

July 4, 2024

Leah Klaassen
Impact Assessment Officer
Nunavut Impact Review Board
P.O Box 1360
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Sent VIA Email: info@nirb.ca

Re: Comment Request for B2Gold Corporation's Back River Project 2023 Annual Report

Dear Leah Klaassen,

The Government of Nunavut (GN) would like to thank the Nunavut Impact Review Board (NIRB) for the opportunity to provide comments on B2Gold Nunavut's 2023 Annual Report for the Back River Project, NIRB File # 12MN036.

The GN has reviewed the proposed project and related documents and has six (6) comments to share with the Board, which are appended to this letter.

The GN appreciates participating in the ongoing review and monitoring of this project through the NIRB process. Should there be any concerns or need for follow-up, please do not hesitate to contact me at jbuller@gov.nu.ca.

Qujannamiik,



Justin Buller
Interim Avatiliriniq Coordinator
Government of Nunavut

GN AR # 01	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Air Quality Mitigation and Adaptive Management
Terms and Conditions	2 and 3 (Project Certificate No. 007).
References	<ul style="list-style-type: none"> • B2Gold Nunavut. Back River Project 2023 Annual Report (April 2024). • Government of Nunavut. Government of Nunavut Comments 2020 Annual Report for Sabina Gold and Silver Inc. Back River Project (May 2021). • Nunavut Impact Review Board. Project Certificate No. 007. (December 2017). • Sabina Gold & Silver Corp. Back River Project Air Quality Monitoring and Management Plan (July 2019).
IDENTIFICATION OF ISSUE	
<p>The Government of Nunavut (GN) notes the absence of clear triggers for the adaptive management of fugitive dust within the Project's Air Quality Monitoring and Management Plan (AQMMP) and Fugitive Dust Reduction Plan (FDRP) (Sabina Gold & Silver Corp., 2019). Clear triggers concerning excessive fugitive dust will enable site staff to implement dust suppressant measures in real-time.</p>	
IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE	
<p>Term and Condition 3 of Project Certificate No. 007 states:</p> <p><i>The Proponent shall have in place dust management and monitoring plans which address the following items:</i></p>	

- a. Reflect commitments made in the Final Environmental Impact Statement, the Final Environmental Impact Statement Addendum, and through the Nunavut Impact Review Board's impact assessment process;*
- b. Verify commitments to use dust suppressants on-site, including a description of the type of suppressant to be used, as well as the frequency and timing of applications to be made throughout the periods of applicable use;*
- c. Specify commitments to the use of appropriate dust suppression measures when conducting activities in the landfill such as topping or capping;*
- d. Outline the specific adaptive management measures to be considered should monitoring indicate that dust deposition is higher than predicted, specifically where project-related traffic is greater than initially expected or where meteorological events have instigated additional deposition; and*
- e. Demonstrate consideration for the implementation of alternative methods (e.g., windscreens) to limit the deposition of dust generated from the Project. (Nunavut Impact Review Board, 2017)*

Pursuant to this term and condition, the Proponent wrote the following in the Back River Project 2023 Annual Report (Annual Report):

The AQMMP aligns with commitments made during environmental impact assessment process and includes a Fugitive Dust Reduction Plan which provides information on dust suppressant use and dust suppression measures. Section 8 of the AQMMP also outlines B2Gold Nunavut's mitigation and adaptive management approach, including possible responses to increased dust generation. These may include alterations to dust suppressant application rate, frequency, methodology or type, and/or modifications of road maintenance protocols, and/or reductions in road usage through personnel awareness or use of alternate vehicles. Adaptive management response will also be triggered in real-time, based on site observations. (Page 4-15; B2Gold Nunavut, 2024)

Emphasis added.

The AQMMP states that the application of dust suppressants is a potential adaptive management response to real-time site-based observations of fugitive dust generated by the Project (Sabina Gold & Silver Corp., 2019). However, as discussed in past GN comments (e.g., GN-AR-01; GN, 2021) the current AQMMP does not provide clear information on thresholds or criteria concerning fugitive dust (e.g., the amount of time required for a dust cloud to dissipate) that would initiate adaptive management. The GN acknowledges the Proponent's intention to update the FDRP and the AQMMP (B2Gold, 2024). The GN recommends that updated plans provide clear triggers (e.g., time required

for a dust cloud to dissipate) for the adaptive management of fugitive dust entailing simple field-based measurements.

