



**Snap Lake Environmental Monitoring Agency**  
**Main Floor, Lahm Ridge Tower**  
**4501 Franklin Avenue**  
**P.O. Box 95, Yellowknife, NT X1A 2N1**  
**Phone: 867-765-0961 FAX: 867-765-0963**  
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Marc Casas  
Regulatory Officer  
Mackenzie Valley Land and Water Board  
7<sup>th</sup> Floor – 4910 50<sup>th</sup> Avenue  
P.O.Box 2130  
Yellowknife, NT X1A 2P6

File: Water Licence MV2011L2-0004

December 19, 2014

**Re: December 2013 Amendment Application – Post-EA Information Package**

Dear Mr. Casas,

The Snap Lake Environmental Monitoring Agency (SLEMA) has conducted a preliminary review of the Post-EA Information Package, and would like to submit the following Information Requests:

Information Request #1

- Figure 3-1a and 3-1b (pages 44 and 45/619) present the predicted and monitored discharge rates and TDS concentrations (End of Pipe), but only from January 2012 to January 2015. Prediction of the discharge rates and TDS concentrations (End of Pipe) for the remaining life of the mine is requested.

Information Request #2

- Figure 3-2(c) (46/619) presents the predicted depth-averaged TDS concentrations at SNAP29 (Drinking Water Intake), with mitigation. It shows that TDS levels at SNAP29 will be above 500 mg/L (Aesthetic Objective) from 2024 to 2029. Will De Beers treat the intake water to meet the Aesthetic Objective for Drinking Water?

Information Request #3

- It is noticed that, in Table 3-11 (page 47/619), TDS levels in DSL1 (upstream lake) are lower than those in DSL2 (downstream lake). It is abnormal except of certain circumstances. Explanation is requested to prevent reviewers from confusion.



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#### Information Request #4

- Suggestion 2 of the Environmental Assessment EA1314-02 states:
  - *"The Mackenzie Valley Land and Water Board should set closure objectives and criteria that ensure drinking water quality in Snap Lake achieves the Health Canada Guidelines for Canadian Drinking Water Quality aesthetic objective for TDS in drinking water within **five years** of the end of mining operations."*
- De Beers predicted that Snap Lake would return to the TDS aesthetic level within **seven years** following the cessation of mining (page 56/619). Even if it is *"consistent with the intent of the suggestion"*, it does not meet the MVEIRB's requirement. What will De Beers have to do to meet this specific closure requirement if the MVLWB does as the MVEIRB suggested?

#### Information Request #5

- Figure 3-10 (page 57/619) presents the post-closure prediction of whole lake average TDS concentrations in Snap Lake. However, the data set is from 2012 to 2130, and no data represent pre-construction, construction and early operation periods, as a result, the "picture" appears not to be complete. It is requested that De Beers add baseline data and other data available into the figure and provide a complete "picture" of trend for TDS concentrations in Snap Lake.

#### Information Request #6

- Measure 1.d) of the Environmental Assessment EA1314-02 states:
  - *"No Total Dissolved Solids or its constituent ions from the Snap Lake mine effluent will be detectable, relative to the range of natural variability, at the inlet to Mackay Lake, 44 km downstream of Snap Lake"*
- However, Table 2 of Appendix II (page 337/619) show that predicted TDS levels (mitigated case) at downstream site #22 (Mackay Lake) range from 45 to 50 mg/L, doubling the baseline level (20 mg/L). De Beers appears not to meet the MVEIRB's Measure 1.d).
- De Beers claimed that the natural variability in baseline TDS at each site is not known and this is based on individual measurements from open-water season only.
- From the data in the same Table, TDS levels in the Lockhart River System are generally low. De Beers claim does not appear to stand. What additional mitigation measures will De Beers take to meet Measure 1.d)?



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Finally, SLEMA has reviewed the combined workplan for the December 2013 and November 2014 amendment applications and is satisfied that the process will meet all legislated requirements and will allow for a thorough review by the stakeholders. However, SLEMA believes that more should be done to promote community engagement in the affected Aboriginal communities. In this regard, we recommend that the MVLWB consider taking additional steps to engage them and to promote meaningful public participation at all phases of the process, including at public hearings. This may mean, for example, ensuring the dissemination of plain-language information in the language in use in that community, holding information sessions and "community hearings", possibly holding culturally-appropriate hearings in those communities, and should the MVLWB only hold hearings in Yellowknife, assisting Elders and other community members to attend these hearings.

If you have any questions whatsoever please feel free to contact Philippe di Pizzo at 867-765-0961 / [exec@slema.ca](mailto:exec@slema.ca).

Sincerely,

Original signed by

Philippe di Pizzo  
Executive Director