

The Ajax Community Advisory group Submission to the B.C. Environmental Assessment Office and the Canada Environmental Assessment Agency

– Additional Issues to be considered for the Application Information Requirements and the Environmental Impact Statement for the Proposed Ajax Mine –

November 16, 2012

Introduction

The Community Advisory Group (CAG) for the proposed Ajax mine in Kamloops wishes to thank Environment Minister Terry Lake for his commitment to a rigorous environmental assessment of the Ajax Project, and for the establishment of the Community Advisory Group. We also wish to thank EAO Director John Mazure for his commitment for a comprehensive and transparent environmental assessment. Finally, the CAG wishes to thank the federal Canadian Environmental Assessment Agency for its commitment to assess the cumulative effects of past, present, and reasonably foreseeable projects relating to the Ajax proposal. With these commitments in mind, the CAG has prepared the following addendum to the issues and questions that were submitted in August of this year, which the CAG wishes to have considered in the Ajax environmental assessment.

I Presence of Measurable Uranium

The March 16, 2009 *Assessment Report on the Abacus-New Gold Joint Venture Diamond Drilling Program on the Ajax Property from November 1, 2007 to October 7, 2008*, revealed seven drill holes with measureable uranium. The references for these holes are:

AK2007-2036
AK2008-0332
AK 2008-0370R
AK 2008-0394
AK2008-0404
AK2008-1006
AK2008-1650

The CAG is interested in the exact locations of these drill holes, and at what point in the production schedule that the rock located in these drill holes will be blasted.

Also, the CAG is concerned that the existing 28 element analysis used for the assessment report may understate the uranium levels in the Ajax deposit. Therefore, the CAG wants to know what other assay methods the proponent proposes to use to determine more accurate levels of uranium in the Ajax deposit.

II Soil Contamination

Despite the potential for soil contamination from fugitive dust emissions from the Ajax mine, there appears to be little attention given to this issue in the draft AIR/EIS Guidelines. Given the critical relationship of soil contamination to other Valued Components being studied by KGHM Ajax, such as Rare Plants and Rare and Sensitive Ecological Communities, and the possible negative impacts to grasslands, ranching, and urban agriculture, the CAG believes that it is not sufficient that the only data the proponent is proposing to compile for the Application is for soil types and erosion (vulnerability), and that this information only will be “illustrated by maps and cross sections at appropriately detailed scales” (page 47, draft AIR/EIS).

An even more vague reference to soil analysis is found on page 144 of the draft AIR/EIS, *17.2 Federal Components*, where it is stated that “It is anticipated that the components to be considered in the federal scope could include...terrain, soils, geology and geohazards.” Words such as *anticipated*, *considered*, and *could* do not suggest a strong commitment to a scientifically rigorous assessment of possible soil contamination from the Ajax mine.

The only other reference to soil contamination in the draft AIR/EIS is found on page 147, Section 17.6: Accidents and Malfunctions, where it is stated that the proponent will assess the environmental effects on soils that might occur from accidents and malfunctions.

Given the critical importance of healthy soil, the CAG believes that the proponent must commit to a rigorous and comprehensive assessment of soil contamination from the Ajax mine. This assessment must be of sufficient rigor to determine changes to the soil geochemistry, both spatially and temporally. A scientifically acceptable number of plot sites that are representative of the areas that could be affected by fugitive dust emissions from the mine must be assessed.

Finally, it is noted that as of September 2011, there was no representative on the Ajax Technical Working Group (TWG) from the B.C. Ministry of Agriculture. If no one on the TWG has a soil science background, THE CAG believes that this omission should be addressed.

III Orica Test Blast Results

Unless the proponent can substantiate that the “small production blast” conducted in February 2011 has any scientific validity for an environmental assessment, the Orica test blast report should not be accepted as a document for the Ajax assessment. The proponent must be required to verify the size of the test blasts that occurred with data such as the amount of explosive material used, the amount of rock that was loosened, and the geological characteristics of the rock that was blasted. The Orica contains no information regarding the size of a full production blast—technically referred to as the “powder factor,” expressed in either explosive material used per tonne or volume of rock. The Ajax Feasibility Study states that average production of ore and waste rock between years two and fifteen will be an average of about 256,000 tonne per day. This suggests that extreme blast sizes will be higher some of the time. **Blast assessment needs to be conducted for extreme blast sizes—rather than average blast sizes.**

The CAG has submitted previous concerns about the test blast results and the lack of assessment of the effects on nearby aquatic habitat for example. In the CAG’s opinion, an extreme size test blast that is monitored for all relevant potential impacts, needs to be carried out.

