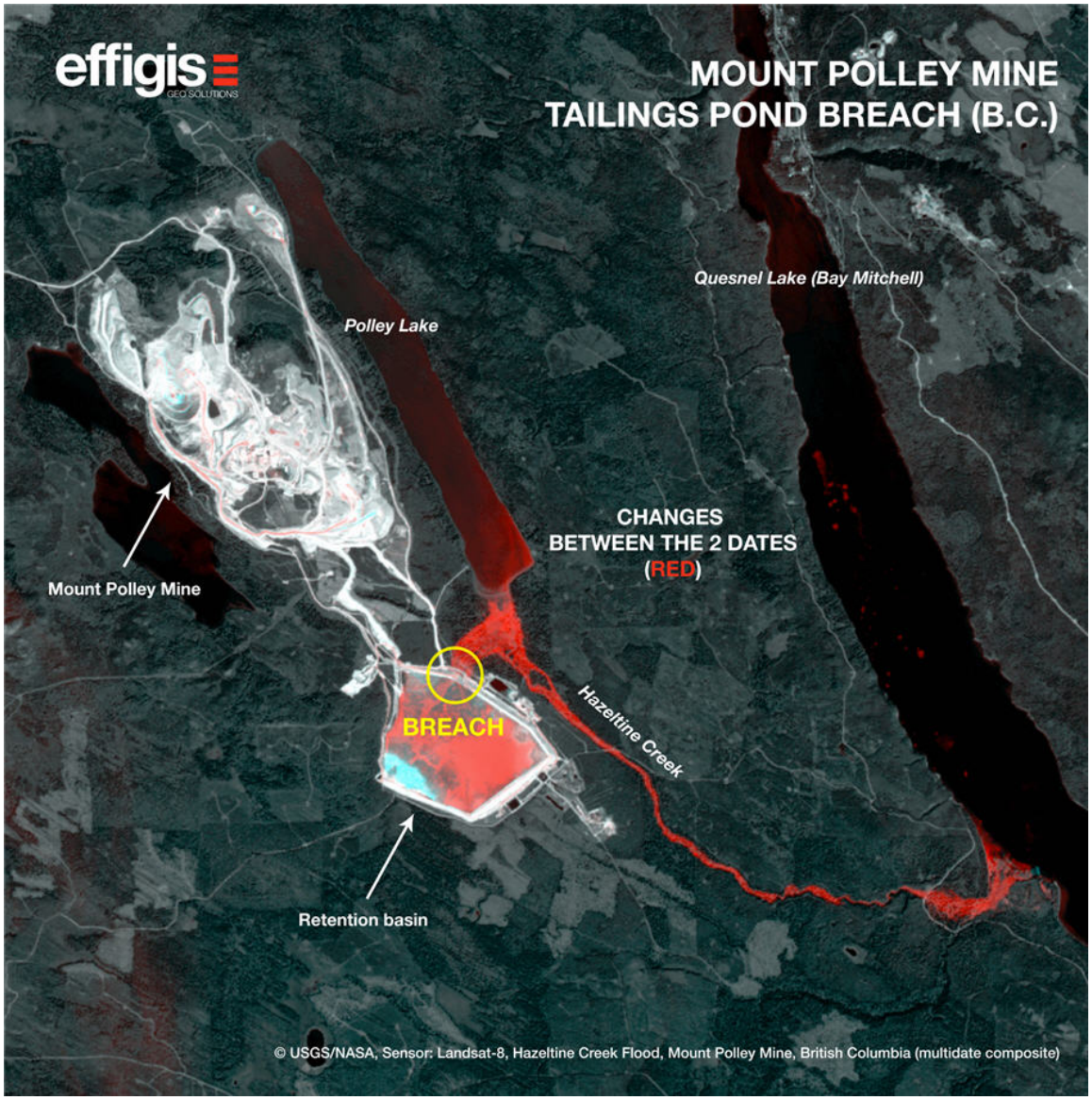
Yuct Ne Senxiymetkwe Camp

Initial Assessment Report on Imperial Metals Mount Polley Mine Tailings Storage Facility Breach

