount Polley disaster and the affected communities*

The BC government is so determined to open new mines and expand old ones that it uses a bad system to rush though approval for risky projects, and fails to really consult First Nations and consider the facts,” says FNWARM’s chair, Chief Bev Sellars, whose Xat’sull (Soda Creek) First Nation’s lands are bearing some of the brunt of the disaster.

“They are blinded by the dollars the mining companies claim they will make, and ignore the terrible risks they are taking with our lives, livelihoods and environments,” said Chief Sellars.

“Our lasting economy is what swims by in the river and lakes, walks on and grows on the land, and flies in the air – and this is what can be destroyed by a lust for the temporary dollars mining can provide,” said Chief Sellars...The magnitude of this disaster shows just how bad an economic decision its approval was, and it comes just days after the Williams Lake Band got its first cheque under a new mine revenue-sharing deal with the province – for a mere \$4,500.

“We expect our share will be about the same,” said Chief Sellars. “We were promised the mine would be safe – well that clearly was not the case. We signed revenue sharing

deals because the mine was built and we were promised a fair share of the revenues to help out communities – and that share turns out to be not even enough to pay for one youth's college tuition."⁴⁰

The mine site is in the traditional territory of the Secwepemc Nation with the Xat'sull and Williams Lake Bands actively using and sharing custodial responsibilities over the area. An apology, compensation and long-term control over the remediation plan is essential.

When evaluating the impacts of the Mount Polley disaster, it is important to recognize that it is not just a question of whether the tailings were toxic or not. For the people who live in the region of the mine: the Xat'sull and Williams Lake bands, for the Secwepemc people in general and for communities such as Likely, this is an ongoing traumatic event. A number of small businesses, including some tourist operations have been decimated by the spill. The impacts on the trout and salmon populations will be substantial. These impacts need to be seen in tandem with the expanding, enormous footprint of the mine, pre-spill.

The union estimates that only a dozen workers from Mount Polley are still unemployed because of the mine closure⁴¹.

When the mine was being discussed in 1992, there was little effort made to consult the First Nations landholders. Staking, exploration and mine development took place without their permission and over their vociferous objections. As the mine developed and expanded from 3 pits (Cariboo, Bell, Springer) to include the expansion of the old pits and the development of 5 others, with the concomitant increase in tailings, waste rock and effluent discharges, the communities have sought to protect what is left of their heritage and land. Hazeltine Creek, now irretrievably ruined, had already been reduced to 65% of its capacity by earlier assaults from placer miners and earlier mining activities.

There is a strong case to be made that the disaster might not have happened if the early interventions and concerns from the affected First Nations and community members had been heeded.

In 2012, MPMC executed Participation Agreements with both First Nations groups that have interest in the area: Xat'sull Cm'etem (Soda Creek/Deep Creek Band) and the T'exelc (Williams Lake Band). Through these respective Participation Agreements, Implementation Committees were formed in order to facilitate open dialogue between both Nations and MPMC for discussing environmental, social and economic matters related to mine development, operation, reclamation and closure (i.e. mine updates, permitting, environmental protection, reclamation, employment opportunities and potential joint ventures).⁴²

The participation agreements signed between First Nations and the company are more an admission of defeat than a victory. The revenue they were promised from the mine is a percentage of the mining tax (tax based on profit), and has returned very little (if anything). Chief Bev Sellars told the media on August 5, 2014, that the Williams Lake Band had received \$4500 as their first payment in compensation from the mine.

The mine should not be reopened until all participation agreements are re-worked and an apology and compensation is paid to the First Nations and other affected peoples. There is a general consensus that local communities need to be involved in planning for remediation and long term care of the site; in particular, the indigenous communities who have strong attachment to the very land upon which the mine sits. However, there may be resentment and resistance to involvement from some community members, since these affected indigenous communities have come to this point through a long history of trespass and pillage by the very structures of colonialism that now seek their counsel. Division and political tension is a result of the disaster.

Where communities discover – after the fact – that their land and people have been irretrievably destroyed, it alters their perceptions of themselves, their cultural memory. The need for understanding how the site came to be; for healing, telling the history, for lament, for commemoration, is essential. The opportunity for peoples to heal themselves culturally, spiritually, politically and socio-economically has to be part of any remediation plan.⁴³

The mine should not be reopened until the affected First Nations give their consent, and an apology and compensation is paid to them and other affected peoples.