On October 27, 2012, a 940,000 tonne blast occurred at the Osisko open pit gold mine in Malartic, Quebec. Will there be any restrictions on blast sizes for the Ajax mine? If so, what monitoring and enforcement measures to control blast sizes will be contained in mine permits? Who will be responsible and accountable for the monitoring and enforcement?

IV Guidelines for the Use of Explosives in or near Canadian Fisheries Waters

There is no reference to these guidelines issued by the Department of Fisheries and Oceans in the draft AIR/EIS. Will the proponent be following these guidelines in the design and operation of the Ajax mine? In particular, will the formulas in Appendices II and III of these Guidelines apply to the Ajax project?

V Additions to Mammal Valued Component

The draft AIR/EIS does not include the following species whose habitat will be displaced or disturbed by mine activities:

- Castor Canadensis (beaver)
- Ondatra zibethicus (muskrat)
- Ursus americanus (black bear)
- Puma concolor (cougar)

The CAG wishes to see these species added to Section 6.17 Mammal VC, as Valued Components.

The displacement of habitat may result in increased deer, bear, and cougar populations in the City of Kamloops, and rural properties and ranches in the vicinity of the mine. The CAG is interesting in knowing how the proponent intends to monitor species displacement, and the possible impacts of this displacement. Will the proponent be radio collaring deer, for example, a year before mine construction begins, so that the possible displacement of deer in the mine area can be studied?

VI Property Value Impacts

Given the proximity of the mine to residential areas, the potential for property value declines exists. The determination of property values is done by means of appraisal methodologies. A more difficult determination is why property values fluctuate. However, there are ample scientific studies that have measured property value declines attributable to unwanted land uses in urban areas. The CAG expects the proponent to assess the potential for property value declines due to mine activities, and to propose a monitoring mechanism, if the mine is approved, to measure changes in property values. The CAG also expects that the socio-economic consultant hired by the BC EAO will recommend a methodology for determining property value impacts.

Recent City of Kamloops “Growth Boundary” mapping shows that the proposed ore stockpile areas will be located 310m from the designated residential area in the Kamloops Official Community Plan. In addition, these ore stockpile areas over-lap in the Guerin Creek watershed. Liability issues from increases to piezometric groundwater pressures in the Aberdeen area that could impact slope stability in the known hazard areas must be addressed. Any increased levels or slope stability problems likely will negatively impact property values and to repair costs for affected homeowners.

What type of insurance will be in place if mine activities lead to increased slope instability in the Aberdeen area?

The City of Kamloops currently relies on dewatering wells to keep groundwater levels and piezometric pressures at acceptable levels, (although other measures such as irrigation restrictions, french drains, and liners are also implemented in specific cases). Will KMGH Ajax be installing additional Piezometers?

How and who will undertake the monitoring and will KMGH Ajax pay for additional measures to keep post groundwater levels & piezometric pressures at pre operational levels?

It is noted in the DAIR that there was no mention of a pre or post groundwater monitoring program around the proposed mine site and downslope into future development areas to expand the existing monitoring program in the developed areas.

VII Cumulative Environmental Effects

The *Background Information* document for the Ajax Mine Project prepared by the Canadian Environmental Assessment Agency (June 2011, CEEA Reference Number: 11-03-6225, File Number: 4302-0072) states that “the environmental effects of other past, present or reasonably foreseeable future projects or activities...must be considered in the environmental assessment of the Project.”

A past project relevant to the proposed Ajax mine was the development and operation of the Ajax East and West pits. All baseline, operational, monitoring, and reclamation data relating to this past project should be incorporated into the current assessment. These data and assessment should include the old Afton tailings facility, based on the fact that part of the tailings in this facility came from ore processed from the Ajax East and West pits.

Reasonably foreseeable future projects that should be considered in the cumulative effects assessment includes the potential development of the nearby Galaxy deposit (50° 38'39" N, 120° 25' 23" W).

Two closely related questions pertaining to cumulative environmental effects of Ajax mine are:

To what extent will KGHM/Abacus account for the mine's rather large carbon footprint? and, To what extent will hydro costs be passed onto citizens of British Columbia?

Neither question has been adequately addressed to date.

