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Via email : [licensing@nunavutwaterboard.org](mailto:licensing@nunavutwaterboard.org)

**RE: 110223 2BE-HOP0712 I16 Final Closure Plan Windy Camp and Patch Lake Facility  
– Kitikmeot Region**

Environment Canada (EC) has reviewed the above-mentioned plans submitted to the Nunavut Water Board (NWB). The following specialist advice has been provided pursuant to the *Canadian Environmental Protection Act*, Section 36(3) of the *Fisheries Act*, the *Migratory Birds Convention Act*, and the *Species at Risk Act*.

As a required of Part I, Item 16 of water license 2BE-HOP0712, Hope Bay Mining Ltd. submitted to the NWB final closure plans for Windy Camp and the Patch Lake Facility. Windy Camp and the Patch Lake Facility are both part of the Hope Bay Regional Exploration project, approximately 160 km southwest of Cambridge Bay. Windy Camp was used as an exploration camp until October 2008. Decommissioning of the site is planned to be completed by late 2012 with contaminated soil remediation completed by 2014. The Patch Lake Facility was used as a maintenance yard and workshop for exploration drilling and supported two tank farms between 1998 and 2008. The maintenance yard and workshop were decommissioned between 2008 and 2010. Contaminated soil remediation is to be completed by 2014.

Upon review of the plans, EC provides the following comments:

**Site-specific soil remediation objectives**

EC noted that the site-specific remediation objectives (SSRO) developed by WESA (2009a) for petroleum hydrocarbon-contaminated soil in the Windy and Patch Lake Camps (see Table 4 of EBA consultant report) were disregarded and replaced with new objectives in Table 5. These revised SSRO are between 1.5 to 8 times higher than those recommended by WESA (2009a). Other than reference to a few consultant reports and one article, these SSRO were not substantiated. EC does not support the practice of applying SSRO to areas other than those for which they were designed. To that end, EC requests more information be provided regarding how these SSRO were determined, including a demonstration of how these criteria will be protective of ecological and human receptors given site-specific conditions and the ultimate land use planned for

these sites following final closure (i.e. wildlife habitat with occasional use by Inuit for subsistence hunting and fishing).

### **Landfilling F3/F4-contaminated soils from Patch Lake**

EC noted the EBA consultant report recommended F3/F4-contaminated soils from Patch Lake be used as intermediate fill at the Doris Camp landfill (see Section 3.4 of Patch Lake Closure Plan and p. 23 of EBA report for reference). However, the *GN Contaminated Site Remediation Guideline* states that after moving soil to an acceptable location, the contaminated soil must be treated and reduced to acceptable levels as per CCME soil quality guidelines. Given the proposed SSRO for the F3 and F4 fractions in these soils and the potential fate of these soils, it is prudent more justification be provided for the proposed SSRO. Further, as per the Nunavut remediation guideline, will these contaminated soils be segregated once they are disposed of at the landfill? As a best practice, EC recommends that F3/F4-contaminated soil be segregated in the landfill via containerization to avoid chemical reactions with other waste disposed at the site.

### **Burn Pan**

EC noted reference to a burn pan located near Quarry 2 at the Doris site in both closure plans (i.e., Section 3.2 and 3.7 of the Patch Lake and Windy Lake closure Plans, respectively) which is authorized under the Doris Type A Water License. EC requests more details be provided for this equipment including its function, size, pictures and what materials are planned to be burned in this unit.

### **Windy Camp Closure Plan**

Section 1.1 indicates chemicals of concern at Windy Camp include the petroleum hydrocarbon (PHC) fractions F2 (diesel fuel) and fractions F3 and F4 (lubricating oils), as well as chromium, copper, nickel and zinc. However, this statement is inconsistent with the consultant reports (EBA 2010, WESA 2009b) which suggest metal contamination is restricted to the Patch Lake site.

If there are any changes to the plans EC should be notified as further review may be necessary. Please do not hesitate to contact the undersigned with any questions or comments with regards to the foregoing at (867) 975-4631 or by email at [Paula.C.Smith@ec.gc.ca](mailto:Paula.C.Smith@ec.gc.ca).

Yours truly,



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