



Snap Lake Environmental Monitoring Agency
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Shannon Hayden
Regulatory Officer
Mackenzie Valley Land and Water Board
7th Floor – 4910 50th Avenue
P.O.Box 2130
Yellowknife, NT X1A 2P6

File: Water Licence Annual Reprt

April 30, 2010

RE: 2009 Water Licence Annual Report

Dear Ms. Hayden,

Snap Lake Environmental Monitoring Agency (SLEMA) is pleased to provide Mackenzie Valley Land and Water Board (MVLWB) with the following comments related to the above report (excluding Appendix I and IV). The comments on 2009 Acid Rock Drainage and Geochemistry Monitoring Report (Appendix I) and Aquatic Effects Monitoring Program 2009 Annual Report (Appendix IV) will be separately presented.

No major concerns are raised but a few editorial comments.

- Section 4, page 5&6: The total amount of treated sewage effluent in page 5 is different from the one in Table 4-1 (43,492 vs. 47,030). Clarification is requested.
- Section 7&8, page 10&11: Table 7-1 shows the surface facilities discharge to water management pond (WMP), and Table 8-1 shows the WMP discharge to the water treatment plant (WTP). Was there contingent discharge from the WTP to the WMP in 2009?
- Section 22, page 32: The description about MBRs operation in Sub-section 22.2 is contradictory. There might be typos, i.e. it should be MBR 1 and 4 were decommissioned.

In addition, SLEMA has some comments on the measurements of precipitation and runoff.

At the Snap Lake Mine, one meteorological station is equipped with a rainfall monitor, and another hydro-meteorological station is equipped with a rainfall and



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snowfall monitor. Then, De Beers has provided two datasets of precipitation and rainfall in Section 10 since 2009.

| Year | Rainfall (mm) at meteorological station | Precipitation (rainfall and snowfall, mm) at hydro-meteorological station |
|------|---|---|
| 2008 | 223.5 | 441.3 |
| 2009 | 173.7 | 152.4 |

The 2009 dataset is questionable because the measured precipitation number is less than the measured rainfall number. Explanation is requested.

It is noted that the Air Quality Annual Reports use data from the meteorological station for rainfall analysis. The Streamflow and Lake Elevation Monitoring Annual Reports use data from the Environment Canada Yellowknife "A" meteorological station (data adjusted for snowgauge undercatch) for water balance analysis.

There have been technical issues with the rainfall and snowfall monitor at the hydro-meteorological station for the past two years, and due to technical issues lots of precipitation events have not be recorded. It is recommended that De Beers continue its efforts in correcting the problems of the rainfall and snowfall monitor and take full advantage of the rainfall and snowfall data taken from the hydro-meteorological station for analysis in the above-mentioned and related reports.

If you have any questions whatsoever please feel free to contact the undersigned or David White at 867-765-0961 / dwhite@slema.ca.

Sincerely,

(original signed by)

Johnny Weyallon
Chairperson

cc: Indian and Northern Affairs Canada
Environment and Natural Resources, GNWT
Environmental Canada
De Beers Canada Inc.