At the October 24th forum held at Thompson Rivers University, when Jim Thompson was asked what carbon tax would be paid by the mine, his response was “the government doesn't know what that will be.” For citizens paying a carbon tax on natural gas (1.4898 per GJ) to heat their homes, and gasoline (1.5 cents per litre) to fuel their vehicles, this is far from reassuring.

Information on proposed hydro rates for the mine varies substantially. As noted in John Schleiermacher's October 16th letter to the Editor (Kamloops This Week), while section 21-12 of the feasibility study claimed a rate of 3.5 cents per kWh, BC Hydro later refuted that rate, indicating an industrial rate of 4.6 cents would be paid by KGHM/Abacus. Once again, this hydro rate falls short of hydro rates levied against BC citizens. Currently BC hydro charges 6.8 cents per kWh (Step 1), and 10.19 cents per kWh (Step 2) while the cost BC Hydro will pay to outsource for energy to meet KGHM/Abacus's energy requirements is 8.5 cents per kWh. If this is not a subsidy, then what is it?

Citizens want and deserve clear, consistent responses to both questions from KGHM/Abacus as well as from government.

VIII Employment and Wage Data

A critical component of the economic and social assessment of the Ajax project is the size of the mine work force and salary levels. Data for these parameters must be consistent and realistic to conduct a proper assessment. Information on these parameters from the proponent and government officials, to date, has been widely divergent.

For example, the KGHM Ajax project website, states that 380 direct jobs will be created, that “the average annual salary for a mining job is \$100,000, and that 22% of the \$180 million to be spent per year during operation,” or \$39.6 million, will be for wages. <http://www.ajaxmine.ca/economic.html>

However, at a public meeting at Thompson Rivers University on October 13, 2012, Ajax public relations manager, Norm Thompson quoted, "My manager tells me that that's the number we should be quoting today because most mines of this size and this nature are producing 60,000 tons a day are about 565 employees." <http://www.kamloopsnews.ca/article/20121014/KAMLOOPS0101/310149997/-1/kamloops/ajax-proposal-faces-tough-forum-crowd>

The 565 employee figure is a 49% divergence from the information on the KGHM Ajax web page. Total wage costs at \$100,000 a year for 565 employees would be \$56.5 million a year, or 43% more than stated on the web page.

Mr. Thompson’s stated employment figure is close to the 550 total employment figures detailed in the Ajax feasibility study (pages 16-24 and 21-10 and 21-11). However, the feasibility study states that the annual payroll cost for 109 employees in the process plant will be \$8,920,285 US (page 21-10), or \$81, 837.48.

For the General and Administrative (G&A) part of the project, the feasibility study states that the annual payroll cost will be \$3,899,880 for 46 employees (page 21-11), or \$84,780 US per employee.

The feasibility study did not state payroll costs for the 395 employees in the mine component of the project.

On October 27, 2012, Kamloops-South Thompson MLA, Kevin Krueger, in an open letter to Ajax, stated that Highland Valley Copper employees average “over \$120,000 in annual remuneration.”

If Ajax is budgeting \$39.6 million for wages and benefits for 565 employees, this is an annual wage and benefit package of only \$70,088.50 per employee – 42% less than

the aforementioned remuneration for the Highland Valley. It is noted, however, that this figure is much closer to the \$81,837-\$84,780 wage range stated in the feasibility study.

Project feasibility is an important issue. A project that is not financially sound increases the possibility that the project will not be able to finance mitigation and compensation costs, or that the mine will shut down, leaving major disclosure liabilities. Therefore, the CAG believes that more employment and wage numbers need to be presented in the environmental impact statement if the socio-economic assessment is not to be significantly flawed.

IX Groundwater Consumption and Pricing

The collection of groundwater from the 1,083 drain holes that will ultimately line the open pit walls (Ajax feasibility study, page 16-15), and the collection of precipitation in the mine area, to be used for mine process water needs to be thoroughly assessed. Collection and retention of this water may adversely affect the Peterson Creek aquifer, the Peterson Creek wetlands, the adjacent grasslands, and downstream water users.

Use of this water without payment suggests that the ecosystems that this water supports constitutes no value; monetary or otherwise. Also, use of such water without charge constitutes a subsidy that distorts the economic benefits and costs of the project.

The Province of British Columbia is urged to establish fees for large-scale industrial uses of groundwater and runoff, and use the Ajax mine as a case study for establishing such fees.

