

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



October 20, 2022

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 – Sabina Gold and Silver Corp. – Back River Project – Responses to 2021 Annual Report Comments

Environment and Climate Change Canada (ECCC) has reviewed the information submitted to the Nunavut Water Board (NWB) regarding the above-mentioned 2021 Annual Report and the subsequent responses to ECCC's comments submitted by Sabina Gold and Silver Corp.

ECCC is providing technical, science-based information and knowledge based on our mandate pursuant to the *Canadian Environmental Protection Act* and the pollution prevention provisions of the *Fisheries Act*. These comments are intended to inform the assessment of this project's potential effects in the receiving environment and on valued ecosystem components. 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. Air Quality

Reference(s)

- Sabina Gold & Silver Corp. Back River Project, 2021 Annual Report for Water Licence 2AM-BRP1831, Section 2.9: A Summary of all General Waste Disposal Activities Including Monthly and Annual Quantities in Cubic Meters of Waste
- Sabina Gold & Silver Corp. Back River Project, 2021 Annual Report for Water Licence 2AM-BRP1831, Section 2.10: Reporting of Incinerator Test Results Including the Materials Burned and the Efficiency of the Incinerator in Relation to Effects on Water and the Potential Deposit of Waste into Water



- Sabina Gold & Silver Corp. Back River Project, 2021 Annual Report for Water Licence 2AM-BRP1831, Appendix B: Waste Disposal
- Sabina Gold & Silver Corp. Back River Project 2021 Annual Report, Section 4.5.1 Air Quality (PC TCs 1 through 5), Project Certificate Condition No. 5
- Sabina Gold & Silver Corp. Back River Project, Responses to 2021 Annual Report Comments, Section 2.3 Response to Environment and Climate Change Canada, ECCC-#01: Air Quality

Comment

The Proponent's response states that, "Sabina has not conducted any stack testing to date but will review completing testing in 2023. Once complete, test results will be provided in the annual reports to the NWB and NIRB."

ECCC would like to note that in the Back River Project Annual Report, Appendix B – Waste Disposal contains daily waste incineration amounts, and while no annual total is provided, it appears the annual total may be greater than 26 tonnes per year. Project Certificate Condition No. 5 of the report also states that "complete stack emissions testing for all incinerators will occur upon commissioning when testing thresholds are met to ensure achievement of the Canada-wide Standards for Dioxins and Furans and the Canada-Wide Standards for Mercury (CCME 2000, 2001)."

ECCC Recommendation(s)

ECCC requests the Proponent perform incinerator stack testing in 2023 to achieve compliance of Project Certificate Condition No. 5. Should the test results indicate a failure to meet the Canada-Wide Standards, the results would then need to be released in an expedited manner, and remedies implemented promptly to sufficiently improve incinerator performance.

2. Geochemical Monitoring Results

Reference(s)

- Sabina Gold & Silver Corp. Back River Project, 2021 Annual Report for Water Licence 2AM-BRP1831, Section 2.6: Geochemical Monitoring Results
- Sabina Gold & Silver Corp. Back River Project, Responses to 2021 Annual Report Comments, Section 2.3 Response to Environment and Climate Change Canada, ECCC-#02: Geochemical Monitoring Results

Comment

ECCC acknowledges the response from the Proponent, stating that the "classification of waste rock and other geological material at the Project was based on the results of the geochemical characterization completed to support the Final Environmental Impact Statement (FEIS) and the Type A Water Licence (WL) Application. The Project-specific metal leaching acid rock drainage (ML/ARD) categories were presented in the Geochemical Characterization Report for the Back River Project, Nunavut (FEIS Appendix V2-7D; WL

Appendix E-3). The site classification criteria were based on the results of static and kinetic waste rock characterization, as confirmed in the above reference appendices, are considered conservative. The rock management criteria developed for the FEIS were carried forward including in the Borrow Pits and Quarry Management Plan.”

ECCC remains of the view that the Neutralization Potential Ratio (NPR) ≤ 2 , based on conventional ABA classification, indicates that there is not enough neutralization potential available, despite low sulfur content. Therefore, if the NPR falls between 1 and 2, it should be classified as uncertain. If the NPR ranges between 1 and 2 and are therefore classified as uncertain, it is recommended that they not be used for construction.

ECCC Recommendation(s)

ECCC recommends that samples with an NPR greater than 1 and less than 2 should be classified as uncertain and therefore not used for construction.

ECCC acknowledges all other responses provided by the Proponent and considers the corresponding comments resolved.

If you need more information, please contact Stephinie Mallon at Stephinie.Mallon@ec.gc.ca.

Sincerely,

[original signed by]

Stephinie Mallon
Environmental Assessment Officer

cc: Jody Small, Acting Head, Environmental Assessment North (NT and NU)