RECOMMENDATION(S)

The GN recommends the Proponent undertake the following:

- That the Proponent update the AQMMP and FDRP to include clear triggers that utilize simple field-based approaches to initiate specific fugitive dust suppression measures (e.g., the application of dust suppressants).

GN AR # 02	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Invasive Species
Terms and Conditions	33 (Project Certificate No. 007).
References	<ul style="list-style-type: none"> • B2Gold Nunavut. Back River Project 2023 Annual Report (April 2024a). • B2Gold Nunavut. Back River Project 2023 Annual Report, Appendix I – Pre-Shipment Equipment Cleaning (March 2024b). • Nunavut Impact Review Board. Project Certificate No. 007 (December 2017). • Sabina Gold & Silver Corp. Pre-shipment Equipment Cleaning Standard Operation Procedures (February 2018).
IDENTIFICATION OF ISSUE	
<p>The GN acknowledges the Proponent’s efforts to minimize the introduction of potential invasive plant species. However, the GN seeks additional information from the Proponent regarding record keeping and roles associated with the shipping and receiving of equipment and bulk supplies.</p>	
IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE	
<p>Term and Condition 33 of Project Certificate No. 007 states:</p> <p><i>The Proponent shall ensure that equipment and supplies brought to the project sites are clean and free of soils that could contain plant seeds not naturally occurring in the area. Vehicle tires and treads in particular must be inspected prior to initial use in project areas. The Proponent shall also incorporate protocols for monitoring for the potential introduction of invasive vegetation species (e.g. surveys of plant populations in previously disturbed areas) into relevant</i></p>	

monitoring and management plans for the terrestrial environment. Any introductions of non-indigenous plant species must be promptly reported to the Government of Nunavut Department of Environment (Nunavut Impact Review Board, 2017).

As detailed in the Annual Report, the Project utilizes the Back River Pre-shipment Equipment Cleaning Requirements Standard Operating Procedure (SOP) to ensure all equipment and bulk supplies arriving at the Back River Project site are in a condition free of any soil or plant debris to minimize the risk of invasive plant (Page 139; B2Gold Nunavut, 2024a). The SOP states the following:

Expediter - *Expediter must inspect each item of equipment and bulk supplies prior to shipment to the property site. Inspections to focus on wheels, tracks, skids, buckets, scoops, undercarriage, and packing material. If any soil is identified, the below cleaning procedures should be followed. Confirmation that equipment is clean must be documented (e.g. as a column to be initialed on the shipping/flight manifest or completion of Form A Expediter Verification).*

Designated site personnel – *If absence [sic] of soil or plant matter is discovered during offload, on-site cleaning should follow the cleaning protocols below. Water should be minimized or eliminated if possible, and the inspection should ensure any removed material is contained, collected, and disposed of as directed by Environment personnel. (Page 1; Sabina Gold & Silver Corp., 2018)*

In 2023, the Proponent provided Appendix I, Pre-Shipment Equipment Cleaning pursuant to this SOP. Appendix I details that that all equipment and bulk supplies shipped to the Project between August and September 2023 were free of soil and plant debris (B2Gold Nunavut, 2024b). However, it is unclear to the GN whether the list of equipment and supplies is exhaustive and represents all relevant shipments received by the Proponent in 2023.

Additionally, the SOP text suggests that designated site personnel are required to verify and address (through cleaning protocols) incoming equipment and bulk supplies (Sabina Gold & Silver Corp., 2018). However, the GN notes that the SOP does not clearly specify whether inspections are mandatory for each shipment or incidental in nature. While Appendix I provides records detailing the date, expediter's identity, list and status of equipment and bulk supplies, similar records for the designated site personnel are not included in annual report materials (B2Gold Nunavut, 2024b). Including records from designated site personnel would enhance transparency in annual reports regarding the Proponent's steps to minimize the introduction of invasive plant species.