August 27 2014



The Imperial Metals Mount Polley mine tailings storage facility damn breach is the largest environmental disaster in British Columbia's history. The 4 kilometer wide, 35 meter high (approximately the length of three telephone poles) damn breach unleashed 10 billion litres of contaminated water and 5 billion litres of solid tailings waste into Polley Lake, down Hazeltine Creek, into Quesnel Lake and onto the Quesnel River which directly connects to the Fraser River Watershed. The Quesnel Lake watershed is host to the second largest sockeye salmon run in the world and 63% of the provincial population is dependent on the Fraser River watershed.

The Imperial Metals Mount Polley mine is located on Northern Secwepemc territory, therefore, this disaster most directly effects the Secwepemc who rely on salmon as their principal food source and the impacted area for hunting game, fishing, gathering berries and medicines. The disaster is also directly affecting Likely residents who have no immediate access to drinking water and are experiencing serious health effects as a result of the spill.

As a result and under the auspices of Secwepemc Natural Law, the Secwepemc Territorial Authority who met over two nights, August 15th and 16th, in conjunction with the Secwepemc Gathering 2014. With over 300 Secwepemc signatories from Secwepemc bands across the nation, the Territorial Authority resolved to light a sacred fire on Monday August 18th at the entrance of the Imperial Metals Mount Polley mine site to gather the community to appropriately respond to the disaster, and so the Yuct Ne Senxiymetkwe camp was born.

As of August 27th, the sacred fire has been burning for 10 days, and during that time, the encampment has recorded and collected testimonials, information and data from workers, contractors, local residents, area Secwepemc, provincial ministries and Imperial Metals executives. The encampment has also surveyed the area and is working with biologists, lawyers and other experts to conduct independent testing and structure a response to this disaster.

The following report is an initial assessment of the disaster and a summary of the data and information we have collected. This report is meant for public consumption and to provide context and information on the disaster the provincial government and Imperial Metals has not and will not disclose.

Imperial Metals Mount Polley Mine

Summary

The Imperial Metals Mount Polley operation opened in 1997 and re-opened in 2005 and currently employs anywhere from 300-400 people, only up to 100 of these employees are local Likely and Williams Lake residents, most of the workers travel from all over the country to work in this mine.

The mine itself is an open pit, low grade, large scale gold and copper mine. Because the gold and copper is less than 1% of the ore being mined, a lot of toxic waste, tailings, are created from processing the 20,000 tonnes of ore that goes through the mine mill each day. During processing, the mined rock is mixed with water and reagents to remove the gold and copper, and the remaining slurry, the tailings, are pumped into the tailings impoundment for disposal.

Tailings Storage Facility

Sudden and catastrophic failure is a common and major risk of all large tailings storage facilities using earthen damns. The bigger the damn, the higher the risk. The average height of a Canadian tailings storage facility has doubled since the 1960s from 120 metres to 240 metres.

Between 2000 and 2012, there were 49 dangerous or unusual occurrences at tailings storage facilities across British Columbia. These occurrences include cracking or caving in of a dam or dike, seepage or appearance of springs on the outer face of the damn or dike and inrushes of water, mud or slurry.

Open damns of toxic slurry are an outdated and dangerous practice in the mining industry, safer practices include drying tailings or turning them into paste before containment. These methods cost more and so are less likely to be used by profit-focused corporations such as Imperial Metals.

The tailings in Imperial Metals' Mount Polley's storage facility were kept saturated, this means they had little to hold them together and a breach in the facility's damn means the waste water and the heavy metal solids flow together out of the facility and downstream. The facility stored a large volume of water, possibly accumulated rainwater, and allowed the water level to rise above the 1 meter buffer required by provincial permit. The provincial Ministry of Environment gave 5 warnings to the company about the amount of water in the impoundment but never enforced them, even after the May 2014 incident where excess water was spilling over the damn. The engineering firm responsible for the construction of the damn also warned Imperial Metals about the high water level.

