



**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**  
**Website: [www.slema.ca](http://www.slema.ca)**

February 6, 2008

David Livingstone  
Director, Renewable Resources and Environment  
Indian and Northern Affairs Canada  
P. O. Box 1500  
Yellowknife, NT  
X1A 2R3

**Re: De Beers 2006 Environmental Agreement Annual Report**

Dear Mr. Livingstone,

Snap Lake Environmental Monitoring Agency (SLEMA) has had an opportunity to review De Beers 2006 Environmental Agreement Annual Report and found it to be satisfactory for the purpose of the Environmental Agreement.

SLEMA makes the following observations, some with a view to improving future Environmental Agreement Annual Reports:

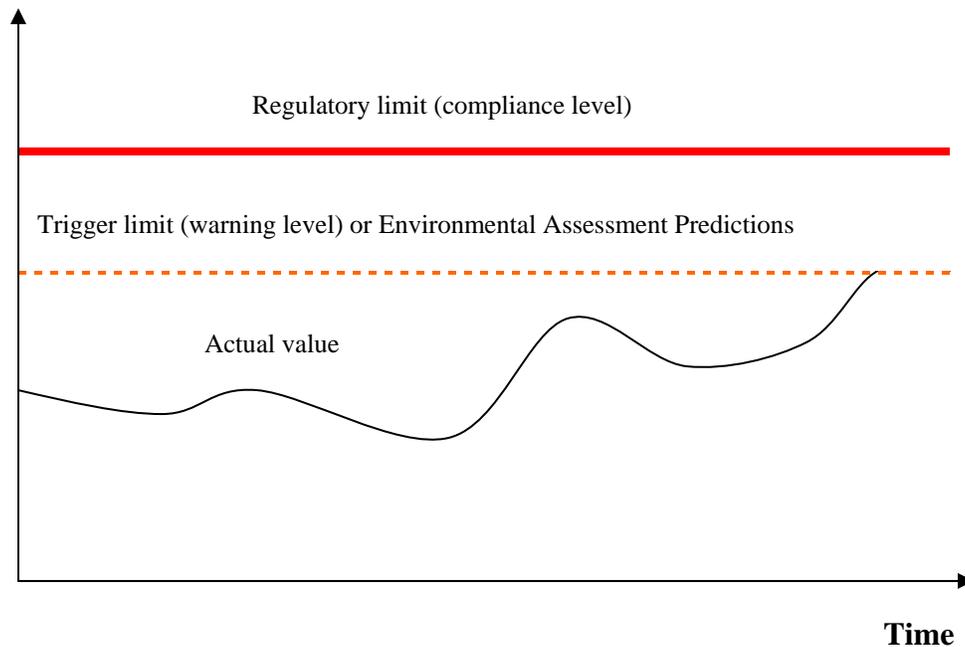
- There is inconsistency between the Plain Language Summary and the body text. In the Plain Language Summary, the number of 2006 submissions seems to be 20, whereas in Table 4-1 (section 4, p44), the number is 22.
- In the Plain Language Summary, for the Aquatics, it is stated that De Beers “found very small increases in dissolved salts in the water in Snap Lake”, which might mislead the readers. Based on Table 2-1 (Section 2, p8), the whole lake average total dissolved solids (TDS) concentration “ranged from 33 to 43 mg/L in 2006”. The lake TDS concentration in 2005 “ranged from 15 to 25 mg/L” in Table 4-1 of 2005 Environmental Agreement Annual Report Supplement (Section 4, p8). It represents an increase by 32% to 187%, and the relative increase is quite significant. The wording “small to moderate increases in TDS” in Table 2-1 (Section 2, p8) is more appropriate. It is recommended that the description in the Plain Language Summary be consistent with that in the body text. SLEMA concerns about the TDS increase in Snap Lake, and requests that De Beers report to SLEMA whenever the lake TDS data are available.
- Table 2-1 in Section 2 provides a summary of the 2006 monitoring activities, observation, and comparisons of results with Environmental Assessment Report (EAR) predictions. The table contents are comprehensive, and the information provided is adequate. However, the presentation of the monitoring results could be improved. The description of the key results in Table 2-1 looks visually unappealing. There are better



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ways to visualize the quantitative results. The improvements for the presentation of the data are recommended in order for the readers with less scientific background to easily understand the monitoring activities, results, and related analysis (environmental quality change over time and distance). The following figure is just an example to show the trend of environmental quality change (water, air, soil, wildlife, and other valued environmental components).