¹ <http://www.empr.gov.bc.ca/Mining/Strategy2012/Pages/Streamlining.aspx>

² Rosa, Eugene. Long Term Stewardship and Risk Management: Analytic and Policy Challenges. In Leschine, Thomas (ed). *Long Term Management of Contaminated Sites* Research in Social Problems and Public Policy, Volumes 13. Emerald Group Publishing. 2007.

³ Rosa, page 231.

⁴ Vaughan, in Rosa, page 231.

⁵ The MOU signed 20 November 2013 between the different BC departments involved in mining impoundment and diversion regulation in BC is an attempt to sort out the chaos. Downloadable from http://www2.gov.bc.ca/gov/DownloadAsset?assetId=9694B72E5D9F479BAC18A00ACFC62F55&filename=memorandum_of_understanding.pdf

⁶ MiningWatch Canada. Mount Polley and the failure of compliance. October 24, 2014. <http://www.miningwatch.ca/blog/mount-polley-and-failure-compliance>

⁷ Province of British Columbia Ministry of Energy, Mines and Petroleum Resources, Ministry of Environment, Lands and Parks, *Mount Polley Copper/Gold Project* (Mine Development Assessment Process, 1992) at 17.

⁸ Environmental Law Centre, University of British Columbia, draft submission to the Independent Panel. The author of this report had access to their research draft and references are to the draft: UVic ELC: page 1. ELC obtained these documents through a sympathetic librarian in Williams Lake, but were denied access by EPIC.

⁹ *"The ministers approved the Mount Polley Mine without a Review Panel process...In 1995, the various environmental assessments managed by BC, including the MDAA, were brought together under the Environmental Assessment Act (EAA). This act contained a new process for assessing the impacts of reviewable projects. The new EA process was similar to that of the MDAA. When the EAA came in force, projects already approved fell under the regulatory scheme of the EAA.*

¹⁰ Maya Stano and Emma Lehrer, *Fair Mining Practices: A New Mining Code for British Columbia*, (Fair Mining Collaborative, 2013) at 235, online: <http://www.fairmining.ca/wp-content/uploads/2014/08/Fair-Mining-Practices-A-New-Mining-Code-for-BC-Web-Copy.pdf>.

¹¹ UVic-ELC draft report, page 16

¹² Downloadable from http://www2.gov.bc.ca/gov/DownloadAsset?assetId=9694B72E5D9F479BAC18A00ACFC62F55&filename=memorandum_of_understanding.pdf

¹³ WCEL, *Undermining the Law: Addressing the Crisis in Compliance of Environmental Mining Laws in BC*, 2011, <http://wcel.org/resources/publication/undermining-law-addressing-crisis-compliance-environmental-mining-laws-bc>

¹⁴ Ball, David. Mine, Dam Inspections Dropped Since 2001. *The Tyee*. 2014/08/08

¹⁵ UVic ELC draft report

¹⁶ *Ibid.* page 33

¹⁷ http://www.env.gov.bc.ca/wsd/public_safety/dam_safety/leg_index.html

¹⁸ *Ibid.*

¹⁹ June 27, 2013 letter from Ministry of Environment to MPMC with permit 11678

²⁰ Newsroom, Government of BC backgrounder August 18, 2014.

²¹ Province of British Columbia Ministry of Energy, Mines and Petroleum Resources, Ministry of Environment, Lands and Parks, *Mount Polley Copper/Gold Project* (Mine Development Assessment Process, 1992) at 22.

²² ELC UVic draft comment

²³ Knight Piésold Consulting, *Tailings Storage Facility Report on 2009 Annual Inspection* (Ref No VA101-1/27-1, 2011), at 6. 29 of 91 total piezometers had failed at the time of the inspection. See also: Imperial Metals Corporation, *The Mount Polley Project Reclamation Plan* (1996), at 3-18. "Monitoring features" were a principle requirement of the TSF design.

²⁴ Knight Piésold Consulting, *Tailings Storage Facility Report on 2009 Annual Inspection*, (Ref No VA101-1/27-1, 2011), at 7.

²⁵ Knight Piésold Consulting, *Tailings Storage Facility Report on 2009 Annual Inspection*, (Ref No VA101-1/27-1, 2011), at 7.