Additionally, Imperial Metals requested a discharge permit to release water from the impoundment in 2009 into Polley Lake. The permit was denied and conditions for approval included the requirement that Imperial Metals build water treatment facilities. The corporation never did and another application to discharge was being processed at the time of the spill. The local belief is that the corporation may have allowed for lax standards for the dam with the idea that a limited amount of spillage and the clean up or remediation following would cost less than building the facilities and additionally make it more likely that the discharge permit would be approved.

The tailings storage facility at Imperial Metals Mount Polley mine held a range of dangerous, heavy metals and toxic chemicals such as mercury, arsenic and lead. Refer to the chart in appendix 1 for a full list of the substances in the tailings. In addition to these dangerous substances, Imperial Metals also contracted and was permitted, by the province, to dump human solid waste from the Metro Vancouver area into the storage facility and use as fertilizer and remediation of the area.

It is important to note that there are over 90 tailings storage facilities using earthen damns in the province. The Imperial Metals Mount Polley facility is certainly not the largest one. The Imperial Metals Red Chris mine's storage facility in Tahltan territory is much larger and uses the same structure and technology.

Impact Assessment

Water

Immediately following the Imperial Metals Mount Polley mine disaster, a complete water consumption, swimming and cooking ban was instituted for Quesnel and Cariboo rivers. The toxic slurry collected along what used to be Hazeltine Creek, spilling into Quesnel Lake, one of the largest glacier fed fjord lakes in North America. Imperial Metals and the provincial government are counting on the heavy metals laden sediment to settle in the depths of Quesnel Lake but the topography of the lake is such that, as the slurry enters the lake from Hazeltine Creek, it is kicked up by the lake currents and continues to circulate in the lake itself.

The spill has directly affected the water in Polley Lake, Hazeltine Creek, Quesnel Lake, Quesnel River, Cariboo River and finally Fraser River, which encompasses and therefore effects 63% of the provincial population.

Full or partial water bans have since been instituted and rescinded over the three weeks since the spill, with Imperial Metals and the Provincial ministries insisting water is drinkable, unless it appears cloudy, in which case residents are advised not to drink it. Water testing by the Provincial government and the Imperial Metals Corporation has proven to be insufficient. The Provincial Ministry of the Environment does not have equipment to test the depths of the lake and some of the chemicals and metals in the tailings storage facility cannot even be tested for by labs being used in the area.

Neither Imperial Metals nor the Provincial government have delivered or provided safe water for the Secwepemc and Likely area communities. Area residents are forced to travel to Spanish Mountain, a steep and dangerous road, at specific times to bring back water safe to use. There are concerns about access, as elders and those disabled cannot travel up this road, not everyone can afford fuel to haul water in, and when winter comes, the road is going to be even more dangerous to traverse.

While the local Secwepemc and Likely communities early on noticed a change in the color, from blue to green, and clarity of the water, from clear to cloudy. Imperial Metals and the Provincial government refused to admit any serious issues with the water until very recently, when the corporation and the government admitted to finding sediment plumes in Quesnel Lake and Quesnel River. The water in the tailings storage facility was a milky green and it is clearly evident that the area water is deeply affected by the spill and continuing leakage into what once was Hazeltine Creek and down into Quesnel Lake, onto Quesnel River which connects to the Fraser River.

In addition to sediment plumes and a change in the color and clarity of the water, there are high levels of copper, selenium and other dangerous metals and chemicals. A blue film floating above the water that burns to the touch has also been documented on Quesnel Lake. After initially denying the reports, the province and the corporation were forced to admit the film existed and on testing it for only two substances, claimed it was organic and a result from the large amount of debris in the lake decomposing. Experts consulted point out that the wood could not possibly be decomposing so quickly and that the testing done was not sufficient as it only tested for two substances and not a full panel of dangerous metals and chemicals.

The government, the corporation and the media has been focusing on drinking water standards, which are much lower than aquatic life standards. According to the government and the corporation, drinking water standards are being met but health workers and other experts are concerned about animals drinking the water and the dust coming off the site. The heavy metals in the lake itself, the reagents, the chemicals, are changing the chemistry of the lake. There are so many different layers of unknowns and the interactions of how this is going to play out are unpredictable. It is therefore irresponsible for the provincial government, Imperial Metals and the media to downplay the effect of the tailings storage facility dam breach on the water until there is a more comprehensive understanding of the situation.

