



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 2, 2021

File: MV2005L2-0015

William Liu
Regulatory Specialist
De Beers Canada Inc.
Suite 300 – 1601 Airport Road NE
Airport Corporate Centre
CALGARY AB T2E 6Z8

Sent via E-mail

Dear William Liu:

**2020 AEMP Annual Report – Interim Approved – Resubmission required
De Beers Canada Inc. – Gahcho Kué Mine, NT**

The Mackenzie Valley Land and Water Board (MVLWB or the Board) met on October 28, 2021 to review De Beers' 2020 AEMP Annual Report, which was submitted under Part I, Condition 5 of Water Licence MV2005L2-0015.

The Board has granted Interim Approval and requires that De Beers resubmit the 2020 AEMP Annual Report (Report), by **December 10, 2021**, in accordance with Board directives resulting from this review, as summarized in Table 1 (attached). This Report will be considered to be approved upon receipt of this information and written conformity of confirmation from Board staff. De Beers should include a concordance table in the next submission to indicate where Board directives have been addressed.

If you have any questions or concerns, please contact [Jacqueline Ho](#) at (867) 766-7455 or [Angela Love](#) at (867) 766-7456.

Yours sincerely,

A handwritten signature in blue ink, appearing to read "Mavis Cli-Michaud".

Mavis Cli-Michaud
Chair, Mackenzie Valley Land and Water Board

BCC'd to: Gahcho Kué Distribution List

Attached: Table 1: De Beers – Gahcho Kué – Board Directives for the 2020 AEMP Annual Report

Table 1: De Beers – Gahcho Kué – Board Directives for the 2020 AEMP Annual Report

| | Board Directives for 2020 AEMP Annual Report | Comment ID |
|----|---|-------------------|
| 1. | De Beers to include a conformity table listing the requirements of Schedule 6, condition 5, in an updated version of the 2020 AEMP Annual Report. | MVLWB-1 |
| 2. | De Beers to include Maps 2.5-1 and 2.5-2 to the Plain Language Summary, in an updated version of the 2020 AEMP Annual Report. | MVLWB-2 |
| 3. | De Beers to correct the text on p. 3-10 regarding mean annual wind speed from 4.57 m/s to 4.62 m/s, as reported in Table 3.4-4, in an updated version of the 2020 AEMP Annual Report. | MVLWB-5 |
| 4. | De Beers to correct the sub-heading numbering for Vegetation and Soils Monitoring Program - Dustfall Transect from Section 3.4.2.5.1 to Section 3.4.2.5.2, in an updated version of the 2020 AEMP Annual Report. | MVLWB-6 |
| 5. | De Beers to correct the text on p. 5-16 regarding significant BACI results for water quality from 14 parameters to 15 parameters, as reported in Tables 5.4-3 and 5.4-4, in an updated version of the 2020 AEMP Annual Report. | MVLWB-10 |
| 6. | De Beers to correct the text on p. 7-56 regarding zooplankton comparisons from "Comparisons of the 2019 zooplankton community..." to "Comparisons of the 2020 zooplankton community...", in an updated version of the 2020 AEMP Annual Report. | MVLWB-11 |
| 7. | De Beers to correct the error in footnote (b) of Table 5.4-10 to read "The BA x CI interaction term must be significant in all simple effects comparisons between 2020 and baseline years for a "Yes" Classification.", in an updated version of the 2020 AEMP Annual Report. | GNWT-ENR-8 |
| 8. | De Beers to correct the error in footnote (b) of Table 7.4-1 to read "When calculating lake-wide means/medians for core lakes in 2020, the arithmetic mean was used when the 2020 data were determined to be normally distributed based on significance of the Shapiro-Wilk test (P<0.05). The geometric mean was used to estimate the lake-wide mean in 2020 when normality could be achieved by applying a log-transformation to the data. The median was used to provide an estimate of central tendency in cases where normality could not be achieved by applying a transformation to the 2020 data.", in an updated version of the 2020 AEMP Annual Report. | GNWT-ENR-10 |
| 9. | De Beers to correct the error in footnote (b) of Table 7.4-5 to read "When calculating lake-wide means/medians for core lakes in 2020, the arithmetic mean was used when the 2020 data were determined to be normally distributed based on significance of the Shapiro-Wilk test (P<0.05). The geometric mean was used to estimate the lake-wide mean in 2020 when normality could be achieved by applying a log-transformation to the data. The median was used to provide an estimate of central tendency in cases where normality could not be achieved by applying a transformation to the 2020 data.", in an updated version of the 2020 AEMP Annual Report. | GNWT-ENR-12 |

| | Board Directives for 2020 AEMP Annual Report | Comment ID |
|-----|--|-------------------|
| 10. | De Beers to update the text in Section 8.3.1.1.1 (p. 8-6) to read “The available DO profile data for Area 8 suggested that under-ice DO concentrations may be lower, overall, during recent AEMP monitoring compared to the baseline years. This trend may have been influenced to some extent by regional weather and precipitation patterns, which appear to be affecting DO conditions both in Area 8 and the reference lakes (e.g., similar under ice DO concentration trends between years were observed in Area 8 and the reference lakes in 2016 and 2017 when notably lower DO concentrations were observed compared to 2020 due to very warm and dry conditions in these years compared to the regional average; Appendix 8C). However, weather and precipitation patterns do not appear to fully explain the observed trend in DO in Area 8. Water management activities occurring on site are a likely factor affecting DO regime in Area 8 during AEMP monitoring years (Appendix 8C).”, in an updated version of the 2020 AEMP Annual Report. | GNWT-ENR-13 |
| 11. | De Beers to update the text in Section 9.3.2.2 (p. 9-14) to read “Although the 2020 study design captured both adult and YOY Slimy Sculpin, the capture probability may have differed between size classes. The year-over-year decreases in YOY captures are attributed to a decrease in capture efficiency due to influences of higher water levels in 2020 and an overall decrease in sampling effort in 2020 versus 2019. There was a decrease in the spatial extent of sampling in each stream and a related decrease in electrofishing time in each stream due to a shift from single-pass sampling in favour of a multi-pass survey design.”, in an updated version of the 2020 AEMP Annual Report. | GNWT-ENR-16 |
| 12. | De Beers to update the text in Section 15 (p. 15-4) to say “...below 75% of AEMP benchmarks...” instead of “...within 75% of AEMP benchmarks...”, in an updated version of the 2020 AEMP Annual Report. | GNWT-ENR-17 |
| 13. | De Beers to update the text in Appendix 6B, Section 6B.2.2.1 and/or 6B.2.2.3 (p. 6B-2) to include the additional information regarding the detection limit comparison for Total Kjeldahl Nitrogen (TKN) (i.e., that all results obtained for TKN in 2020 were above the sample-specific detection limit (DL) and ranged from 1.7 to 7.2 times the DL.”, in an updated version of the 2020 AEMP Annual Report . | GNWT-ENR-18 |
| 14. | De Beers to update Table 8A-5 to correct the rounding in the summary statistics for the diversity and evenness endpoints, in an updated version of the 2020 AEMP Annual Report. | GNWT-ENR-20 |