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- ²⁶ Ministry of Energy and Mines, “ M-200 Permit Amendment Approving Mining the C2 and Boundary zone pits, (15 August 2011), 4. Tailings Storage Facility, d) Monitoring, ii at 6.
- ²⁷ MPMC “Mount Polley Responds to Vancouver Sun article published on September 26, 2014”. October 3, 2014.
- ²⁸ Knight Piésold Consulting, *Tailings Storage Facility Report on 2010 Annual Inspection* (Ref No VA101-1/29-1, 2011), Executive Summary, at II
- ²⁹ Knight Piésold Consulting, *Tailings Storage Facility Report on 2009 Annual Inspection* (Ref No VA101-1/27-1, 2011), at 12.
- ³⁰ Knight Piésold Consulting, *Tailings Storage Facility Report on 2010 Annual Inspection* (Ref No VA101-1/29-1, 2011), at 7. See also Imperial Metals Corporation, *The Mount Polley Project Reclamation Plan* (1996), at 3-19. The 1996 Reclamation Plan identifies that “multiple spigot offtakes” will be used to control beach development and the pond location. This seems to have been done in 2010.
- ³¹ Knight Piésold Consulting, *Tailings Storage Facility Report on 2009 Annual Inspection at 3*(Ref No VA101-1/27-1, 2010) at 3. See also: Knight Piésold Consulting, *Tailings Storage Facility Report on 2010 Annual Inspection* (Ref No VA101-1/29-1, 2011), at 5, and Brian Olding & Associates Ltd and LGL Ltd, “Independent Review of the Mount Polley Mine Technical Assessment Report for a Proposed Discharge of Mine Effluent (2009)”, online: (2011) at 21 <http://s3.documentcloud.org/documents/1262983/final-report-mpmc-master-ta-review-jun21-2011.pdf> . DSR reviewed the classification and suggested that the owner’s costs tied to a breach/failure were not included in the guidelines rating. When these costs were removed the dam hazard classification was modified from “high” consequence to “low” consequence per the 1999 CDA guidelines.
- ³² The Canadian Dam Association, *Dam Safety Guidelines*, Edmonton: CDA, 2007, ch 2.5.2 Dam-Breach Analysis and Inundation Mapping, at 23.
- ³³ The Canadian Dam Association, *Dam Safety Guidelines*, Edmonton: CDA, 2007, ch 2.5.4 Dam Classification, at 25.
- ³⁴ Knight Piésold Consulting, *Tailings Storage Facility Report on 2010 Annual Inspection* (Ref No VA101-1/29-1, 2011), at 5 and 14. The Code notes that only dams with a failure consequence of “high,” and “very high” are required to have an Emergency Preparedness Plan (note, the extreme classification is not mentioned in the Code). There is no requirement for dams classified as low or significant to have such a plan. Though, this is not to say a plan was not mandated as a part of their permit at the Chief Inspector’s discretion. See: *Health, Safety, and Reclamation Code for Mines in British Columbia, BC Reg 313/2008, s 10.6.8, at 10-13.*
- ³⁵ From the UVic ELC draft report.
- ³⁶ Haddock, Mark. Letter to Premier Christy Clark, November 19, 2014.
- ³⁷ Auditor-General of British Columbia, July 2011
- ³⁸ Imperial Metals Corporation, “Mount Polley Updates”, online (2014)
http://www.imperialmetals.com/s/Mt_Polley_Update.asp?ReportID=671041
- ³⁹ Saskatchewan Ministry of Energy and Resources. Institutional Control Program: Post Closure Management of Decommissioned Mine/Mill Properties on Crown Land in Saskatchewan. December 2009.
http://www.er.gov.sk.ca/Institutional_Control-Decommissioned_Mines/Mills Page 11.
- ⁴⁰ Chief Bev Sellars, quoted in FNWARM news release. August 5, 2014 Mount Polley disaster shows BC mining system is a mess: Government must stop placing mining interests above FN rights and the environment.
<http://www.fnwarm.com/media/483c729cd55407e6ffff8c2efffe41e.htm>
- ⁴¹ Sunny Dhillon. Reopen Mount Polley Mine, union says. *Globe and Mail*. September 7, 2014
- ⁴² *Mount Polley Mining Corporation Annual Environmental & Reclamation Report 2013*
- ⁴³ Kuyek, Joan. *Theory and Practice of Perpetual Care of Contaminated Sites*. 2011.