

July 11, 2011

2200-21

Ms. Nicole Vinette
Project Assessment Manager
BC Environmental Assessment Office
Box 9426 STN PROV GOVT
Victoria BC V8W 9V1

Dear Ms. Vinette:

RE: Proposed Ajax Mine Project

Based on the information provided to date including, but not limited to, the "KGHM Ajax Mining Inc. - Ajax Project - Project Description" report, the April 27, 2011, working group meeting, the June 16, 2011, open house, and the various work plans, the City of Kamloops would like to ask a number of questions of the proponent.

Overall, we have concerns with a mine being located within such close proximity to existing homes (1,400 m at the closest) and within such close proximity to the urban growth boundary (within 950 m). Our research has yet to discover where a mine is operating in North America within these short distances from residences. Therefore, the questions that we are posing through this letter are to help us better understand what the impacts (positive or negative) will be to the residents of Kamloops. Also, we want to gain a better understanding of what mitigative measures will be taken by the proponent to reduce or eliminate any of the negative impacts.

A. Project Description

1. Mine Location

- a) The proponent's project summary document is located on the BC Environmental Assessment Office website and is one which is reviewed by the public. This document indicates that the proposed mine is located "10 km southwest of Kamloops". This description is misleading as the proposed mine actually straddles the City of Kamloops southern boundary. Approximately half of the mine is located within the City of Kamloops. It has been brought to our attention that some residents of Kamloops have not even paid attention to any information being published about the mine because they think that it is some distance away from Kamloops. We feel that it is important for the proponent to correct this information and any future information so that residents of Kamloops are aware that a mine is being proposed within city limits and can adequately inform themselves.

OUR CORPORATE MISSION IS . . . to provide the best possible services to our citizens that reflect the will of Council and provide a balance of benefits to the community.

- b) Similarly, all future pictorial submissions should clearly show the city limits.
2. Additional Storage Areas
- a) Will there be any additional storage areas other than those outlined in Figure 5.2 of the Project Summary document? Will there need to be storage areas established for times of extreme weather (most especially in the winter time) when the roads are impassable and trucks hauling concentrate are not able to leave/enter the site? If so, where will these areas be located? What capacity will they be designed to store?

B. Direct Impact on Neighbourhoods

1. Public Health

- a) What are the health impacts to residents within the vicinity of the proposed mine? The project summary document does not go into details regarding the types of chemicals that will be used and by-products that will be formed during the various mining operations including, but not limited to, blasting, crushing, concentrating, etc. We would like to know the details of those chemicals and by-products.
- b) What are the levels of dust going to be on existing and proposed neighbourhoods? We would like to know specifically how much additional dust is going to fall in the surrounding neighbourhoods (Aberdeen, Upper Sahali, Pineview Valley, Dufferin and Knutsford) in any given month and what mitigation measures will be utilized? Will the levels of dust cause health concerns for the general public and/or those with pre-existing respiratory conditions?
- c) We are concerned about evaporation and leaching from the tailings pond. Does this have the potential to vaporize chemicals? Is there the potential for acid rain? Is there potential for leaching?

2. Light

- a) What will be the impact of 24-hour operations on the surrounding neighbourhoods (existing and proposed) with respect to mine lighting? What level of light during the non-daylight hours can residents expect and what mitigation measures will be used?
- b) Our understanding is that the waste rock and tailings piles will extend above the height of the current hills in the area. If this is correct, we anticipate there will be lost sunlight during the winter months to those residents in the Upper Sahali and Knutsford areas. Information is requested regarding how much sunlight will be lost to these neighbourhoods.
- c) What will be the impact of the shadowing from the tailing and waste rock piles? We ask that the proponent conduct a shadow impact study of these facilities.

- d) The Kamloops Astronomical Society has an observatory at Stake Lake which was put there specifically due to the quality of the dark sky. They are able to maintain their dark sky designation due to the cooperation of the residents of Stake Lake. We would like confirmation that the proponent will work with the Kamloops Astronomical Society to reduce the impact of the proposed mine on their observatory and implement some of their recommendations for types of lighting.