RECOMMENDATION(S)

The GN recommends the Proponent undertakes the following:

- In this and future annual reports, the Proponent should explicitly confirm whether the list of equipment and supplies presented in the Pre-Shipment Equipment Cleaning Appendix is the total list of equipment and supplies brought to the Project during the reporting period.
- The Proponent should clarify if designated site personnel are required to inspect and verify the status (i.e., clean and free of soil and/or plant debris) of all incoming equipment and bulk supplies or if assessments are incidental in nature.
- If applicable, the Proponent, in future annual reports should provide records indicating the outcome of designated site personnel inspections.

GN AR # 03	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Spills/Pollution Prevention
Terms and Conditions	N/A
References	<ul style="list-style-type: none"> • Agnico Eagle Mines Limited: Meadowbank Complex. Meadowbank Complex 2023 Annual Report 61-000-100-REP-006. (March 2024) • B2Gold Nunavut. Back River Project 2023 Annual Report (April 2024) • Government of Nunavut, Department of Environment, Environmental Protection Division. Environmental Guideline: General Management of Special and Hazardous Waste. (March 2023) https://www.gov.nu.ca/sites/default/files/publications/2024-05/Hazardous%20Waste%202023-03.pdf • <i>Spill Contingency Planning and Reporting Regulations</i>
IDENTIFICATION OF ISSUE	
<p>The Annual Report includes Table 4.4-1 which summarizes the 19 reportable spills (as defined by the <i>Spill Contingency Planning and Reporting Regulations</i>) that occurred in 2023 (Page 4-4 and 4-5; B2Gold Nunavut, 2024). However, the GN notes that the Annual Report does not include a summary of minor (i.e., non-reportable spills) that occurred in 2023.</p>	
IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE	
<p>The Annual Report includes Table 4.4-1 which summarizes the 19 reportable spills (as defined by the <i>Spill Contingency Planning and Reporting Regulations</i>) that occurred in 2023 (Page 4-4 and 4-5; B2Gold Nunavut, 2024). However, the GN notes that the Annual</p>	

Report does not include a summary of minor (i.e., non-reportable spills) that occurred in 2023.

The GN acknowledges that reporting minor spills is not a statutory obligation. However, the GN notes that other projects within the territory often include a summary of minor spills in annual reporting materials (e.g., Agnico Eagle Mines Limited, 2024). Small spills, if not effectively cleaned, can pose risks to wildlife. For example, ethylene glycol is toxic to wildlife in small quantities (GN, 2023). The GN believes that providing information on minor spills through annual reports offers valuable information about the types of contaminants entering the environment, as well as Proponent's efforts to prevent, contain, and clean up such incidents.

RECOMMENDATION(S)

The GN recommends the Proponent undertake the following:

- In this and future annual reports, the Proponent should endeavour to report all spills.

GN AR # 04	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Aircraft - Wildlife Protection
Terms and Conditions	60 & 61 (Project Certificate No. 007)
References	<ul style="list-style-type: none"> • Agnico Eagle Mines Limited. Appendix 39, Parts 1-5, Agnico Eagle Mines Limited - Meadowbank Complex 2023 Wildlife Monitoring Summary Report Annual Report (March 2024). • B2Gold Nunavut. Back River Mine 2023 Wildlife Mitigation and Monitoring Program Report, Appendix K (March 2024). • Sabina Gold & Silver Corp. Back River Project Wildlife Mitigation and Monitoring Program Plan (Version 12) (April 2023).
IDENTIFICATION OF ISSUE	
<p>The GN acknowledges that the Proponent engages in various mitigation actions to minimize the disturbance of caribou and other wildlife generated by helicopter activity. As detailed in the Project's Wildlife Mitigation and Monitoring Plan (WMMP) the implementation mitigation actions, specifically vertical and horizontal flight distances, relies heavily on wildlife observations made by helicopter pilots. As such, the GN is concerned with the lack of caribou observations reported by helicopter pilots in 2023. Additionally, the GN notes that the presentation of helicopter flight data negatively impacts the ability to assess compliance with the Project's WMMP.</p>	
IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE	
<p><u>Pilot Observations</u></p> <p>In the 2023 Wildlife Mitigation and Monitoring Program Report (WMMP Report), the Proponent states that, "helicopters make trips between the Goose and [the Marine Laydown Area] areas, as well as taking supplies (e.g., drilling gear) and crews (field</p>	

survey biologists) to other areas near the mine,” (Page 20; B2Gold Nunavut, 2024). To minimize disturbance to caribou, the Project’s WMMP states the following measures:

