



April 7, 2016

BC Environmental Assessment Office
Tracy James, Project Assessment Manager
Tracy.James@gov.bc.ca

Dear Tracy James:

RE: KGHM Ajax Mining Ltd. Application

Council recently received the results of the preliminary KGHM Ajax Mining Ltd. (KGHM) application review from SLR Consulting (Canada) Ltd. (SLR). Council is pleased with the thoroughness of SLR's review and is confident with the process to date. The results of the review have left Council with a number of concerns related to the application. The concerns of greatest importance are listed below.

Air Quality

- The air dispersion modelling results are not transparent and cannot be verified by SLR due to the use of proprietary software by KGHM's consultant.
- The air modelling parameters are based on 94% mitigation of dust emissions, which includes 4% from precipitation and the remaining 90% from actioned mitigation of emissions. The likelihood of achieving this level of mitigation is unclear, and the specific details on how 90% mitigation will be achieved are lacking in the application, including plans for mitigation in the face of potential cessation of operations due to strikes, low copper prices, etc.
- A precautionary approach of modelling different levels of dust mitigation (e.g., 70%) needs to be applied.
- Only 14 ha of beach area in the tailings storage facility have been included in the air model as dust generating, whereas the project description calls for large beach areas in the scale of approximately 400 ha (the actual number is unknown), with reductions in water content throughout the life of the mine.

Water

- Groundwater - The area in Aberdeen impacted by groundwater should be included in the local study area. A similar concern was the subject of a letter from the Mayor to the BC Minister of Environment on July 30, 2012.
- Treatment and use of water - The South Mine rock storage facility, which could potentially contribute to groundwater quality effects in the Peterson Creek aquifer, was not included in the effects assessment.



- Aquatic life/fish - Since the air dispersion model has yet to be validated, effects of dustfall to Jacko Lake cannot be quantified. What are the impacts to fish and fish habitat?

Vibration and Noise

- The impact on fish mortality in Jacko Lake due to blasting, piling, and dust has not been sufficiently assessed.
- The predictive methods used to assess slope stability in Aberdeen may not be reliable, and the effects from blasting are unknown.
- Blast vibration predictions are based on averages and include exceedances of guideline thresholds, which suggest greater exceedances when maximum predictions are used.
- Mine noise predictions are based on averages; the application does not fully address how above-average noise levels will be mitigated.

Socio-economics

- Community (City) image - The potential impacts on tourism, the Tournament Capital designation, and quality of life based on perceptions of the mine have not been adequately addressed in the application. Further, the confidence level presented in the application that pertains to residual effects on community image and quality of life for residents is rated as Low, which is a concern.

Human Health

- The proponent should use the Health Canada hazard quotient (HQ) of 0.2, as outlined in the Application Information Requirements, instead of the BC Contaminated Sites Regulation guidance of 1.0. The use of the latter may underestimate the health risks of the project. Further, the HQ should be applied consistently throughout the application.
- The justification for selection of Toxicity Reference Values (TRVs) for assessed contaminants is absent in the application. The use of certain TRVs without justification may underestimate the health risks of the project.
- Results from the Human Health Risk Assessment should be viewed with caution, as the air dispersion model, which is the basis for many human health pathways, has yet to be validated.

Other areas of concern include, but are not limited to, the list below.

Tailings Management

- Council looks forward to reviewing the details of the mitigation plan and emergency response plans regarding a potential breach of the tailings storage facility, including a detailed description of flow pathways in the event of a breach.
- Council needs more information about the operation of the tailings storage facility and the likelihood that beach areas can continually be wetted as they grow in size.
- What is KGHM's experience with the thickened tailings system?

Local Effects

- Although temporary on-site housing for workers in the construction phase of the project is proposed in the application, there may be increased demand in the rental housing market, which could drive up rental prices for lower-income families.
- Local businesses may lose skilled employees to the mine. In a recent report, Venture Kamloops cited that the lack of skilled labour is already a concern for local businesses.
- The loss of doctors is a concern. Council has heard concerns expressed by physicians who may leave the City if the mine is approved, and Council wants to ensure that this will be taken into consideration in the application.
- There needs to be consideration for a property value protection plan that outlines how stressors related to property value decline will be mitigated, most specifically, noise, vibration, dust, and dark sky. This is especially important considering KGHM's confidence level in its assessment of effects to property values is rated as Low.
- Baselines should be established for the effective use of mitigation measures (e.g., housing foundations, water quality, slope stability, etc.).
- The Pineview Valley community needs to be included on the list of impacted neighbourhoods with respect to potentially reduced property values.
- Certain mine components will be visible from locations around Kamloops, including Kenna Cartwright Park and the Sun Rivers area. The importance of this to residents' perceived quality of life is understated.

Dark Sky

- There is insufficient detail in the application to assess the impact of lighting from mine operations, and mitigation strategies are not discussed in sufficient detail to maintain confidence in their use.
- The primary cause of sky glow (atmospheric scattering) has not been sufficiently incorporated into the application.
- In the dark sky assessment, WorkSafeBC illumination levels were used, which are based on the reflectivity of asphalt, whereas the on-site gravel/sand averages five times greater reflectivity.
- The effects on wildlife due to sky glow and mine operations have not been adequately assessed.

Aquatics

- The Thompson River has recently been placed on the 2016 Endangered Rivers List for BC, mainly because of the declining steelhead salmon population. The mine may have an impact on this designation.

Climate Change

- Discussion of the impacts of climate change is lacking in the application.
- What are the impacts to groundwater and surface water during operation and closure of the mine, as well as the impacts to mine components post-closure, including the tailings storage facility and the open pit?
- What are the effects of mine operations and vegetation loss on greenhouse gas emissions within the Kamloops airshed, especially when combined with climate change? How do the effects relate to the City's greenhouse gas reduction targets?
- How will climate change impact the assumptions and modeling inputs used to assess the effects of the mine?

Council acknowledges the letter sent by KGHM on March 21, 2016, which reiterated that KGHM will work closely with SLR to ensure that SLR receives all of the information requested. Council wants to make sure that all of the information requested is forthcoming from KGHM in sufficient time for SLR to complete a thorough review before preparing its final report to Council for May 9, 2016.

At this time, Council cannot adequately comment on the project one way or the other based on the information currently available and level of uncertainty currently outlined.

Yours truly,

A handwritten signature in black ink, appearing to read 'P. G. Milobar', written in a cursive style.

P. G. Milobar
Mayor

JF/lm/kjm/dla

cc: Canadian Environmental Assessment Agency