



**Deninu K'ue First Nation**  
**Box 279**  
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**XOE OMO**

**E-MAILED**  
May 21/14

Chuck Hubert  
Senior Environmental Assessment Officer  
Mackenzie Valley Review Board  
200 Scotia Centre  
Box 938, 5102-50<sup>th</sup> Avenue  
Yellowknife, NT X1A 2N7

May 21, 2014

**Re: Snap Lake Water License Amendment Project**

Dear Mr. Hubert,

The Deninu Kue First Nation (DKFN) is pleased to provide the following comments on the Snap Lake Water License Amendment review. The Snap Lake Mine is within the current and traditional socio-economic use areas as identified in the Deninu K'ue Ethno-history Report prepared by Vanden Berg and Associates. Members of DKFN have participated in several community engagement initiatives since 2012 led by De Beers for the Snap Lake Mine Project; however, effective consultation throughout the life of the mine has not occurred. Similar to other groups and agencies, the DKFN is concerned with the uptrend in the concentration of total dissolved solids (TDS) being released into Snap Lake and potentially downstream. We acknowledge that other ions and anions, such as chloride and fluoride, are also of concern, but in our submission we make reference to the general term of TDS.

The effect of increasing levels of TDS on the aquatic environment was originally raised during the environment review for the project and the Mackenzie Valley Review Board, in its 2003 *Report of Environmental Assessment and Reasons for Decision on the De Beers Canada Mining Inc. Snap Lake Diamond Project*, concluded that potential for significant adverse impacts on aquatic life remain if TDS levels in Snap Lake exceed concentrations predicted by De Beers, despite the implementation of mitigation measures proposed at that time. Further, emphasis was placed on developing and adaptive management plan during the original review in 2003, the water licensing process in 2004 and the water license renewal in 2011. Adaptive management is used to address uncertainties and implement appropriate actions.

In its TDS Response Plan (dated December 2013), De Beers has identified the sources of TDS and the current and ongoing management practices to reduce TDS. Ongoing management efforts are focused on a phased study initiated in 2012 on water treatment technologies and a pilot scale treatment study to reduce concentrations of TDS. Unfortunately, modeling predictions show that TDS concentrations will continue to exceed current and proposed site specific water quality objectives for Snap Lake. Further, in its Evaluation of Effluent Quality Criteria Report

(dated December 2013), De Beers continues to identify uncertainties, particularly in regard to the mixing zone and use of a second diffuser, despite ongoing monitoring at the site for more than a decade. In response to this De Beers will implement a plume study in the summer of 2014.

So in light of the ongoing concerns about elevated levels of TDS in Snap Lake and downstream, the phased and pilots studies that are underway and the planned studies for 2014, we recommend the following for consideration in the environmental assessment (EA1314-002) and water license amendment (MV2011L2-0004) review process:

- Suspension of the environmental review decision phase until after the results of the above noted studies are completed and results are presented by De Beers;
- Identification of specific management actions, other than ongoing studies, by De Beers regarding mining practices that could reduce the levels of TDS.

We continue to be disappointed that over a decade of monitoring has been conducted at Snap Lake and the issue of increased levels of TDS continues to be forefront. We are concerned that based on the current actions and commitments by De Beers that this issue will continue for the life of the mine. We thank the Mackenzie Valley Environmental Review Board for the opportunity to participate in this process and look forward to an amenable results from this process.

Sincerely,



Chief Louis Balsillie

Encl.

cc. Linda Vanden Berg, LVB Strategic Negotiations and Research  
Marc d'Entremont, LGL Limited