

Environmental Protection Operations Directorate
Prairie & Northern Region
5019 52nd Street, 4th Floor
P.O. Box 2310
Yellowknife, NT X1A 2P7

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



July 13, 2023

via email at: 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 (formerly Sabina Gold & Silver) – Back River Project – 2022 Annual Report

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) regarding the above-mentioned 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 preparedness and emergencies. This work includes reviewing proponent characterization of environmental effects and mitigation measures, and providing advice to decision makers on activities needed to mitigate these environmental effects. 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. Aquatic Baseline Report – Graphs and Summary Statistics

Reference(s)

- Sabina Gold & Silver Back River Project, 2022 Annual Report for Water Licence 2AM-BRP1831, Appendix E: Back River Project 2022 Aquatic Baseline Report, Section 4.0 - Results

Comment

The Aquatic Baseline Report identifies several observed guideline exceedances during the 2022 baseline monitoring. Exceedances included pH (Goose Lake, Propeller Lake, Reference B Lake), total aluminum (Goose Lake, Propeller Lake), total copper (Goose Lake), total chromium (Reference B Lake). The report states that exceedances for pH, aluminum, and copper were also observed in



previous years of baseline monitoring. However, previous data has not been summarized or presented to support these statements. A graph depicting baseline data collected to date, and/or a table summarizing the existing baseline dataset would aid in support and understanding how the 2022 data fits into the existing dataset.

ECCC Recommendation(s)

ECCC recommends the Proponent provide graphs and summary statistics of the baseline data collected to date to support the conclusions that 2022 data is consistent with previously collected baseline data.

2. Aquatic Baseline Report – Future Monitoring

Reference(s)

- Sabina Gold & Silver Back River Project, 2022 Annual Report for Water Licence 2AM-BRP1831, Appendix E: Back River Project 2022 Aquatic Baseline Report, Section 5.0 – Summary and Conclusions

Comment

The Aquatic Baseline Report notes that, “baseline conditions for the AEMP are still being characterized and variability is expected within the baseline dataset as the data accumulate over time.” No further discussion is provided on future baseline data collection or existing data gaps that need to be filled during future monitoring programs.

ECCC Recommendation(s)

ECCC recommends the Proponent provide a description of planned future aquatic baseline monitoring, including identification of existing data gaps.

3. Aquatic Baseline Report – Water Quality Guidelines

Reference(s)

- Sabina Gold & Silver Back River Project, 2022 Annual Report for Water Licence 2AM-BRP1831, Appendix E: Back River Project 2022 Aquatic Baseline Report
 - Appendix C: 2022 Water Quality – Analytical Chemistry Results
- [Federal Environmental Quality Guidelines \(FEQGs\) - Canada.ca](https://www23.international.gc.ca/quality-guidelines/guidelines-eng.aspx)

Comment

The guidelines used for assessment of water quality data include the Canadian Council of Ministers of the Environment (CCME) Water Quality Guidelines for Protection of Aquatic Life. ECCC notes that some of these guidelines are outdated and newer guidelines based on more recent science have been developed in the form of the Federal Environmental Quality Guidelines (FEQG). The FEQGs have been developed to support environmental monitoring on substances for which CCME guidelines do not yet exist or are not reasonably expected to be updated in the future.

ECCC Recommendation(s)

ECCC recommends the Proponent review the available FEQGs for inclusion in the list of guidelines used for analysis of water quality data at the Back River project.

4. No Identification of Materials That Were Open Burned

Reference(s)

- Sabina Gold & Silver Back River Project, 2022 Annual Report for Water Licence 2AM-BRP1831, Appendix B: Waste Disposal
- [Guideline for the Burning and Incineration of Solid Waste \(gov.nu.ca\)](#)
- [ECCC Solid Waste Management for Northern and Remote Communities Planning and Technical Guidance Document \(publications.gc.ca\)](#)

Comment

Appendix B (Waste Disposal) quantifies the volume of materials that were open burned at the Back River Project but does not identify what materials were burned. The Government of Nunavut's guidelines for open burning restrict this method to paper products, paperboard packing including boxboard and cardboard, untreated wood including lumber and plywood, and natural fiber textiles. Both the Government of Nunavut and ECCC discourage open burning, and it is not evident why open burning was performed when an incinerator was available.

ECCC Recommendation(s)

ECCC requests that items subjected to open burning be specified, and recommends that these items be considered for incineration, contingent on incinerator availability, as a preferred alternative to open burning.

If you need more information, please contact Victoria Shore at Victoria.Shore@ec.gc.ca.

Sincerely,

[original signed by]

Victoria Shore
Senior Environmental Assessment Officer

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