



## Independent Environmental Monitoring Agency

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March 21, 2018

Joseph Mackenzie  
Chair, Wek'èezhìi Land and Water Board  
#1-4905 48th St, Yellowknife, NT  
X1A 3S3

**Re: Misery Underground Development - Draft Water License and Draft Land Use Permit (W2012L2-0001, W2017D0004)**

Dear Mr. Mackenzie,

The Independent Environmental Monitoring Agency (Agency) has reviewed Dominion Diamond's Misery Underground Development (MUG) – Draft Water License and Draft Land Use Permit, and submits the following comments and recommendations for consideration by the Board.

**Part H: Water Quality Modeling Special Study**

The Agency notes that the purpose of the Misery Underground Water Quality Model Updates Report is to evaluate the influence of the MUG Project on water quality predictions previously completed for Jay Project operations and closure. In its intervention, GNWT Environment and Natural Resources stated that, while it believes the work done by Dominion Diamond on the modeling updates is sound, further information is required to fully assess the predicted water quality conditions. The Agency agrees and believes having a Special Study Design provided to the Board for approval prior to updating the MUG Water Quality Modeling would provide regulatory agencies and other stakeholders the opportunity to address any potential outstanding matters related to the influence of MUG underground water.

• **Recommendation:**

The Agency recommends that the amended Water License include proposed Part H Conditions 38(a) and (b) as amended below.

• **Recommendation:**

Proposed Part H Condition 38(b) require results of the Special Study (not a summary of results as currently proposed) be submitted to the Board for approval within one year of the effective date of Amendment #6 (currently no time frame is stipulated).

**Part H: Discharge from the King Pond Settling Facility**

The Agency believes that proposed Part H Conditions 42, 43 and 46 together best ensure protection of the aquatic receiving environment downstream of the King Pond Settling Facility. These Conditions are reiterated below:

Condition 42: *The Licensee shall ensure that Discharge from the King Pond Settling Facility is such that a dilution factor of 1.7 or greater is realized during Discharge;*

Condition 43: *The Licensee shall ensure that Discharge from the King Pond Settling Facility does not exceed 470,915 metres cubed annually;*

Condition 46: *Following the addition of Minewater from the Misery Underground Development to the King Pond Settling Facility, the Licensee shall not Discharge from the King Pond Settling Facility, unless otherwise approved by the Board.*

In its application, Dominion Diamond has stated that if discharge from King Pond is required, downstream Site-Specific Water Quality Objectives would be met under this discharge volume limit and the 1.7 dilution factor.

• **Recommendation:**

The amended Water License include proposed Part H Conditions 42, 43 and 46.

### **King Pond Settling Facility Stream Survey Study Design**

The Agency believes the best way to ensure effective monitoring of potential impacts to fish spawning habitat in streams B2, B3 and B4 is to require a stream survey study design be submitted for approval by the Board prior to conducting monitoring and reporting of results in the Aquatic Effects Monitoring Program (AEMP) Annual Report and the King Pond Settling Facility Stream Survey Report.

• **Recommendation:**

The amended Water Licence include both proposed Part J Conditions 14 and 15.

### **Surveillance Network Program**

The proposed Amendment includes establishment of a new SNP station 1616-46(b) to monitor water pumped from Misery Underground sump into the King Pond Settlement Facility and Lynx pit. In addition, revision of the sampling frequency and measured parameters at the existing Cujo Lake SNP station 1616-48 is proposed to address the dilution factor discussed in Part H Condition 42.

• **Recommendation:**

The amended Water License include new SNP station 1616-46(b) and revision of the sampling frequency and measured parameters at existing SNP station 1616-48.

Should you have any questions concerning these comments, the Agency is pleased to discuss these at your convenience.

Sincerely,



Jaida Ohokannoak  
Chairperson

Cc: Dominion Diamond– April Hayward  
Tłjchq Government – Jessica Hum  
Yellowknives Dene First Nation – Alex Power

łutsel K'e Dene First Nation – Ray Griffith  
North Slave Metis Alliance – Nicole Goodman  
Kitikmeot Inuit Association – Geoff Clark  
Government of the Northwest Territories – Laurie McGregor  
Indigenous and Northern Affairs Canada – Michael Roesch