**Parameter**



- Section 3 and Section 4 of the report present the summaries of the 25 monitoring programs and management plans, and the abstracts of 2006 report submissions (11 annual reports and 5 geological reports for 2005). Although they are very helpful for the readers to understand the environmental programs in the context of the project, there is too much information about them. Instead, De Beers should focus on the environmental monitoring results and analysis, and overall environmental performance in 2006. There are 67 pages for the summaries or abstracts, which are almost three quarters of the 2006 EAAR (90 pages). It is recommended that only the report list (Table 3-1, p13 and Table 4-1, p44) and the update for the monitoring programs and management plans are shown in the main body text, those specific summaries or abstracts should be put into the appendix of the Environmental Agreement Annual Report.
- Table 3-1 and Table 4-1 listed the report submissions. However, Snap Lake Environmental Monitoring Agency (SLEMA) has not received some of the monitoring programs, management plans, and annual submissions,



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as well as related document updates. SLEMA would like to make itself a hub of information for the Snap Lake Project, and hope De Beers will support its efforts through making a copy (both hardcopy and electronic copy) of its submissions for SLEMA.

- There is a typo in Table 3-1 (p13). The approval date for Adaptive Management Plan could not be 31 Mar, 2008.
- The Environmental Agreement requires the Annual Report shall include “a comprehensive summary of all compliance reports required by the Regulatory Instruments”. Section 5 only provides a summary of the requests by the Inspector of Indian and Northern Affairs Canada (INAC) and the De Beers response to each of the Inspector requests. The compliance summary of other applicable regulatory instruments seems to be missing. They could include, but not to be limited to water licence, land use permit, land lease, fish authorization, air quality standards, and explosive permit.
- It is recommended that De Beers provide compliance summary for applicable valued environmental components (such as water quality and air quality) within Section 5. The following tables of water quality parameters against water licence limits are only examples for De Beers reference.

**Compliance of SNP 02-17 and SNP 02-16-i**

| Parameter | Maximum Concentration |   |   | Average Monthly     |                           |
|-----------|-----------------------|---|---|---------------------|---------------------------|
|           | Discharge Criterion   | Maximum Monitored Concentration in 2007 | Number of Occurrences above the Criterion | Discharge Criterion | Monitored Results in 2007 |
| TSS       | 14mg/L                |   |   | 7 mg/L              |                           |
| ...       |                       |   |   |                     |                           |

| Parameter        | Annual Mass Loading Criteria | Annual Loading in 2007 |
|------------------|------------------------------|------------------------|
| Ammonia          | 187,000 kg                   |                        |
| Nitrate          | 219,000 kg                   |                        |
| Total Phosphorus | 256 kg                       |                        |

**Compliance of SNP 02-18**

| Parameter        | Average Monthly Criterion | Monitored Results in 2007 |
|------------------|---------------------------|---------------------------|
| TDS (calculated) | 350 mg/L                  |                           |

- Section 7 only provides a list of mitigative measures to the Sewage Treatment Plant (STP) operations. Other issues that required mitigation should be summarized and included in Section 7. The pH exceedance (p86) should be reflected in Section 5 (Summary of Compliance).



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- The description about the adaptive measures for the increased volumes of mine water in Section 8 seems to be too brief, and provision of more details is recommended
- The community members commented on De Beers submissions in the meeting with Snap Lake Environmental Monitoring Agency (SLEMA), and express their specific concerns on the Snap Lake project. SLEMA collected these concerns and comments, and put them into the letter to De Beers. It is recommended that De Beers address them in Section 9 of the Environmental Agreement Annual Report.

SLEMA would be pleased to discuss the above comments with De Beers and others to ensure improved public reporting and environmental management at Snap Lake mine.

Sincerely,

*Original signed by*

Johnny Weyallon  
Chairperson