3. Noise and Vibration

- a) What level of noise will be heard by the neighbouring residents during mine operation? How will that level increase or decrease when future residential areas are constructed? How will the level(s) of noise differ during different operations (i.e. blasting versus crushing versus back-up-beepers on trucks or equipment on the waste rock piles)? What measures will the proponent take to reduce the impact of noise?
- b) How often will blasting occur (i.e. what are the minimum and maximum number of times blasting will occur each day)? How far away will vibrations be felt? Will proposed subdivisions within the Aberdeen and Pineview Valley neighbourhoods feel vibrations from the blasting? Will blasting be restricted to certain times of the day?
- c) What impact will the blasting have on the proposed Coal Hill water reservoir?

C. Impact on City Infrastructure and Operations

1. Southwest Sector

- a) The City of Kamloops has existing groundwater and slope stability issues in close proximity to the mine. This groundwater causes concerns with respect to slope stability and is constantly mitigated utilizing a network of more than 100 piezometers controlled through 30 dewatering wells operated by the City. Both the piezometers and the dewatering wells are monitored generally weekly by the City and some critical wells are hard wired to the City's SCADA system allowing for continuous monitoring. Additionally, alarms are set up for the piezometers to detect piezometric pressures which dip or rise sharply. All dewatering wells have backup power in place or have hookups for backup generators in the event of power failure. Some wells pump a few hours per week while others pump continuously. As noted above, there is also a continuous alarm system for the critical dewatering wells and a weekly alarm generated for wells where it is assessed that their failure for a short period of time would be acceptable. The piezometer/dewatering system is of sufficient importance to the City that it is administered through a formal Risk Management Plan.

We will be meeting with representatives of KGHM-Ajax and Orica (their consultant) during early July to discuss this matter in person. However, due to the serious nature of our concerns in this area, I thought it reasonable to repeat in this letter the questions that we will be seeking answers to during our July meeting:

- i) precipitation falling onto waste rock management facilities will penetrate below the evaporative zone more quickly than if it was falling onto native grasslands. Does the proponent have any information pertaining to what kind of increase in groundwater recharge this will result in and what is the impact on the Aberdeen neighbourhood?
- ii) what is the peak ground acceleration in the Aberdeen area from blasting? We will have our consultants put this information into their stability model to ensure that blasting will not negatively impact stability.
- iii) the air blast tests that were conducted were done during clear sky conditions. What are the results of air blast during adverse weather conditions, specifically conditions that would exacerbate the magnitude of the airblast at the receptors?
- iv) we would like to have advanced notification of the exact timing of future limited scale tests or full-scale test blasts so that we can utilize our existing vibrating wire piezometers to determine if impacts are felt in the areas of slope stability. Please provide us with information (exact date and time) for the next round of test blasting and detailed information about the blast size and how and where it will be conducted.
- v) we understand that a number of boreholes have been drilled around the proposed mine area. In order to help us determine what impact the proposed de-watering activities will have on our Aberdeen neighbourhood, we ask that the proponent provide borehole drilling data including logs, water levels and other hydrogeological information. Our consultants will utilize this information in our groundwater models to determine whether or not there will be impacts to the southwest sector.
- vi) a number of residents in the areas surrounding the proposed mine to the south, west and east rely on groundwater wells for their potable water. As part of the environmental assessment process, the proponent should conduct baseline sampling of those existing wells (including quantity, groundwater level and quality). Please confirm that this will occur.
- vii) At the end of the operations (23 years from now), is the open pit going to be filled with water? If so, what is the impact of that on the groundwater regime specifically in the Aberdeen neighbourhood?

Once we have received and reviewed the provided information, we will be in a better position to discuss the possibilities of sharing costs for the existing groundwater monitoring network, cost sharing for a permanent solution to the groundwater and stability issues and contingencies for problems which may arise in the future.

2. Fire Protection and Emergency Response

- a) It is important for us to understand what the proponent's expectations are with respect to fire protection and response time. A number of the proposed facilities are within the City of Kamloops but located such a distance from the nearest fire station that our response time would be well over industry standards for this type of operation. We require details from the proponent regarding their expectations with respect to fire protection and emergency response. If they are not expecting service from the City of Kamloops, they should provide a detailed fire protection plan for review by Kamloops Fire Rescue.
- b) Open pit mining requires personnel for mine rescue operations specific to the site. As Kamloops Fire Rescue does not have the equipment or training to perform mine rescue, the proponent should provide details as to how mine rescue operations are to be performed and what they will be expecting from Kamloops Fire Rescue.

