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May 7, 2014

File: L020

Lionel Marcinkoski
GNWT
P.O. Box 1500
Yellowknife, NT X1A 2R3

Dear: Mr. Marcinkoski

Re: Snap Lake Mine
2012 Environmental Agreement Annual Reports

De Beers has received two comment letters to date on the 2012 Environmental Agreement Annual Report, from the Yellowknives Dene First Nations (YKDFN) and the Snap Lake Environmental Monitoring Agency (SLEMA).

In regards to SLEMA comments received January 20, 2014, De Beers agrees to provide additional visuals of wildlife in subsequent reports. De Beers however disagrees with recommendations 2 and 3. The inclusion of both changes over time photos of the North Pile is not a requirement of the Environmental Agreement. Furthermore, discussions of changes to the pile overtime are housed within the Geotechnical Annual report submitted as a component of the Water License Annual Report (WLAR) and the Interim Closure and Reclamation Plan. In regards to a water quality synthesis De Beers maintains that this present's unnecessary duplication of reporting as this is discussed in both the WLAR and the Aquatic Effects Annual Report. A plain language summary is included in both of these documents.

In regards to the YKDFN Letter received January 7, 2014, De Beers provides the following comments:

Environmental Health Monitoring Program

As provided by email January 13, 2014 please find the following response:

In the 2003 MVEIRB Reasons for decision (Section 2.1.4), the main conclusions of the Environmental Assessment and the regulators are summarized. The Board agreed with DBCI methods and that the Mine was unlikely to result in harmful effects to wildlife and humans. However, the Board suggested that additional monitoring might be required to be sure the predictions were correct. The Board made a suggestion (Suggestion #28)Ñ

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(S28) The follow up and monitoring programs that will be carried out by De Beers should be utilized by the GNWT where appropriate to monitor adverse impacts on wildlife and human health.

This was a difficult suggestion to interpret. Later in Section 2.15.3.1 of the EA Reasons for decision, the Board outlines concerns about cumulative effects on Environmental Health. The Board agreed with DBCI that it is unlikely the Mine would contribute substantially to the cumulative effects to wildlife/human health. There was acknowledgement there was uncertainty in calculating this since precise numbers from the various operations, particularly in relation to dust quality, were lacking.

Regardless, the Environmental Agreement (Section 7.2D, pg 22 of the agreement) notes that Environmental Health monitoring is required. Dust quality seems to be the main issue and how chemicals from dust would affect what humans eat or wildlife eat/uptake. Golder prepared a draft plan for this work in 2004 and how it would connect to the Environmental Management System on site (see attached). It centers around updating chemisty for lichens, dust, snow, etc and then doing risk assessment if anything of concern were detected. This monitoring was done by DBCI.

Section 4

De Beers appreciates YKDFNs comments and would welcome the opportunity to work together on a user friendly Structure.

Section 4.1.1 Hydrology Monitoring

De Beers will make every attempt to ensure that the water balance is clear, however difficulty lies in surveying the lake during ice cover and ice off, resulting in a margin of error. De Beers is working to improve the predictive capability of the model and as such in 2014 will be redoing the bathymetric work in both Snap Lake and the immediate downstream lakes.

Section 4.1.4 Vegetation Monitoring

Duplication of 2008 data

De Beers had deleted this section to avoid duplication across years but can include the short paragraph.

Dustfall Monitoring

De Beers will discuss with the Vegetation monitoring team to determine whether this synthesis is possible based on the data that was collected during the 2013 field season.

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Section 4.1.10 DO

The observed DO levels were not repeated in this report as they are located within the Aquatic Effects Monitoring Program.

Section 10

De Beers will strive to include more context that is not duplicated in other reports such as the WLAR and AEMP in section 10 of the 2013 report.

Should you have any questions, comments or require further clarification, please do not hesitate to contact me at (867) 766-7308 or e-mail me at the following address: Alexandra.Hood@debeerscanada.com.

Sincerely,

DE BEERS CANADA INC.

Alexandra Hood
Permitting and Environmental Superintendent
Snap Lake Mine

Attachments

Copied to:

M.Sanderson, P. Green, R. Walbourne	AANDC
Z. Liu, P. Di Pizzo	SLEMA
K. Eggers	DFO
S. Lacey-McMillan	EC
S. Wittaker	GNWT
T. Slack	YKDFN
M. Hoover	NSMA
M. Tollis	LKDFN
K. Garner	TG
E. Bonhomme	DBCI

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Functional Group:	DBCMI – SLDP	**Responsibility**:		**Start Date:**	
Last Revised:		**Revised By**:			
Action Plan Number: Environmental Health			**Environmental Aspect Reference #:**		

Objective:

1. Investigate effects of dust deposition on snow, lichen and vascular plants and determine if there is a health risk to wildlife using habitat in the vicinity of the project.

Target (amount and date):

1. Ensure dustfall will not create a health risk to wildlife using habitat in the vicinity of the project.

Overall Strategy:

1. Manage sources of particulate emissions and dust, monitor dustfall deposition, investigate the health risk to wildlife using habitat in the vicinity of the project if dustfall targets are exceeded, and adaptively manage project activities if a risk is identified.

Actions to Achieve Objective & Target: (List each action by number)

1. Manage dust and monitor dustfall deposition rates as outlined under the Air Quality Management Program.
2. Initiate the Environmental Health Management Program **only** if monitoring under the Air Quality Management Program identifies that dust deposition rates exceed target levels.
3. Prepare in advance Safe Work Plans to assess health and safety hazards for all aspects of program activities.

Performance Measure(s) and Monitoring and Measurement Procedures:

Conduct monitoring as outlined in the Environmental Health Monitoring Program.

1. Monitor the concentrations of metals and polycyclic aromatic hydrocarbons (PAHs) in snow, lichen, and vascular plants. The frequency of monitoring will depend on the results of initial sampling.

Progress Reports:

Results of Environmental Health monitoring will be documented in the annual monitoring report for the year in which monitoring activities are conducted.

Budget:

PREPARED BY:	APPROVED BY:	EFFECTIVE DATE:
FORM NO:		DATE OF REVISION:

Special Resource Needs:

Action Plan Summary

#	Activity	Assigned To	Status	Planned Completion Date
1	Examine results of the Environmental Health monitoring. If observed concentrations of metals or PAHs in lichen, snow and/or vascular plants are greater than those predicted in the Environmental Assessment Report, then conduct a wildlife health risk assessment.	Golder		By March 31 (in the year following initiation of the monitoring)
2	If a risk assessment is conducted and risks to wildlife health are identified, then develop and implement changes in dust control practices to mitigate the wildlife health risk.	De Beers		As required
3	If a risk assessment is conducted and no risks to wildlife health are identified, then review the Air Quality EMP to allow a larger dust deposition threshold trigger for the Environmental Health EMP.	De Beers/Golder		As required
4	If concentrations of metals and PAHs are not greater in lichen, snow, and vascular plants despite increases in dustfall amounts, then review the Air Quality EMP to allow a larger dust deposition threshold trigger for the Environmental Health EMP.	De Beers/Golder		As required
5				

Revision Log and Comments				
Authorization:				

Legend for Status Column: **Active** **A** **Complete** **C** **Delayed** **D**