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ECCC File: 6100 000 115/002  
NWB File: 2AM-BRP1831



July 16, 2025

via email at: [licensing@nwb-oen.ca](mailto:licensing@nwb-oen.ca)

Richard Dwyer  
Manager of Licensing  
Nunavut Water Board  
P.O. Box 119  
Gjoa Haven, NU X0B 1J0

Dear Richard Dwyer:

**RE: 2AM-BRP1831– B2Gold Back River Corp – Back River Project – Annual Report Reviewed**

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) by B2Gold Back River Corp. regarding the above-mentioned 2024 Annual Report.

ECCC provides expert information and knowledge to project assessments on subjects within the department's mandate, including climate change, air quality, water quality, biodiversity, environmental emergencies preparedness and responses. This work includes reviewing proponent characterization of environmental effects and proposed mitigation measures. We provide advice to decision-makers regarding a proponent's characterization of environmental effects, the efficacy of their proposed mitigation activities, and may suggest additional mitigation measures. Any comments received from ECCC in this context does not relieve the proponent of its obligations to respect all applicable federal legislation.

The following comments are provided:

**1. Topic: Baseline Water Quality Data**

Reference

- Back River Project 2024 Annual Report for Water Licence 2AM-BRP1831, Appendix E: 2024 Baseline Surface Water Quality Report
  - Figure 2-1 – Surface Water Quality Sampling Stations, 2024
  - Section 3.2 – Goose Lake and Reference B Lake Water Quality
  - Section 3.3 – Stream Water Quality



### Comment

The data and analysis provided in Appendix E are intended to contribute to the baseline surface water quality dataset for the Project. However, the results of the 2024 water quality monitoring indicate exceedances of guidelines for numerous parameters and many parameters are identified at higher concentrations than have been measured during previous monitoring years. The report also identifies that some of the water quality parameters demonstrate increasing trends, which is an unexpected result. Specifically, lake water quality monitoring identifies Goose Lake West Bay (BRP-29 and BRP-31) as having the highest concentrations of parameters compared to the other Goose Lake and Reference Area B monitoring stations. Similarly, stream monitoring at Goose Lake inflow from Echo Lake (BRP-19) and inflow from Llama watershed (BRP-18) in 2024 showed higher concentrations of parameters compared to previous years and other inflows, and guideline exceedances for parameters which had not previously exceeded guidelines (arsenic and copper).

While the report presents these exceedances of guidelines and increasing trends, there is no interpretation provided, and no statistical analysis has been completed to determine if the observed increase is significant. ECCC notes that Goose Lake West Bay stations (BRP-29 and BRP-30) are closer to project-related works as compared to other lake monitoring stations which did not demonstrate the same exceedances and trends. In addition, Goose Lake Inflow from Echo Lake and inflow from the Llama watershed (BRP-18 and BRP-19) flow through the project area. It is unclear whether the results from 2024 may indicate potential impact from project-related activities and whether this data should be included in the baseline water quality dataset.

### ECCC Recommendations

ECCC recommends the Proponent provide a discussion of the results of the 2024 baseline water quality monitoring. This should include:

- An analysis of whether the increasing concentrations represent a statistically significant increasing trend,
- A discussion of potential causes of increasing trends at stations with closer proximity to project activities,
- A discussion on whether the 2024 water quality data is suitable to be included in the baseline water quality dataset.

## **2. Topic: Time Series Plots**

### Reference

- Back River Project 2024 Annual Report for Water Licence 2AM-BRP1831, Appendix E: 2024 Water Quality – Time Series Plots

### Comment

Time series plots for baseline water quality monitoring data are presented in Appendix E and depict baseline concentrations over time. As noted in the Baseline Surface Water Quality Report, there are instances where guidelines are exceeded in the baseline water quality dataset. However, the figures provided in Appendix E do not depict the guidelines. Indicating the relevant guidelines in the figures would increase clarity and would aid interpretation of data. This may be particularly important given the 2024 findings of increasing trends and identification of new parameters exceeding guidelines.

### ECCC Recommendation

ECCC recommends the Proponent include the relevant parameter guideline in the time series water quality plots to aid in interpretation of results.

## **3. Topic: Barrel tank farms installation design**

### Reference

- Back River Project 2024 Annual Report for Water Licence 2AM-BRP1831
  - Section 1 – pg11/1381
  - Section 2, Subsection 12 – pg 19/1381

### Comment

In Section 2, Subsection 12, the Proponent states that a “4 x 100 barrel tank farm” has been installed to provide additional storage and redundancy. However, no details are provided regarding the installation design or associated mitigation measures to ensure effective containment and spill control in the event of a release. Additionally, in Section 1, the Proponent notes that “the fuel tank containment area at the MLA was enlarged to facilitate additional storage, and initial construction for similar storage at Goose commenced” in 2024. It is unclear whether this activity is separate from or inclusive of the 4 x 100 barrel tank farm referenced above.

ECCC is seeking clarification to ensure the barrel tank farm has appropriate secondary containment in place and is located at least 30 metres from any waterbody. Without proper containment, a spill could adversely affect fish, fish habitat, migratory birds, and water quality.

### ECCC Recommendation

ECCC recommends the Proponent provide:

- Clarification on whether the 4 x 100 barrel tank farm is included in the previously referenced containment upgrades;

- Details on the spill containment and mitigation measures associated with the barrel tank farms;
- The proximity of the tank farms to nearby waterbodies to confirm compliance with standard siting best practices.

If you need more information, please contact Jessica Kassar at (867) 222-2036 or [Jessica.Kassar@ec.gc.ca](mailto:Jessica.Kassar@ec.gc.ca).

Sincerely,

Jessica Kassar  
Environmental Assessment Officer

cc: Eva Walker, Head, Environmental Assessment North (NT and NU)