X Visual Impact of Blast Plume

The following image is a photo of a 940,000 tonne blast at the Osisko open pit gold mine at Malartic, Quebec, on October 27, 2012. The photo was taken immediately north of the railway tracks on Rue Royale, about 1.3 km due north of the mine perimeter. Large production blasts at the proposed Ajax mine have the potential to create similar visible blast plumes within the City of Kamloops.

Questions about the chemical content of blast emissions from Ajax, and their possible health impacts, have already been submitted by the public and the CAG. The issue of plume visibility also needs to be addressed. From Google Earth imagery, the top elevation of the material to be removed in the proposed Ajax pit is about 991 metres above sea level (masl). This means that blasting will begin at or near this elevation. The Aberdeen Ridge trends from between 980 masl to 1023 masl. Therefore, it is likely that a blast plume of 150-200 metres in height will be seen within parts of the City. South and SW winds have the potential to carry blast emissions well into the City.

On blue sky days, the Ajax blast plume will likely be extensively photographed and could become a defining negative image for the City of Kamloops. The CAG believes that the visual impacts of blast plumes from the Ajax mine need to be assessed, including the possible effects of stress and anxiety from concerns about potential toxins in the blast plume.



<http://www.quartier-sud-malartic.com/images/dynamitage-osisko-malartic-27octobre2012-8.jpg>

XI Insurance and Corporate Structure Questions Regarding the Ajax Project

The CAG was heartened to see the Provincial Government participate in the Northern Gateway Pipeline hearings, and to see the government raise questions about the ability of the pipeline proponent, Enbridge, to fund the cost of any accidents and resulting pollution that may arise from the operation of the pipeline. We have the same concerns about the ability of KGHM Ajax to fund similar costs arising from pollution and accidents due to the Ajax project.

1. What types of insurance coverage will KGHM Ajax have for the construction and operational phases of the project?
2. What types of claims will be covered under the various policies KGHM Ajax is expected to have?
3. Will KGHM Ajax have insurance coverage for pollution legal liability?
4. If pollution legal liability is covered under the insurance policies KGHM Ajax will have in place, is it possible that the policy could potentially be exhausted by other types of claim in any given year?
5. In the Ajax Feasibility Study (page 21-13), it is noted that \$1.2 million US\$ has been budgeted under G&A expenses. Has KGHM Ajax determined its insurance coverage limits?
6. During the Northern Gateway Pipeline Hearing, an Enbridge representative agreed that it would be a good idea for his company to get a preliminary indication of insurance coverage. Has the insurance market been approached by KGHM Ajax for quotes for insurance coverage? Has KGHM Ajax obtained any information regarding insurance coverage so that it can do a preliminary analysis of matching its risks to its insurance needs?
7. Would such risk analysis be provided to potential lenders and investors for the project?
8. Has a preliminary risk analysis of the mine on the operation of the Trans Mountain Pipeline been undertaken yet?
9. Has Kinder Morgan been contacted yet to provide KGHM Ajax with a risk assessment of the operation of the mine on the Trans Mountain Pipeline?
10. Has such an assessment of the mine risk on the pipeline been done?
11. What are the risk characteristics (e.g., probability of incidence, cost of each incidence?)

14. Has KGHM Ajax done any cost estimates of possible risk events (e.g., damage to Trans Mountain Pipeline; blockage of Peterson Creek by slide activity; structural damage from blasting, earthquake activity)?
15. What risks that KGHM Ajax faces are insurable, and what risks are not insurable?
16. If a property owner is claiming damage due to blasting, or excessive dust, would the claimant submit their claim to KGHM Ajax or the insurance company, or government?
17. If the cost of an event that is attributable to KGHM Ajax (e.g., damage to the Trans Mountain Pipeline that causes a major oil spill), exceeds the insurance coverage of KGHM Ajax, would the parent Polish company, KGHM, provide financial coverage to cover the deficit?
18. What is the corporate Structure of KGHM's holdings in Canada?
19. Will KGHM Polska Miedz serve as a guarantor if KGHM Ajax does not have adequate insurance coverage in the event of an incident that exceeds the costs of KGHM Ajax's insurance coverage?
20. Will First Nations have any equity interest in Ajax?
21. The bonding requirements by the B.C. Government for mining developments appear to cover only reclamation costs. Is KGHM Ajax willing to enter into funding arrangements through the federal and provincial governments for other than reclamation costs arising from the operation of the Ajax mine?