



# Interior Health

September 29, 2011

Nicole Vinette  
Project Assessment Officer  
Environmental Assessment Office  
1-836 Yates St, Victoria BC V8W 1L8

Dear Ms. Vinette:

## **Re: Ajax Project Draft AIR/EIS Guidelines Review**

Interior Health has reviewed the Draft AIR (dAIR)/EIS Guidelines and provides the following comments and questions with respect to the dAIR:

### **6.1 Climate**

#### **6.1.3 Spatial and Temporal Boundaries**

- 1) The proponent should clearly define how the LSA was determined and the criteria used with respect to climate and air quality monitoring.
- 2) Will the meteorological station, with its location adjacent to Sugarloaf Mountain provide true representation of meteorological conditions with respect to predicting air quality impacts for the LSA?

### **7.7 Housing**

- 1) The proponent should clearly define the impact to housing stock including affordability and availability.

### **8.2 Community Health and Well Being**

#### **8.2.3 Spatial and Temporal Boundaries**

- 1) The proponent should clearly define the background information and criteria used to determine its boundaries and assessment of the potential effects to community health and well being.

### **10.1 Air Quality (Dust fall, PM<sub>10</sub> and PM<sub>2.5</sub>)**

#### **10.1.1 Rationale and 10.1.2 Background**

- 1) The inventory of air quality parameters should be expanded to include all potential air contaminants and their sources, including, but not limited to:

Bus: 250-851-7340 Fax: 250-851-7341  
Email: [misty.palm@interiorhealth.ca](mailto:misty.palm@interiorhealth.ca)  
Web: [interiorhealth.ca](http://interiorhealth.ca)

**HEALTH PROTECTION & LICENSING**  
*Less Risk ~ Better Health*

Public Health  
519 Columbia Street  
Kamloops BC V2C 2T8

- a) Trace metals, air pollutants from the list of toxic substance is Schedule I of the Canadian Environmental Protection Act, criteria air contaminants, radiological parameters, physical characteristics (e.g., crystalline silica dust).
- 2) The dust inventory should include total particulate matter and the inhalable (PM<sub>10</sub>) and respirable (PM<sub>2.5</sub>) fractions. The particulate fractions should be described in terms of toxicological properties for parameters such as trace metals, for example. The PM<sub>2.5</sub> fraction should also be described in terms of primary and precursor pollutants.
- 3) The BC Provincial Guidance on Application of Provincial Air Quality Criteria for PM<sub>2.5</sub> and the CCME Guideline for Continuous Improvements for Keep Areas Clean should be included as the guiding principles in the development of the particulate assessment program.
- 4) It has been documented that no safe thresholds have been identified for respirable particulates. Therefore, the applicant must strive to not degrade the air quality further, and work to achieve or exceed the Provincial Air Quality Criteria for PM<sub>2.5</sub> of:
  - 25µg/m<sup>3</sup> daily (24hr average)
  - 8µg/m<sup>3</sup> annual air quality objective
  - 6µg/m<sup>3</sup> annual air quality planning goal.
- 5) Under Section 10.1.2, the AIR refers to the Regional Brocklehurst sampling station as a location for PM<sub>2.5</sub> data collection. It should be noted that this station is separated by a distance of approximately 5km, and varies in elevation and topographical features from the LSA. All efforts must be made to validate the Brocklehurst station data as being representative of the LSA.
- 6) Under Section 10.1.2, the AIR refers to consumption of country foods potentially exposed to contaminated soil or dust fall as a valued component. This should be reflected in the project assessment through fruit and vegetable production in residential gardens. The status of data collection from the perspective of background levels and ongoing monitoring programs in this area of study is unknown. The topic of bioaccumulation of trace metals in human receptors is not noted in project assessment plans reviewed to date.

#### **10.1.4 Potential Effects of the Proposed Project and Proposed Mitigation**

- 1) The proponent should clearly define the LSA and the criteria used to determine its boundaries and assessing potential human health effects.
- 2) The LSA description should identify potential receptors (residential, commercial and industrial land uses) and sensitive sub-populations and the distance from each to project construction and operational components. As examples, this should include identification of schools, child and adult care facilities, parks and playgrounds and retirement type developments where elderly populations may be concentrated.
- 3) Monitoring sites within the LSA should be broadened to include potential receptor sites and potential emission sites (such as rock waste storage, tailings ponds, etc.)