- *...Pilots will report all incidental sightings of caribou to other pilots and the Environment Department.*
- *During calving, post-calving, and early summer (June 5 – July 31), large groups of caribou (more than 250) will be avoided by 610 m vertically or 4 km horizontally...*
- *During calving, post-calving, and early summer (June 5 to July 31), helicopter pilots will avoid groups of 25 or more caribou either vertically (610 m) or horizontally (2 km).*
- *During all seasons, pilots will avoid groups of less than 25 caribou vertically (610 m) or horizontally (1 km).* (Pages 7-21 and 7-22; Sabina Gold & Silver Corp., 2023)

Section 2.4.3 of the WMMP Report indicates that the total distance flown by helicopters at Back River in 2023 was 53,658.34 km and that 27% of this distance was flown during drill moves within 4 km of the mine (Page 22; B2Gold Nunavut, 2024). However, this section states that, “[h]elicopter pilots did not report any wildlife sightings in 2023, therefore no management actions were triggered, and helicopter use was in compliance with the WMMP Plan and NIRB Conditions,” (Page 22; B2Gold Nunavut, 2024). The GN is concerned with the lack of pilot observations as other evidence presented in the WMMP Report indicate caribou occurred near the Project throughout the year. For example, Table 3.9-2 illustrates that 93 incidental observation events by personnel at the Back River Mine occurred in 2023, totaling approximately 27,510 caribou (Pages 56 and 57; B2Gold Nunavut, 2024).

Helicopter Figures and Data

The Proponent presents Figure 2.4.1 Helicopter Flights, June to October 2023 in the WMMP report (Page 23; B2Gold Nunavut, 2024). However, the GN notes that the figure is difficult to interpret for the following reasons. First, Figure 2.4.1 illustrates helicopter flights from June to October in 2023. However, it is unclear if these months are the only months in which the Project utilizes helicopters. Second, Figure 2.4.1 utilizes points which indicates the position of a helicopter every 3 minutes; The GN notes that this symbology does not clearly depict individual flight legs or flights that occurred above or below 610 meters above ground level.

Additionally, the WMMP Report does not provide tabular data of flight logs. The GN notes that other projects in Nunavut, such as the Meadowbank and Whale Tail Project provide helicopter flight tables in annual report materials, these tables detail information such as: date, flight purpose, mean height above ground (m), justification for low flight (Agnico Eagle Mines Limited, 2024).

RECOMMENDATION(S)

The GN recommends the Proponent undertake the following:

- The Proponent should provide an explanation as to why pilots failed to report any wildlife sightings in 2023 despite evidence (e.g., incidental sightings by other site personnel, wildlife camera detections) to suggest that wildlife was present around the Project throughout 2023.
- In future annual reports, the Proponent should clarify in which months helicopters are utilized for Project activities.
- In future annual reports, the Proponent helicopter figures should employ symbology that clearly depicts information such as individual flight legs or flights that occurred above or below 610 meters above ground level.
- In future annual reports, the Proponent should provide tabular data of flight logs. These tables should include information such as: date, flight purpose, flight distance, flight's mean height above ground level (m), justification for flight occurring below 610 m, wildlife observations made by the pilot and any course corrections made as a result.

