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Website: www.slema.ca

Willard Hagen Chair Mackenzie Valley Land and Water Board 7th Floor – 4910 50th Avenue P.O.Box 2130 Yellowknife, NT X1A 2P6

File: Water Licence MV2011L2-0004

April 26, 2013

RE: 2012 Water Licence Annual Report

Dear Mr. Hagen,

Snap Lake Environmental Monitoring Agency (SLEMA) has reviewed the 2012 Water Licence Annual Report. Enclosed please find the Comment Table.

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

Sincerely,

Original signed by

Johnny Weyallon Chairperson

GENERAL INSTRUCTIONS FOR EXCEL TEMPLATE:		App #: MV2011L2-0004
1. Do not leave blank rows above or between		
2. Do not modify or delete the instructions o	r the column headings (i.e. the grey areas).	Review of: De Beers Canada Inc.
3. Each comment must have an associated to		
4. All formatting (i.e. bullets) will be lost when this file is uploaded to the Online Comment Table.		Reviewing Agency: SLEMA
5. If necessary, adjust the cell width and height in order to view all text.		
6. Cutting and pasting comments from WORD documents cannot include hard returns (spaces		Date: April 26, 2013
between paragraphs).		
7. If you would like to create paragraphs within a single cell, please use a proper carriage return (ALT		
& ENTER).		
<u>TOPIC</u>	COMMENT	RECOMMENDATION
Be as specific as you think is appropriate; for example a section or page of the document, a recommendation #, general comment, etc.	Comments should contain all the information needed for the proponent and the Board to understand the rationale for the accompanying recommendation.	Recommendations can be for the proponent or for the Board. Recommendations should be as specific as possible, relating the issues raised in the "comment" column to an action that you believe is necessary.
WLAR 2012, Section 23	It is good to see De Beers making more efforts in improving water management.	
WLAR 2012, Section 26	Based on recent hydrological modeling results, De Beers has to work harder in water management, especially source control, at the mine.	
WLAR 2012, Table 13-1 and Table 22-2	A few editing issues, e.g. Table 13-1 and Table 22-2, were pointed out to De Beers via e-mails, and correction was made.	De Beers resubmits the corrected Table 13-1 (Paste Solids numbers to be replaced by the numbers in Table 22-2).

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Appendix A. ARD 2012, Section 9.1, Page	It is stated that Bogs north of SP3 and SP5 had elevated concentrations of nitrate (0.07 to 38 mg/L as N), which may result from North Pile seepage. This	SLEMA has been concerned about the seepage from the North Pile to Snap Lake. During the water licence renewal process, SLEMA recommended the MVLWB put the ARD bog stations between the North Pile and the Snap Lake shoreline into the Surveillance Network Program, especially under the umbrella of SNP 02-10. The MVLWB stated in the Reasons for Decision (Page 114) that once the licence is approved, the proposed changes to the SNP based on IL-6 and proposed east cell site (SLEMA's recommendation) can be sent out for review, ensuring everyone has proper input. Now it may be the right time to initiate the review of SNP 02-10.
130	raises a concern.	SLEMA recommends the MVLWB do so.
Appendix A. ARD 2012, Section 9.2, Page		
130	All recommendations are supported.	
	Field Inspection Report was reviewed and commented	
	in November 2012 Environmental Update and one	
	SLEMA letter was issued out. http://www.slema.ca/wp	
	content/uploads/2012/01/November-2012-	
	Environmental-Update.pdf, and	
	http://www.slema.ca/wp-	
Appendix B. 2012 Geotechnical Site	content/uploads/2012/01/20121221-Letter-to-	
Inspection	MVLWB-on-2012-Geotechnical-Field-Inspection.pdf.	
Appendix C. Monitoring Program Summary	Recommendations in Setion 5. Summary are	
for the Period 1999 to 2012	supported. No other concerns are raised.	

Appendix D. Updated Predictions of Total Dissolved Solids and Chloride Concentrations in Snap Lake for 2013 and 2014	The modeling for TDS and Chloride is satisfactory. The modeling predicted that Chloride concentrations would exceed the CCME Water Quality Guideline for Chloride of 120 mg/L in 2013. SNP 02-20 data on February 10, 2013 indicates that the Chloride exceedance is coming in the following months. SLEMA is concerned about the potential impacts of the Chloride exceedance.	It is recommended that the MVLWB require De Beers to conduct chronic toxicity tests (cladoceran crustacean Ceridaphnia dubia and alga Pseudokirchneriella subcapitata) for SNP 02-20 in the following month after a Chloride exceedance.