Additionally, the intakes for the drinking water come from the bottom of the lake, not from the top. The sediments are settling to the bottom of the lake, therefore, the intakes are at the most dangerous level of the water.

There are also concerns about rain and the effect heavy rains will have on the toxic slurry still lined along what used to be Hazeltine Creek, flowing into Quesnel Lake. Nothing has been done to contain the tailings or the damn and heavy rains will continue to spread the chemicals and metals into the surrounding areas.

Aquatic, Land and Plant Life

While the Provincial government, the Imperial Metals Mining Corporation and the media have claimed the water being tested is meeting drinking water standards, it is important to note that these standards are much lower than aquatic life standards.

The government and the corporation have admitted high levels of copper, selenium, iron, aluminum and other harsh chemicals and metals in the water and in parts of the salmon and trout tested. These levels exceed B.C. guidelines for sediments and contaminated sites regulation standards. The government and corporation are still insisting the fish are safe to eat even though there have been

documented cases of fish being caught after the spill with their skin falling off and internal bleeding and deformities.

The Quesnel Lake watershed is host to the second largest Sockeye Salmon run in the world. The Quesnel sockeye travel up the Fraser River, turn into the Quesnel River, swim up Quesnel Lake, pass through the toxic materials suspended in the lake where Hazeltine Creek meets it, turn up into the Horsefly and Michelle Rivers. The Imperial Metals Mount Polley Mine breach could not have happened at a worse time for these salmon as it is peak spawning season and because they are filtering the water to breathe, the contaminants are likely lethal and this could be the end of the salmon. As upstream carriers of a load of these heavy chemicals, the salmon act as another vector for contaminate. Salmon can become stressed, disoriented and fail to spawn if they encounter pollutants, debris and changes in water temperature and environment. The copper levels in the water are high enough to impair the salmon's directional sense of smell, which the sockeye need to move up the lake and find their primary spawning areas. Approximately 20 km up the lake from the outlet, there is a shallow area where the lake water usually flows westward. That flow concentrates small plankton that feeds young salmon, but the polluted water has spread eastward and reached the area, which affects both the young fish and its food supply. This year, the run was expected to be as large as 3 million salmon. There are only 24 lakes associated with sockeye in the entire Fraser and 7 of those are listed in the red zone, depleted of fish. Experts such as David Suzuki expect that all of the fish in Hazeltine Creek are gone and will not likely return anytime soon, the contaminated water would make it almost impossible for them to survive.

Biologists who have been testing the sediment plumes and the murky waters in Quesnel Lake are further hypothesizing that the plumes and the discoloration is the lake itself dying, starting with the smaller organisms and onto the larger animals in the lake and the animals that feed on them as well. As this is the peak time for salmon spawning, it will also, in two weeks, be a peak time for grizzle bears in the area to feed on the salmon.

The hazards of bioaccumulation are also a very real concern to experts surveying and predicting the outcomes of the Imperial Metals Mount Polley tailings dam breach. Even if the Provincial government and the corporation are insisting most levels of contaminants are under safety regulation standards, bioaccumulation of aluminum, arsenic, mercury, selenium and other dangerous chemicals and metals can happen quickly and so have serious long term effects on humans and animals alike.

Long before the salmon arrive in the rivers to spawn, eagles and ravens, blackbirds and osprey can be seen scouting up and down the rivers, searching, waiting, looking for wild salmon. Many eagles will travel to the spawning areas in the fall, and over-winter there, benefiting from the rotting salmon that litter the