GN AR # 05	
Department	Environment
Organization	Government of Nunavut
Subject/Topic	Blasting Activities – Wildlife Protection
Terms and Conditions	41, 43, 44, (Project Certificate No. 007).
References	<ul style="list-style-type: none"> • B2Gold Nunavut. Back River Mine 2023 Wildlife Mitigation and Monitoring Program Report, Appendix K (March 2024). • Sabina Gold & Silver Corp. Back River Project Wildlife Mitigation and Monitoring Program Plan (Version 12), (April 2023).
IDENTIFICATION OF ISSUE	
<p>As a result of its review of section 2.5 of the WMMP Report, the GN is concerned with the Proponent's failure to reliably conduct and report on pre-blast surveys intended to safeguard wildlife on numerous occasions in 2023.</p>	
IMPORTANCE TO REVIEW AND SUPPORTING RATIONALE	
<p>As described in section 7.1.5.8 the Project's WMMP, the Proponent is required to conduct pre-blast height of land surveys before all blasts to reduce disturbance or risk of injury to caribou or other wildlife (Sabina Gold & Silver Corp., 2023). Pursuant to this, the WMMP Report states that blasting occurred at the Goose site during a total of 90 days between in 2023, with 109 individual blast events being completed (Page 25; B2 Gold Nunavut, 2024). Additionally, the WMMP Report states that pre-blast surveys were conducted on 62 days when blasting occurred (pre-blast surveys were also conducted on eight days where no blasting was reported) (Page 25; B2Gold Nunavut, 2024).</p> <p>However, the Proponent indicates that a pre-blast survey was not conducted for one blasting event that occurred at the Gander location in April 2023. (Page 25; B2Gold Nunavut, 2024). The GN notes that the Proponent does not provide an explanation for why a pre-blast survey did not occur.</p>	

In the WMMP Report, the Proponent also indicates that there are 29 days where pre-blasting surveys were not documented for locations where blasting occurring. (Page 25; B2Gold Nunavut, 2024). The Proponent does not provide an explanation as to why documentation for pre-blast surveys is missing for ~32% of days where blasting occurred in 2023.

Additionally, the Proponent states that, "...missing documentation of these surveys does not confirm that they were not completed, as site personnel are required to incidentally report sightings of wildlife, particularly during blasting," (Page 25; B2Gold Nunavut, 2024) and that "...no additional mitigative measure were required in 2023," (Page 26; B2Gold Nunavut, 2024). While the GN acknowledges the utility of incidental sightings by site personnel, incidental sightings are not systematic in nature and do not replace pre-blast surveys required under the WMMP. Additionally, as surveys may not have been conducted on ~32% of days where blasting occurred, the GN believes that it is inappropriate for the Proponent to arrive at the conclusion that no additional mitigative measure were required.

RECOMMENDATION(S)

The GN recommends the Proponent undertake the following:

- The Proponent should provide an explanation for why no pre-blast survey occurred in April 2023 at the Gander Site. The Proponent should also provide details on how this failure to comply with the WMMP will be avoided in future years.
- The Proponent should provide an explanation as to why pre-blast survey documentation is missing for ~32% of days where blasting occurred.

GN AR # 06	
Department	Economic Development & Transportation
Organization	Government of Nunavut
Subject/Topic	Gender / Employment
References	12MN036-2023 Annual Report-App C SEMC-IMRE 2023 Socio-Economic Monitoring Report for the Back River Project
SUMMARY OF PROPONENT'S CONCLUSIONS	
In its annual report, B2Gold Nunavut stated that the company is making efforts to improve current policies and protocols. B2Gold Nunavut affirms that the team now has 609 employees and is also targeting the improvement of Inuit employment.	
REVIEWER'S COMMENTS AND SUPPORTING RATIONALE	
<p>While the 2023 Back River Project Socio-Economic Monitoring Report shows that participation by Inuit women in the mine's labour force has increased, Inuit women accrued only 2% of hours of project labour. For Inuit men, the rate is 12.2%. This is in clear contrast to the 85% of hours performed by non-Inuit employees.</p> <p>Additionally, the turnover rate is another point of concern. In 2023, Inuit women represented 21% of all Inuit employees' turnover rate, a rate disproportionate to the number of Inuit women employed by B2Gold.</p>	
REVIEWER'S RECOMMENDATIONS	
<p>The GN recommends that this and future Annual reports contain additional detail to help explain the following:</p> <ul style="list-style-type: none"> - What are the specific strategies B2Gold is designing to promote the employment of Inuit? - Does B2Gold have any retention program based on IQ for Inuit employees, especially for Inuit women? <p>The GN also suggests that B2Gold implement a recruitment strategy that specifically considers the barriers preventing Inuit women from working in the mine.</p>	