

Comments on Air Quality Modelling sections

of the

KGHM Ajax Mining Inc. proposal for development of the Ajax mine.

Submitted to:

Kamloops Moms For Clean Air
Kamloops, B.C.

Submitted by:

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To the British Columbia Environmental Assessment Office:

Kamloops Moms For Clean Air contracted Dr. Douw Steyn, PhD, ACM, FCMOS, Professor Emeritus of Atmospheric Science, UBC, Department of Earth, Ocean and Atmospheric Sciences, to review the Air Quality Section of the KGHM Ajax mining application and prepare the attached report.

Dr. Steyn has concluded that the model, as provided to the EA process, is uninformative and cannot be used to determine plant output concentrations of any of the pollutants of concern in any area of the city. Dr. Steyn lists the three most important areas of weaknesses as follows:

"model conservatism, model evaluation and emission source strength" (Steyn 2016 p. 8).

Furthermore Dr. Steyn states that the city is currently over the provincial yearly average benchmark for PM2.5 air pollution as stated below:

".....the City of Kamloops has no choice but to pursue an aggressive program of emissions reduction to improve AQ for its citizens in North Kamloops. This means reducing emissions from all sectors - domestic heating, road dust, diesel emissions, and of course all industrial emissions. In such a situation it makes no sense at all to allow a new industrial source of the pollutant in question (PM2.5) no matter how small its incremental effect." (Steyn 2016 p.9)

The people of Kamloops, and especially those in the community with young children and aging parents, deserve to understand the findings of expert reports like this one which clearly point to the potential consequences of further industrial activity contributing to the existing burden of PM2.5 air pollution in Kamloops.

As many other conclusions on human and environmental health effects are directly linked to the outputs of the air quality model, the process hinges on this piece of the proponents submission. KMFCA argues that the model therefore needs to reflect the core objectives of conservatism, and defensibility. The following statement by Dr. Steyn indicates that these core objectives may not be supported by the model. His review:

"...has revealed a number of instances of what [he] consider[s] to be technical and study design weaknesses. These weaknesses are in the context of a regulatory study, rather than a study in the research realm. Their resultant effect is to undermine the robustness of the overall conclusions." (Steyn 2016 p. 8).

The weaknesses presented by Dr. Steyn further support the lack of confidence KMFCA has, that these core objectives of conservatism and defensibility have not been met within the proponent's air quality modelling exercise. Therefore, KMFCA believes that the risks to the 13,000 children living downwind of the project site are essentially still unknown.

Sincerely, Kamloops Moms For Clean Air