edges of rivers and lakes, for many months. The trout are also arriving, anticipating their catch of salmon eggs left unprotected or accessible. Bears are an important link in the spread of salmon energy into the terrestrial spaces. Besides feasting on the fattest parts, they drag the salmon, dead and dying, up onto the land where it will decompose and feed the plants that line the banks of the rivers. The trees and shrubs along the salmon spawning rivers keep erosion from the edges, which keeps the river water clean and oxygen rich. The salmon fertilizer will ensure that these same plants thrive. The plants also shade the river, ensuring the right temperature for spawning salmon and for salmon fry and smolts to grow. Those same plants, mostly deciduous leaf-bearers, shed leaves in the fall into the rivers and lakes and feed zooplankton therein. That same zooplankton eat the flesh of decomposing salmon that is either washed immediately into the lakes or ends up there in the spring when the high waters flush the drying, desiccated salmon carcasses into the local ecosystem. When the salmon fry hatch in spring, their main foodsource is the zooplankton that feeds upon the leaf litter and salmon carcasses of their ancestors, thus completing the cycle of life that ensures the salmon's survival, and the survival of all those dependent upon the salmon, plant and animal alike. Even though we notice the sockeye the most when they are red and spawning, they are always present in these areas, whether as eggs, alevin, fry, smolts or returning adults.

The area and life affected by the spill also includes, to list a few, endangered caribou, cougars, beavers, lynx, mountain goats, rabbits, badgers, frogs, snakes, hawks, eagles, and deer.

Human Health

The effects of the Imperial Metals Mount Polley Mine tailings dam breach on the health of surrounding residents is not being documented or addressed by the Provincial government or Imperial Metals Corporation. The camp has been recording and collecting documentation on these effects from residents and doctors in the area. The following reporting includes physical, mental, spiritual and emotional health.

Physical Health: The camp has received reports of health effects resulting from the Imperial Metals Mount Polley Mine before and after the tailings damn breach. In addition to the elevated levels of cancer in the territory surrounding the mine, area Secwepemc and residents now have a host of other health effects to worry about. Members of the community have attended the encampment with reports of blood in their urine, dizziness, nausea, headaches, sore throats, and other respiratory issues.

Mental Health: The mental and emotional anguish and stress suffered by Secwepemc, St’at’imc, Tsilhqot'in, Cheam and other Indigenous communities along the Fraser River is incomprehensible. The camp has received reports of

women all along the affected riversides weeping, grieving their loss and coming to terms with the immensity of the impact of the disaster. The Likely and area community is also suffering from an immense amount of trauma and stress as water bans and states of emergency are instituted, lifted and reinstituted again. The camp has received reports of posttraumatic stress disorder from Indigenous and Likely area residents, who are suffering from insomnia (sleeplessness, teeth grinding), anxiety, and depression as a result of the immense trauma of the disaster.

It is important to note that the testing of the water by the Provincial government and corporation is highly insufficient, no tests are being taken in Polley Lake or the deeper areas of Quesnel Lake. Additionally, no air quality tests are being conducted. Therefore, the short or long-term effects cannot be sufficiently understood or appropriately addressed by the government or the corporation.

Spiritual and Emotional Health: An immense and incomprehensible amount of spiritual and emotional trauma is being experienced by the Secwepemc as a result of this disaster. The site of the disaster is the same area in which small pox wiped out entire villages of hundreds of pit houses housing up to 30 Secwepemc at a time and has been held in high regard for thousands of years. The area affected by the disaster is, was an area where Secwepemc hunted, gathered and fished, went on vision quests and even derived some of their names. The Secwepemc gathered huckleberries, soap berries, saskatoon berries, thimble berries, raspberries, cranberries, blueberries, chokecherries as well as powerful medicines only available in this area. As a result of the disaster, some area Secwepemc will not be able to hunt, fish or gather over the coming years. The Secwepemc are speaking of the spiritual and emotional impact of the disaster as losing a close relative, an entire village and as the end of a way of life.

Long Term Health

The specific long term outcomes of this disaster are not known as it is the largest tailings storage facility dam break this world has seen. We do know though, that a spike in cancer rates is guaranteed.

We also know the long term effects of bioaccumulation of mercury, arsenic, aluminum and other heavy metals and chemical poisoning. These effects are well documented and widely available and therefore will not be included in this initial report.

