



7th Floor - 4922 48th Street,
P.O. Box 2130, Yellowknife NT X1A 2P6

Tel: 867-669-0506 Fax: 867-873-6610
www.mvlwb.com

November 20, 2020

File: MV2005L2-0015

William Liu
De Beers Canada Inc.
Suite 300 – 1601 Airport Road NE
Airport Corporate Center
Calgary AB T2E 6Z8

Sent via Email

Dear William Liu:

**Re: Information Requests – Responses Required
Aquatic Effects Monitoring Program (AEMP) Workshop November 17-19, 2020
De Beers Canada Inc. – Gahcho Kue Mine, Kennady Lake, NT.**

The Mackenzie Valley Land and Water Board (Board) held an AEMP Workshop on November 17-19, 2020 to discuss AEMP Design Plan (Version 6) and 2015-2018 Aquatic Effects Re-evaluation Report for Water Licence MV2005L2-0015. Information Requests (#1 - #12) for De Beers Canada Inc. arose from the AEMP Workshop and are presented in Appendix 1.

Responses should be submitted to the Board by **December 18, 2020**. The Responses to Information Requests will be distributed for review upon receipt. The Board will use this information in evaluation of the AEMP Design Plan (Version 6) and Aquatic Effects Re-evaluation Report.

Please contact Angela Love at angela.love@mvlwb.com or Jacqueline Ho at jho@mvlwb.com with any questions or concerns regarding this letter.

Yours sincerely,

A handwritten signature in black ink, appearing to read "J Ho".

Jacqueline Ho
Regulatory Specialist

Copied to: Distribution List

Attached: Information Requests

APPENDIX 1: INFORMATION REQUESTS

From the November 17-19, 2020 Aquatic Effects Monitoring Program (AEMP) Workshop for
De Beers Canada Inc. – Gahcho Kue Mine
MV2005L2-0015

Table 1: Information Requests

#	Subject	Information Request
1	Non-Detect Data	De Beers to investigate whether non-detect water and sediment quality data collected in core and reference lakes before 2015 could be used in the before-after-control-impact (BACI) analysis, using an alternative approach to what was applied in the AEMP analysis. In the event that all or most of the results were non-detect for the affected parameters, this request is not applicable. De Beers to show the implications of the potential alternative approach to the AEMP dataset (i.e. calculation of normal range and BACI analyses).
2	BACI Contrasts	De Beers to re-evaluate the BACI analysis of baseline versus 2015 and 2016 AEMP data to determine whether significant BACI results represent potential Mine effects for each AEMP component. Explore the utility of running a contrast between Baseline, Construction and Operations periods. Based on these evaluations, provide a recommendation whether it is defensible to include the 2015 and 2016 data as “Before” data in the BACI analysis for core lakes.
3	Alternative Approach(es)	De Beers to propose alternative approach(es) if the responses to Information Request (IR) #1 and IR #2 do not support the inclusion of 2015 and 2016 monitoring data as baseline.
4	Water Quality Model Predictions – Action Levels	De Beers to consider including current water quality model predictions as criteria for Action Levels associated with the water quality component.
5	Water Quality Drinking Water Action Levels – Under Ice	De Beers to consider developing action levels for drinking water quality related to under-ice conditions. If De Beers is proposing to not develop action levels for under-ice conditions, provide rationale to support how that the proposed action levels meet the guiding principles of the Board’s <i>Water and Effluent Quality Management Policy</i> .
6	Conceptual Mitigation Plan– Fish Habitat and Community	De Beers to develop a conceptual mitigation plan for the return of Arctic Grayling to Kennady Lake during post-closure, including a timeline for implementation for the Fish Habitat and Community Component.

7	MVLWB ID-85	The response provided to comment ID MVLWB-85 refers to data from 2014 from Lake N11, however, results in Figure 9.2-14 as presented in the Aquatic Effects Re-evaluation Report indicate this is for Lake D2/D3 and that data were only available beginning 2015. Board staff also note the response provides a percentage total of ~102%, with <i>D. longiremus</i> accounting for 0% for Area 8 in 2014. De Beers to confirm if there are typographical errors in the response and the correct wording.
8	MVLWB ID-88	The response provided to comment ID MVLWB-88 confirmed that a frequency criteria is not included in the toxicological impairment. De Beers to confirm if there was an error in the text of Section 9.5.4.2 of the Aquatic Effects Re-evaluation Report as the first bullet includes a three-year frequency.
9	Fish Habitat – YOY Slimy Sculpin	The response to comment ID GNWT-ENR-87 indicated a follow up fall field survey could be considered if young-of-year (YOY) Slimy Sculpin are not detected in the summer program. De Beers to confirm whether a follow up fall survey would be immediately triggered if no YOY were observed or if that response would be delayed until the following year. De Beers to confirm if this trigger for additional sampling be included as part of a response plan or is it a separate contingency that triggers automatically.
10	Re-evaluation of Plankton and Benthos Action Levels	If it is determined that the 2015 and 2016 construction data will be included in the baseline data set, De Beers to re-evaluate the magnitude-of-effect based action levels for the plankton and benthos components. De Beers to propose revised action levels, if it is found that the variability in the endpoints changes.
11	Revisions to Action Levels	De Beers to propose changes to Action Levels for all components resulting from discussions from the AEMP Workshop.
12	Implications to Design Plan	De Beers to provide a summary of the changes to AEMP Design Plan from Version 5 (approved) to Version 6 (reviewed) and 6.1 (to be submitted) based on the proposed changes, including but not limited to, from the review of the Aquatic Effects Re-evaluation Report 2015-2018 and AEMP Design Plan Version 6, discussions from the AEMP Workshop, and Responses to IR #1 - #11.