3. Traffic and Hauling

- a) We require confirmation and details of the route that the proponent plans to use for hauling the concentrate to Vancouver. We have concerns about haul trucks using Lac Le Jeune Road north of the proposed mine site as this road was not built to a standard which would accommodate this type or amount of traffic. To the best of our knowledge, Lac Le Jeune Road is not built to a highway standard on any portion of the road regardless of whether or not it is in the City of Kamloops or the Thompson-Nicola Regional District. It is simply a rural road.
- b) Additionally, Lac Le Jeune Road is used by school buses and residential traffic and does not seem the best option for a haul route. We strongly suggest using Inks Lake Road as much as possible and then rebuilding that road once the tailings storage facility is built over top. This route would alleviate any conflict between large haul trucks and residential/school bus traffic and would be the most direct route to the Coquihalla interchange.
- c) We require that the proponent complete a Traffic Impact Assessment. Given the proximity to and use of BC Ministry of Transportation Infrastructure (BC MOTI) controlled access highways, it is recommended that a meeting be held between BC MOTI, the City and KHGM-Ajax representatives to determine a terms of reference for this study. For your information, the City is currently conducting a study with the MOTI and ICBC to determine short-term and long-term improvements at most of the interfaces between MOTI and City infrastructure, including the Copperhead Interchange with the Trans Canada Highway.

Currently, we are in the data collection phase of the project and moving into the identification of short-term improvements. Dependent upon the impact of the mine, there may be an opportunity to tie in the traffic impact assessment into this study.

The Copperhead Interchange with the Trans Canada Highway is used by Dufferin and Pineview Valley neighbourhoods and is adjacent to an elementary school. Should the proponent plan to utilize this intersection as a haul route, we would require them to identify all of these potential hazards and conflicts with industrial truck traffic. We are concerned about mine traffic in general, and specifically the hauling of concentrate to Vancouver, and what impacts they will have on this intersection.

- d) We need to know what the impact will be on Lac Le Jeune Road when most (if not all) of the mine's employees will be travelling that route on a daily basis. We can then determine what it will cost the City of Kamloops to upgrade the road to a standard which will support this amount of traffic. Additionally, we will be able to calculate the additional cost to maintain the road (especially during the winter time) to a standard which will be safe for this type of traffic.
- e) What will the impacts be on the timing of the Aberdeen Drive/Copperhead Drive extensions contemplated in TravelSmart and KAMPLAN?

4. Solid Waste

- a) Other than waste rock and tailings, what types of wastes will be generated during mine operations? How much waste is anticipated on a monthly or yearly basis? What are the expectations around disposal of this waste? How much will be recycled by the proponent? How much is anticipated to enter the City's solid waste system (either being land filled or recycled)?

**D. Impact on Future Planning
(Transportation, Growth, Sustainability, and Airshed)**

1. Transportation

- a) The City of Kamloops has an integrated transportation plan which we refer to as TravelSmart. This plan was created in 1999 and is currently undergoing a re-write in order to properly address changing circumstances over the past decade. A copy of the TravelSmart plan can be found on our website at www.kamloops.ca for your reference. Rather than focusing on building new roads, TravelSmart shaped the City's pattern of growth to optimize the use of existing roads, and make the most efficient use of any additional facilities required. The results formed the foundation of the City's Official Community Plan (KAMPLAN). One of the key elements of TravelSmart and KAMPLAN is that 36% of the population growth is planned to be in the Southwest sector (Aberdeen, Dufferin, Sahali) up to 100,000 population threshold. Up to the 120,000 threshold, 48% of the population growth is planned to be in the Southwest sector.

In order to understand what impact the proposed mine will have on transportation planning within the City of Kamloops, we would like the following additional information:

- i) will impacts from the mine (further to questions above related to light, noise, dust, vibrations, etc.) make the Aberdeen, Pineview Valley and Dufferin neighbourhoods less desirable places to live?

This may cause additional growth in other areas in the City which may not have sufficient transportation infrastructure in place.

- ii) will additional traffic generated on roadways within the southwest sector negatively impact those areas from a desirability perspective?