Economic Fallout

Approximately 1.5 million salmon were expected in this year's Quesnel Sockeye Salmon run. At the selling price of $30 per salmon, the net loss attached to this year's run is $45 million. Experts advise that the impact will be felt for at least the next 25 years, which, not counting for inflation is a net loss of over $1 billion.

Property values in the surrounding areas have plummeted with reports of real estate agents not even returning calls from local residents and refusing to give appraisals on the area.

Small businesses and ecotourism in the area is already suffering huge losses with cancellations and bleak prospects for the future.

Imperial Metals Containment Efforts Assessment

The totality of the clean up effort of Imperial Metals Mount Polley Mine 23 days following the disaster has been confined to the aesthetic shoreline clean up of the debris in Likely area. The wood, replete with toxins from the spill, is being collected, some chipped and sold whole for profit.

The corporation has not built fences along the 10 km that used to be Hazeltine Creek, once a 1.2 meter wide creek, now a 150 meter wide gorge, to keep wildlife from being caught in the toxic sludge. Neither has the corporation installed silt nets to mitigate the amount of heavy metal laden sediment still pouring into Quesnel Lake or taken any steps towards addressing the ultra fine metal laden sediment now circulating through the Lake.

Currently, Imperial Metals is only allowing shoreline tests of surface water in Polley Lake, which rose almost 2 meters after the tailings dam breach, to assess its toxicity because of a plug created by the debris of old growth trees at the mouth of Hazeltine Creek. This plug, according to the corporation, creates a safety risk for any boats on the lake as, if it were to suddenly dislodge, another flood of slurry and tailings would be released down what used to be Hazeltine Creek and into Quesnel Lake. Nothing is being done to secure this plug to prevent a repeat of the August 4th deluge and or to allow for accurate testing of Polley Lake.

Instead, Imperial Metals is using a series of pumps to slowly lower the water level of Polley Lake so that more testing can be done before an action plan is put into place. The untested water is being pumped down Hazeltine Creek and again, into Quesnel Lake. The testing being done in Quesnel Lake is also minimal as the Ministry does not have equipment that can test deep enough in order to have a full assessment of the composition of the water in the lake.

In summary, no substantive clean up is taking place and there are no plans for any substantive clean up. The rate of the pumping out of Polley Lake into Hazeltine Creek and further down into Quesnel Lake is so slow, it would take 6 months to lower the lake's water levels to allow for safe testing. Winter is coming and the rains and heavy snowfall will spread the toxicity further into the surrounding environment and the Fraser Watershed and will also make it increasingly difficult to effectively test, mitigate and contain the dispersal of the toxins.

Legal Assessment

International Law

The United Nations declaration of water as a human right, Resolution 64/292, identifies “the right to safe and clean drinking water and sanitation as a human right that is essential for the full enjoyment of life and all human rights.” Article I.1 states that water is indispensible for leading a life in human dignity and is a prerequisite for the realization of other human rights. Comment No. 15 also defines the right to water as the right of everyone to sufficient, safe, acceptable and physically accessible and affordable water for personal and domestic use. The concept of water as a human right is so fundamental, it underpins many other UN resolutions and conventions. It is obvious then that the Provincial and Federal government alongside the Imperial Metals Mining corporation are violating international law in their conduct before, during and after the spill. Therefore, remedies must be provided to the effected area residents, this includes the 63% of the population of British Columbia that lives along the Fraser River water basin.

Domestic Law

While a full domestic law assessment of this disaster is pending with a working group of lawyers, advocates and academics, the prerequisites for a multitude of criminal charges and private class action suites are present upon a *pima facie* analysis of the facts of the situation. Up until the publishing of this report, no records or evidence have been seized from Imperial Metals by the RCMP and the Provincial or Federal government has not made any movement towards charges further than mentioning, in passing, at the most recent Likely town hall meetings have indicated that criminal charges may be brought against Imperial Metals and the managers of their Mount Polley Mine.