- 4) The assessment should clearly describe the ambient air in the LSA and the projected emissions from the project (construction, operation, decommissioning, closure AND post closure) for the aforementioned parameters. The standards or benchmarks used towards the assessment of the human health significance of the described ambient and emission inventories should be clearly presented. The quality of data collected should be sufficient for initiation of human health risk assessments should residual effects of concern be identified.
- 5) The proponent should clearly outline the methodology used to identify and analyze potential adverse health effects. Does this include bio monitoring of potential receptors?
- 6) The assessment for potential adverse effects should be expanded to include post closure.
- 7) Broaden mitigation measures for potential adverse health effects to include post closure.
- 8) The proponent should provide a clearly defined complaint response and resolution policy as part of the mitigation of adverse effects relating to air quality.
- 9) It is noted from a memorandum between Knight Piesold and the Ministry of Environment (May 5, 2011) that "MoE is not expecting air quality dispersion modeling for particulate matter or dust since these models have limited utility". Clear justification for all methods of data collection which could be used for the purpose of human health assessment within the LSA should be provided.

## **10.2 Water Quality**

- 1) The proponent should include detailed information with respect to potable water supply for the mine, specifically:
  - a) What is proposed for the source of potable water?
  - b) What is proposed for the treatment of source water/raw water to provide water that is considered potable and compliant with the Drinking Water Protection Act?

### **10.2.1 Rationale**

- 1) Ensure water quality is compared against the Guidelines for Canadian Drinking Water Quality.

### **10.2.3 Spatial and Temporal Boundaries**

- 1) The proponent should clearly define how the LSA and RSA were determined with respect to assessing potential human health effects and water quality.

- 2) With respect to the surface and ground water monitoring sites/wells within the LSA and RSA, the proponent should identify how these sites were chosen with respect to monitoring for potential adverse health effects.
- 3) Are there any drinking water intakes or drinking water supplies located within the RSA or LSA that may be impacted?
- 4) How were the surface and ground water monitoring sites/wells chosen?

#### **10.2.4 Potential Effects of the Proposed Project and Proposed Mitigation**

- 1) The proponent should clearly outline the methodology used to identify and analyze potential adverse health effects. Does this include bio monitoring of potential receptors?
- 2) The above mentioned analysis should be expanded to include post closure.
- 3) With respect to potential adverse health effects relating to water quality, the proponent should assess water quality results against the Canadian Guidelines for Drinking Water Quality.
- 4) The proponent should clearly outline the proposed mitigation measures with respect to any exceedances of the Guidelines for Canadian Drinking Water Quality and other applicable guidelines and legislation.
- 5) Proposed mitigation measures should also include post closure.
- 6) The proponent should provide a clearly defined complaint response and resolution policy as part of the mitigation of adverse effects relating to water quality.

#### **10.3 Noise and Vibration**

##### **10.3.3 Spatial and Temporal Boundaries**

- 1) The proponent should clearly define how the LSA and RSA were determined with respect to noise and vibration effects. A description of the LSA in terms of receptor populations should be provided and include sensitive sub population identification. No rationale or criteria have been provided for the proposed local and regional spatial extent map. The noise impact assessment should define how the permissible noise levels are applied within the context of the spatial and temporal study boundaries.
- 2) The proponent should conduct seasonal/year round assessment for the purpose of developing a complete background profile.

### **10.3.4 Potential Effects of the Proposed Project and Proposed Mitigation**

- 1) The proponent should clearly outline the methodology used to identify and analyze potential adverse health effects. Does this include bio monitoring of potential receptors?
- 2) Proposed mitigation measures should also include post closure.
- 3) The proponent should provide a clearly defined complaint response and resolution policy as part of the mitigation of adverse effects relating noise and vibration.

### **10.3.5 Residual Effects and Their Significance**

- 1) Transportation should be included as a noise generating parameter that may have potential adverse effects.
- 2) "Noise associated with the construction and closure phases of the mine will not be modelled as the time frame will be relatively short-term". How will noise levels/possible adverse effects from construction and closure be assessed in the absence of modelling? The proponent should include construction and closure noise in the overall impact assessment and proposed mitigation measures.
- 3) In addition to the reference guidelines listed in the report, the proponent should also consider in the development of a noise impact assessment program:
  - a) Health Canada – Guidelines for Evaluating Human Health Impacts in Environmental Assessment: NOISE draft January 2011.
  - b) Municipal Noise Bylaws such as those found in Kamloops, Vancouver, Richmond, North Vancouver and Delta BC.

Sincerely,



Misty Palm  
Environmental Health Officer

MP/dla