



Kamloops Physicians for a Healthy Environment Society

Our Mission: Kamloops Physicians for a Healthy Environment Society is dedicated to protecting the health and well-being of the citizens of Kamloops by promoting health education and science-based interventions that result in maintaining and improving the environment.

c/o 311 Columbia Street, Kamloops, BC V2C 2T1

kphe2013@gmail.com

www.kphe.ca

Twitter: @_KPHE

A BRIEF OUTLINE OF OUR CONCERNS:

November 23, 2015

WHO ARE WE? We were formed in March 2013 (and became a society in November 2013) because of our concerns about population and environmental health related to the proposed KGHM Ajax Mine. There are over 100 physicians, 40 allied health professionals, concerned citizens and PhD members in our group.

WHERE IS THE PROPOSED MINE SITE? The proposed KGHM/Ajax copper/gold, large scale, open pit mine site is perched on a plateau above and adjacent to Kamloops, BC (pop 90,000). It would be within 6 kilometers of 8 elementary schools, 4 high schools, 4 senior residences, 1 hospital and the Thompson Rivers University. There are homes in close proximity to the site, and the closest Kamloops neighbourhood and elementary school is within 2 km of the proposed mine.

Periods of high winds are common in Kamloops, and winds often come from the southwest - much of our population is downwind. The Thompson River valleys form a natural basin that traps air pollution, especially during our frequent winter inversions. The mine pit is above the city with the proposed tailings facility five times larger than the one that recently failed at Mount Polley, British Columbia. Our river system contains migrating salmon, and we have been subject to drought conditions in the past. We are concerned that we do not have excess water available to supply the huge amount required to operate this mine.

ISSUES ABOUT THE ENVIRONMENTAL REVIEW PROCESS: Mining rights granted at the provincial level, under a Mining Act that is over 150 years old, cannot be reversed by our citizens or our City Council. The results of core samples and surveys are not shared with the public. The methodology used, and which potential contaminants will be measured is only partially disclosed by the mining proponent. The proponent does its own "studies", modeling impacts to air, water and soil. There is no independent modeling being done, nor real life study of working mines.

The Environmental review is not conducted with a panel of experts present at all meetings. Instead the BC Environmental Assessment Office (EAO) Project Leader calls on the experts individually when he feels input is needed. There appears to be very few full group meetings to realize the complexity and inter-relationships of technical impacts. We feel the format of a federal panel would be more robust, but this was denied by Peter Kent, Minister of the Environment in 2011. When the 18,000-page application is released to the public, the community groups and public have only 75 days to respond. The EAO has 180 days to respond. Without adequate time and funding, the timeline is too short to examine technical documents in detail, and presents a huge challenge for lay people or hired consultants to contest it.

Until March 2013 we assumed that our medical colleagues in Public Health would be our advocates in this process. However, when the representatives from Interior Health pulled out of the EAO process in July 2012 (because it was beyond their scope and such an unprecedented project) we became even more concerned. There appears to be no direct oversight by our Medical Officers of Health, and the project goes well beyond their operational capacity and expertise.

HEALTH IMPACTS ASSOCIATED WITH MINING: Pollution, particulates, and by-products of mining will travel downwind into Kamloops and the surrounding areas, the only question is by how much. The modelling done to try to quantify these increases will be based on assumptions and approximations. These will have limitations imposed by the model and the accuracy of the data inputs. Fine and ultra-fine particulates produced at the proposed mine can travel enormous distances and will be present in the air we breathe. Kamloops' air quality is already compromised - our annual average for fine particulates has been around 9 ug/m³ for PM2.5 for the last few years - which exceeds the BC Ministry of Environment's (MOE) Planning Goal of 6 ug/m³. It is not

uncommon to have air quality advisories in Kamloops due to high PM2.5 levels associated with our topography and the combination of forest fires, slash burning, fuel combustion, and industrial activity.

Any increase in air pollution will be associated with an increase in health impacts – there is no “safe” level of air pollution. The medical evidence for the impact of air pollution is robust, and is published in high quality articles from reputable organizations and scientists: World Health Organization, American Heart Association, and New England Journal of Medicine. The evidence is as solid as linking smoking to cancer, stroke and heart disease. The particulate impact goes farther than the lungs and leads to increases in all cause mortality, strokes, heart attacks, developmental delay, cancer and pregnancy complications. References are available on our website (www.kphe.ca).

Mining will result in the release of toxic heavy metals and compounds that attach to the particulates generated in the mining process and can pollute the ground and surface water. Heavy metals do not degrade and cannot be destroyed - for many there are no truly safe levels, as evidenced by an ever-lowering standard regarding lead. Open pit mining utilizes large trucks, machinery and blasting (expected to consume 91,000 liters of diesel fuel per day), which would effectively double the current diesel emissions in our city. Diesel emissions are now categorized as a class I carcinogen by the WHO.

WHAT ARE WE ADVOCATING FOR? We are not against mining, but we are against the construction of such a large open pit mine so close to our established urban population, unprecedented in Canada and with no comparable example around the world. In studying the effects of mining on the environment and human health, and the limitations of mitigating risks, we feel this mining project application should never have been allowed to proceed.

Since the proposal has been moving through the assessment process, we are asking for the highest accepted standard, a **Health Impact Assessment**, and we are asking for a robust review by a **Federal Panel**. The BC Health Officers Council passed a motion that all large industrial projects in BC be assessed fully with a Health Impact Assessment (Motion 138.2, April 2013). The people of Kamloops deserve nothing less than the most rigorous health impact assessment available. This type of assessment requires a different approach than our current environmental assessment that only includes a limited analysis. Because there are always challenges, assumptions and error ranges when impacts are estimated, we are concerned that the models will not provide a proper assessment. The baseline meteorological data that are being collected (especially with regards to inputs for pollution dispersion modeling) may not accurately represent the local conditions, and therefore may not provide an accurate result regarding the probable impacts of pollution on our population. Any suggestion that the impacts of this large industrial project can be adequately mitigated to protect our population must be challenged.

KPHES is also asking for a **full economic assessment** to include a thorough reckoning of the costs of the proposed mine. We expect increased hospital and health care utilization due to air pollution related illnesses. Our emergency services have no capacity to deal with the impacts of a mining tailings-pond failure such as occurred in Mount Polley August 2014, and Brazil in November 2015. KPHES anticipates an exodus of environmentally sensitive industry and businesses. We expect challenges in recruiting and retention of physicians, allied health professionals, and educators.

This application for a massive mine so close to an urban population should receive the highest possible scrutiny. Our understanding of current literature leads us to conclude that there would be serious short and long term negative health impacts on the people of Kamloops.



Dr. Jill Calder
on behalf of
Kamloops Physicians for a Healthy Environment Society