In addition to criminal and private charges, violations of workers rights are rife in the Imperial Metals Mount Polley Mine. The camp has received reports of physical intimidation, a litany of unsafe practices and has a bad habit of firing employees who question management or speak out about safety concerns. The union offers little to no protection for workers at the mine. The camp has received reports of workers being ordered into Polley Lake immediately following the disaster, swimming around with snorkels to pull dead fish out of the lake and clear the pumps.

Secwepemc Natural Law

The responsibility of stewardship and protection of the land and water and all life that depends on it is a foundational principle of Secwepemc Natural Law. To that end, the violations of this law by Imperial Metals are numerous, ongoing and egregious. In addition to these violations, Imperial Metals does not have consent of the Secwepemc to be present on their territory. The corporation has been evicted and will face ramifications for their failures at Mount Polley Mine and their violations of free prior and informed consent in their Ruddock Creek Mine in Southern Secwepemc territory.

Imperial Metals Ruddock Creek Mine Assessment
(Ashley Churchill, Secwepemc)

Ruddock Creek is one of 4 mines Imperial Metals owns, including the Huckleberry Mine, the Red Chris Mine currently under construction and scrutiny by the Tahltan, and Mount Polley. The mine itself sits in a glacial area, the Scrip Range in the place commonly known as British Columbia, in Secwepemcul'ewc, the territory of the Secwepemc. The range flanks both the Columbia and Fraser River watersheds, and sits in the headwaters of the Adams River, which is home for Salmon spawning in one of the largest salmon runs in the world. While Ruddock Creek is considered a relatively small mine in terms of daily output, and so doesn't fall under Federal Environmental review, it has the potential to have a greatly disproportionate impact.

The mine has been in the discovery phase for a number of years as ownership of the mine has changed over time, and exploration has already lead to wastes being flushed into the environment. When Lead-Zinc is mined, as with any ore, toxic substances are used to more easily extract ore from "waste rock." It can make up to 90% of what is removed from the earth. Once the ore is removed, waste rock and toxic substances from processing are further processed and turned into a slurry to be stored, usually in tailings ponds, or backfilled into the mine. Slurry is put into tailings enclosures and covered with water (ponds) to prevent oxidization (contact with air) of heavy metals and chemicals. The idea is that these ponds are left for the water and Earth to clean up over time, or dilute and distribute slowly over time. This is an important point for Lead-Zinc mines such as Ruddock Creek because what happens with Lead-Zinc deposits when they are exposed to oxygen and moisture, they "go acid." When oxygen and moisture reach it in the process of mining, it chemically reacts (like metal rusting on a car), and can start a chain reaction. In this process, intense heat is generated as it reacts, and the water it comes in contact with turns acidic. So, along with the toxic chemicals used to extract the ore, the naturally occurring heavy metals that would have remained locked up in the rock, for the most part, but released during mining and processing, the slurry and waters are also acidic.

The type of rock that Lead-Zinc is typically found in, sulphide deposits made up mostly of Pyrites, can easily lead to acid mine drainage, even after a mine is shut down, as it continues to react underground, and affect groundwater. In reports, Imperial Metals argues that the host rock is mostly carbonate-Based, which will mostly neutralize acid generation, and the mine shafts are relatively dry, which reduces acid generation. What is not mentioned is that even a small amount of acid generation that goes unchecked can create a chain reaction, especially if you add other chemicals and heavy metals from processing, that can further react and lead to non-acid generating rock to "go acid." If ground water gets into the backfilled mines, and if there are any cracks where seepage can occur, over time this can still lead to this process. This area is also relatively wet for the interior, and receives 850-1400mm of rain, and very large amount of snow accumulation, so the risks of it going acid and for groundwater contamination are high. As it is in a glaciated area that receives high amounts of snow, if it does go acid, the heat generated from the reactions underground, could also negatively impact the area. This relatively wet climate is also what has allowed for the unique habitat that the Endangered Mountain Caribou require, and there are known populations in the area of the mine, which are very likely to be affected, even if all of the mitigation plans work.

Tailings Management and Impact Assessment

In earlier proposals, there were plans to store the tailings in enclosures just below Tumtum Lake, and beside the Adams River, just outside of the park. For this tailings pond to be constructed they would have had to divert a salmon spawning stream and a tailings pipeline would have to run through sensitive marsh ecosystems and along streams, crossing the Adams River. There would have been also another temporary storage facility closer to the mine, also connected by pipeline.

