



Water Resources Division  
Nunavut Regional Office  
Iqaluit, NU X0A 0H0

NWB#: 3BE-GRA  
CIDMS#: 388748

February 4, 2010

Phyllis Beaulieu  
Manager of Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU, X0A 1J0

**Re: New Application, Grail Project (NWB#: 2BE-GRA), Indicator Minerals Inc.**

Please be advised that Indian and Northern Affairs Canada (INAC) has completed a review of Indicator Minerals Inc's application for a new Type "B" Water License #2BE-GRA, Grail Project located in the Qikiqtani Region of Nunavut. All associated documents related to this license posted on the NWB ftp website under 2BE-GRA were included in my review (please see attached technical memo for recommendations).

Should you have any questions or comments, please do not hesitate to contact me at (867) 975-4738 or by email at [Andrea.Cull@ainc-ianc.gc.ca](mailto:Andrea.Cull@ainc-ianc.gc.ca)

Yours truly,

*Original Signed By*

Andrea Cull  
Water Management Specialist

Cc: Lou-Ann Cornacchio, Water Resources Manager, INAC



## Technical Review Memo

To: Phyllis Beaulieu, Manager of Licensing, NWB

From: Andrea Cull, Water Management Specialist, INAC

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**Re: New Application, Grail Project (NWB#: 2BE-GRA), Indicator Minerals Inc.**

### **BACKGROUND:**

Andrea Maynes of Indicator Minerals Inc. submitted a New Type "B" Water License application to the Nunavut Water Board (NWB) on November 26, 2009.

Indicator Minerals is applying for a water license for water use and waste disposal associated with activities in mining and milling (including exploration and drilling) located in the Qikiqtani region of Nunavut.

The Grail property is located approximately 65 km Northwest of the Hamlet of Taloyoak.

Chantrey Lake is the largest lake in the area around the Grail property that has the potential to provide the best potable water.

### **INAC HAS REVIEWED THE FOLLOWING DOCUMENTS:**

- Cover letters dated November 26 and 27, 2009
- Water License Application
- Email clarifying camp coordinates dated December 9, 2009
- Exploration/ Remote Camp Questionnaire
- Appendix A – Non-technical Summary
- Maps and Figures
- Spill Contingency Plan and MSDS Sheets
- Environmental Procedures Plan for Grail Project
- Abandonment and Restoration Plan

All associated documents related to this license posted on the NWB ftp website under 2BE-GRA were included in my review.

INAC recommends that the Board impose applicable standard conditions to this new water license. In addition, the following additional comments/



recommendations are provided for your consideration in the licence approval process.

## **RECOMMENDATIONS:**

### **1. Drilling Operations**

INAC recommends that all drill cuttings are placed in drill holes, sumps, or removed from the project area for appropriate treatment. All sumps shall be backfilled and contoured to prevent precipitation run-off collection prior to the end of the project field season.

INAC recommends that the proponent provide an operational plan detailing how diamond drill return-water will be managed in a manner that will not pose a negative impact on the quality of nearby freshwater sources. The Plan should consider the use of hot water rather than drill additives to support permafrost drilling operations as a means of protecting freshwater quality and/or how any use of CaCl<sub>2</sub> (Calcium Chloride) will be handled to minimize or prevent any adverse effects to water.

Drill additives or mud should not be used with holes drilled through ice unless the mud is re-circulated and contained and all drill cuttings are removed from the ice surface.

### **2. Waste**

#### **a). Camps / Wastewater Disposal**

INAC recommends that all sumps for the disposal of grey water should be located a minimum distance of 31m from any water body and such that there are no adverse effects to the quality, quantity and flow of water. Furthermore, all sumps should be treated, backfilled and contoured to match the surrounding landscape prior to the end of the projects field program.

#### **b). Hazardous Wastes**

INAC recommends that Hazardous waste/ waste oil materials stored on-site should be clearly labelled so they will be visible under all conditions and in all seasons. This recommendation is intended to prevent possible damage to the containers.

INAC recommends that the proponent remove all hazardous materials/ waste oil from the site on a regular basis to prevent the over accumulation



of these materials. Hazardous waste/ waste oils must be disposed of at an approved facility outside of the Territory of Nunavut (no known facilities within Nunavut). All transfer of this type of waste must be in accordance with the GN's "Guideline for General Management of Hazardous Waste - January, 2002". In addition hazardous wastes should be stored within a lined secondary containment structure to prevent any off site impacts (other secured structures would also be acceptable).

INAC recommends that the proponent be required to submit copies of all manifest forms related to the transport of hazardous waste/ waste oil as part of the Annual Report for this site.

#### c). No Open Burning

According to EC's Technical Document for Batch Waste Incineration Guidelines, there should be no open burning of plastics, wood treated with preservatives, electrical wire, Styrofoam, asbestos or painted wood. This is to prevent the deposition of waste materials from incomplete combustion and/or leachate from contaminated ash residues from affecting any surrounding waters.

#### d). Incineration

According to EC's Technical Document for Batch Waste Incineration Guidelines, a facility incinerating more than 26 tonnes of waste per year, dual chamber, controlled air incinerators are the recommended configuration. The proponent shall make determined efforts to achieve compliance with the Canada-Wide Standards for Dioxins and Furans and the Canada-Wide Standard for Mercury Emissions. Efforts should include the implementation of a comprehensive waste management strategy (especially waste segregation) that is designed to reduce and control the volumes of wastes produced, transported, and disposed of.

### **3. Spill Contingency Plan**

Section (5.3) of the Spill Contingency Plan should make reference to the Nunavut Spill Report Line and include a copy of the Nunavut Spill Report Form. This form can be obtained from the Nunavut Water Board public registry at <http://www.nunavutwaterboard.org>. Please note that the 24-hour Spill Report Line telephone number is (867) 920-8130 and facsimile number is (867) 873-6924. Furthermore, INAC requests the proponent report all spills to Peter Kusugak, INAC Manager of Field Operations, phone: 867-975-4295, fax 867 975-6445 as well as the Nunavut Spill Report Line.

Cc: Lou-Ann Cornacchio, Water Resources Manager, INAC