2. Growth

- a) The City's Official Community Plan identifies the Aberdeen neighbourhood as a significant growth area. Specifically, 48% of the City's growth distribution to a population level of 120,000, which is anticipated to be reached by the year 2036 at current growth rates, is projected to occur in this neighbourhood. The City has based its major infrastructure planning and expenditures (i.e. roads, water, sewer, and new fire hall location) over the past 30 years on this growth area. Growth in other areas carries an even greater cost to the taxpayer.
 - i) what impact will the proximity of the mine have on the desirability of future residents living in this major growth area? Should the Aberdeen neighbourhood become a less desirable neighbourhood, to the point where residential growth is significantly slower than anticipated or does not occur at all, what growth impact, pressures and costs will this place on other areas in the city not having the infrastructure in place?

Further, the City has followed a 1.25% over five years growth scenario for growth management and planning purposes.

- ii) what are the local employment generation projections during mine construction and operation activities - both direct jobs, as well as 'spin-off' employment? Please translate this into population growth projections attributable directly to the mine (based on local labour availability, consequent in-migration to take up mine and related jobs, and the family characteristics of in-migrants). These projections would allow us to have a greater sense of when key population thresholds (100,000 and 120,000) would be reached.
- b) What future mineral rights does Abacus hold in the southwest sector? We would like to have an understanding of the future expansion perspective within the area.

3. Sustainability

- a) The Sustainable Kamloops Plan was adopted by City Council in 2010 and sets out Kamloops Vision of Sustainability. The plan is divided into 19 key sustainability components and then sets aggressive goals in each which allow us to work towards our Vision. A copy of the Sustainable Kamloops Plan can be found on our website at www.kamloops.ca for your reference.
 - i) please outline how the proposed mining operation will abide by the Sustainable Kamloops Plan and will work towards our Kamloops Vision of Sustainability.

4. Airshed

- a) Creation of an Airshed Management Plan for the City of Kamloops is currently underway. The need for this plan was identified during the creation of the Sustainable Kamloops Plan. The vision of the plan is to ensure that citizens have healthy air to breathe by meeting or exceeding the Canada-wide standards and provincial air quality objectives, ensure continuous improvement in air quality throughout the community/region, educate and inform the community on local air quality issues, and lead by example by changing behaviour as needed to protect air quality. As this planning process is underway, please indicate your willingness to provide information and/or presentations to the two airshed management committees.
 - i) is the mine expected to negatively impact air quality within the Kamloops airshed?
 - ii) what is the air quality impact from the additional vehicular traffic generated by the mine (employees, contractors, haul trucks, etc.)?

E. Socio-Economic Impacts

1. Recreation

- a) The areas proposed for the waste rock management facilities and most especially the tailings storage facility/pond are highly used recreational areas. Inks Lake and surrounding areas are used extensively for skating, fishing, hiking, mountain biking, ATVing and more. Please quantify the impact that the proposed mine will have on the recreational use of these areas. What proposed rehabilitation or upgrade works are proposed?
- b) What will be the quality of Jacko Lake as a fishing lake if a 450 m deep open pit is located immediately adjacent?

2. Economic Spin-off

- a) It is widely understood that the proposed mine will create approximately 385 jobs over the life of the mine and approximately 1000 during the initial two years of construction. Obviously these jobs will have a positive impact on the City. We would like more information on what the other economic spin offs there will be from the proposed mine? Please quantify.
- b) Please translate the employment generation into population growth projections attributable directly to the mine (based on local labour availability, consequent in-migration to take up mine related and spin off jobs and the family characteristics of in-migrants). These projections will allow us a greater sense of understanding around when key population thresholds (e.g. 100,000 and 120,000) will be reached.

3. Long-Term Impact

- a) What is the long-term impact of having a mine of these proportions within the City? What will the impacts of the proposed mine be on Kamloops?

4. Quality of Life

- a) What will be the impact (positive and negative) on the quality of life for Kamloops residents as a result of mining operations?

F. Impacts on Habitat, Fish and Wildlife

We understand that federal and provincial ministries are part of the environmental working group and will be reviewing these types of questions in detail, but we wanted to voice our questions and concerns regarding the impact(s) of this proposal on habitat, fish and wildlife. We will leave the detailed questions to the federal and provincial experts.

1. Peterson Creek

- a) How will the re-routing of Peterson Creek impact the fish and wildlife associated with that creek? Will grassland areas be lost as a result of the diversion?