The most recent plan is to dump waste from the mine into Light Lake for the first 6 months, and once there is more space made in the mine, to start backfilling it with the waste that would be stored in temporary above ground lined holding areas. Light Lake will be turned into a permanent tailings pond. The decision to use Light Lake was based on its location relative to the mine and on the basis that there "likely" are no fish in it or the adjacent Creek, because they didn't catch any during surveys in 2006-2007. It is not clear where these temporary storage sites will be placed, or if they will use Light Lake or their original plan for the tailings storage dam by Tumtum, as they haven't been finalized. In their reports, Imperial Metals lists many endangered species, and potential and actual negative impacts of the mine, but also that they will do their best, following industry and government standards, to mitigate most of those effects.

In the light of the Mount Polley spill, where they ignored warnings that the dam would fail, and that they have changed the plans regarding environmental impact

mitigation multiple times, and not finalizing them before continuing in the process of opening the mine, this poses many problems. What is clear, is that this mine will have an impact, regardless of any accident or catastrophe. Even if there is a small amount of acid drainage, or a tailings pipeline or enclosure leaks, it will drastically impact aquatic life, including spawning salmon. Even if nothing goes wrong, and they follow through with the regulations and mitigation, the construction, exploration, and general mine workings have negative impacts from road building, changing ground water levels and flow of water, and the presence of a colonial human settlement in the area. This area has extremely sensitive ecosystems that is home to widely diverse species of aquatic life and terrestrial life, that provide for Secwepemc people, regardless of band. Familial connections, trading relations, and harvesting happen across all band territories, and beyond to other Fraser River and Columbia River peoples, including non-Indigenous people. That this mine is located in glaciers, and at a peak in the headwaters of both these rivers, any impact, small or large, by accident or with intent, will affect everyone downstream, most notably the Secwepemc bands in the immediate area that depend on the lands and waters. Most of the impacts will be felt after the mine is underway, but moreso when the mine has closed down, and into the future, for the next generation to struggle with, as the affects are cumulative and the processes associated with leaching and acid mine drainage can be slow.

Conclusions

This report has concluded that the end objective for Imperial Metals is not clean up, is not remediation but is to restart the Mount Polley Mine and push through other Imperial Metals projects such as Red Chris Mine in order to fund any clean up effort in the future. To that end, the camp has received reports that the mill manager has been called back into work and blasts have been heard at the mine site.

This report concludes that mines should not occur in sensitive ecosystems, or in the immediate vicinity of streams or lakes, especially large rivers that so many peoples and so much life depends on.

This report concludes that a mining moratorium must be in place while an extensive third party review of mining practices is conducted. This includes developing disaster protocol and appropriate reporting structures allowing local residents to be notified of dangers and incidents, however small, at the mine.

This report concludes that the decimation of the salmon is akin to the decimation of the buffalo and an active act of genocide against the Secwepemc.

Finally, this report asks how many rivers, creeks, lakes and watershed until we say enough?

Appendix 1

Substances in Mount Polley tailings as reported to the NPRI (in tonnes)

Substance	2009	2010	2011	2012	2013	Total
Nickel	48	73	56	63	71	311
Lead	105	59	40	36	38	278
Arsenic	81	137	84	84	83	472
Zinc	273	701	453	420	403	2250
Copper	9,016	9,044	7,570	6,723	6,392	38745
Vanadium	1,045	1,474	1,357	1,637	1,557	7070
Cadmium	2	2	1	2	1	8.6
Cobalt	105	139	129	142	138	653
Phosphorus	7,784	11,374	9,735	10,056	10,405	49354
Antimony	35	3.6	2.8	3.5	3.6	48.5
Manganese	3,231	7,444	4,733	4,733	4,119	24260
Mercury	0.5	0.7	0.5	0.4	0.6	2.6
Selenium	0.01	0.01	6.8	8.2	9.0	24