2. Jacko Lake

- a) How will the blasting impact the fish in Jacko Lake?
- b) Please provide confirmation that Jacko Lake will not drain into the Ajax Pit (even over time).
- c) Is there the potential to preserve Jacko Lake and its surroundings as a recreation area by swapping the private land around it with Crown Land?

3. Inks Lake

- a) Although Inks Lake is not fish bearing, it is used by wildlife, especially birds. What will be the impact to wildlife in the area when with the loss of Inks Lake and surrounding areas?

4. Grasslands

- a) What is the total area of grasslands either completely destroyed or negatively impacted by the proposed project? What mitigative measures are proposed to reduce the impact to the grasslands? For example, are there replanting strategies in place for the finished waste rock and tailings piles?
- b) What is the impact on wildlife by removing this quantity of grassland?

5. Kamloops Lake

- a) What is the impact on fish and wildlife based on the proposed water intake volumes?

G. Aesthetics

1. Power Line Location

- a) During the April 27, 2011, working group meeting it was mentioned that the proponent is favouring the east power line option, but no final decision has been made. Please provide details on the location of the finalized power line location. If the east option is selected, what will be the impacts on the City's future growth in that area? We are concerned the proposed location will impact a future growth area of the City that is highlighted in the Official Community Plan. If the eastern option is used, we would prefer to see it built so it wouldn't bisect a future City neighbourhood.
- b) Are there any health impacts from having high voltage power lines in such close vicinity to residences?
- c) What are the aesthetic impacts on surrounding properties from the finalized power line location?
- d) Is there the possibility of reduced property values with a power line located very close (or even on) certain properties?

2. View scapes

Up to this point, only two-dimensional drawings have been available to the public. It is safe to say that the proposed mine will have an impact on the aesthetics of Kamloops. In order to relay to residents what those impacts are, we ask that the proponent develop a number of different "visuals".

- a) We would like to see a three-dimensional table-top type model constructed of the proposed mine area and the surrounding neighbourhoods.
- b) Artist type renderings would be helpful. We ask that "snap shots" be created from different locations around Kamloops and include artists' renderings of what the new view scape will be. Snap shots from the following locations are requested as a minimum:
 - Aberdeen Elementary School
 - Top of Pacific Way in Aberdeen
 - Pineview Valley neighbourhood
 - McGowan Park in Sahali
 - Entering Kamloops on the Coquihalla, Highway 5A and Highway 5
 - Batchelor Heights' newest subdivisions
 - Knutsford area - highest point on Knutsford Hills Road
 - Dufferin neighbourhood
 - Rayleigh
- c) Please create a model using a Google Earth type of format. By drawing the facilities into this type of format, residents will be able to point out where their house is located and see what visual impacts (if any) there will be from their own home.

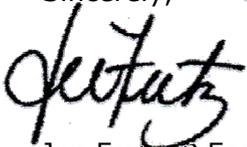
3. Mitigative Measures

- a) Please detail the mitigative measure that will be undertaken to reduce the aesthetic impacts of the mines waste rock and tailings facilities both during and after operation (i.e. sloping, seeding, planting, etc.)
- b) Is the tailings pile going to be progressively closed?
- c) Can the waste rock and tailings piles be moved further south of Kamloops and east of the Coquihalla Highway to eliminate or minimize any and all aesthetic impacts?
- d) What other options have been explored for locations of the waste/tailings piles?
- e) Has the proponent explored using a buffer between the mine and current/future Aberdeen and Knutsford neighbourhoods?

H. Conclusion

Thank you for taking the time to listen to and understand our concerns. We look forward to receiving answers to our questions and to continuing our involvement on the Environmental Working Group.

Sincerely,



Jen Fretz, P.Eng
Sustainability and Environmental Services Manager

JF/rjt

cc: Environment Canada - Lyle Thompson, Project Manager
Environmental Working Group - Proposed Ajax Mine Project (via email)
Thompson-Nicola Regional District - Dan Wallace, Planner
KGHM-Ajax - Jim Wittaker, Project Manager
Dianna Stoopnikoff, Environmental Manager
City of Kamloops Mayor and Council
MLA for Kamloops-South Thompson - Kevin Krueger
MLA for Kamloops-North Thompson - Terry Lake, Minister of Environment
MP Kamloops-Thompson-Cariboo - Cathy McLeod