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July 4, 2024

*Your file*                      *Votre référence*  
12MN036

*Our file*                      *Notre référence*  
12-HCAA-CA7-00007

Nunavut Impact Review Board  
Attn: Leah Klassen  
Impact Assessment Officer  
P.O. Box 1360 (29 Mitik St.)  
Cambridge Bay, NU X0B 0C0

Via email to : [info@nirb.ca](mailto:info@nirb.ca)

**Subject: Fisheries and Oceans Canada Comments RE: 12MN036 - B2Gold Corporation Back River Project 2023 Annual Report**

Dear Leah Klassen:

The Fish and Fish Habitat Protection Program of Fisheries and Oceans Canada (DFO) received your request for comments on May 13, 2024. DFO has reviewed the B2Gold Corp.'s (B2Gold) Back River Project (the Project) *2023 Annual Report* in regard to its mandate, i.e. the management, protection and conservation of fish and their habitats. The Nunavut Impact Review Board (NIRB) invited parties to respond to the following topics:

1. Effects monitoring
  - a. whether the conclusions reached by Sabina in the *2023 Annual Report* are valid; and
  - b. any areas of significance requiring further supporting information or any changes to the monitoring program which may be required.
2. Compliance Monitoring
  - a. provide a summary of any compliance monitoring and/or site inspections undertaken in association with the Project, including specifically:
    - i. identify the Terms and Conditions from the Project Certificate which have been incorporated into any permits, certificates, licences or other approvals issued for the Project, where applicable; and report annually to the NIRB on the status of those incorporated terms and conditions;
    - ii. a summary of any inspections conducted during the 2023 reporting period, and the results of these inspections; and

- iii. a summary of B2Gold's compliance status with regard to authorizations that have been issued for the Project.

DFO focused its review on the following:

- 2023 Annual Report: Performance on Project Certificate Terms and Conditions.
- Appendix G: Rascal Stream West Installation Construction Monitoring Report.
- Appendix H: Downstream Assessment of the Goose Lake Water Withdrawal Increase on Arctic Grayling Spawning and Rearing Habitat.
- Appendix I: Pre-Shipment Equipment Cleaning.
- Appendix K: 2023 Wildlife Mitigation and Monitoring Program Report.
- Appendix L: Back River Project: Marine Laydown Area – 2023 Marine Sampling Report.

DFO provides the following comments for the NIRBs consideration.

#### 1. Effects Monitoring

DFO is generally agreeable with B2Gold's reporting and has the following comments and concerns related to effects monitoring:

Section/Document	Concern	Request
Condition No. 27	Change in water withdrawal limits from Goose Lake.	DFO thanks the Proponent for submitting the Downstream Assessment of the Goose Lake Water Withdrawal Increase on Arctic Grayling Spawning and Rearing Habitat (Appendix H). It is DFO's understanding that the Proponent will submit a Request for Review to DFO prior to increasing water withdrawal from Goose Lake. Please confirm.
Appendix K (Wildlife Mitigation and Monitoring Program Report [WMMPR]), Figures: 8.2.1 & 8.2.2.	Figures do not show the aggregation areas or the marine mammal species that may be encountered along the shipping routes – a more detailed map could help informing monitoring efforts.	DFO recommends B2Gold works with DFO on creating an updated map of shipping routes that illustrates aggregation areas, seasonality, as well as marine mammal species expected to be encountered along the shipping routes.
Conditions No 58 and No. 64 and Appendix K (WMMPR), Section 8.2	The sections state “Prior to the 2023 shipping season, the Proponent provided the Marine Monitoring SOP (November 2022) to the shipping companies” and	Please provide the most recent Marine Monitoring and Marine Shipping SOPs as well as the Shipping Management Guidelines brochures that were distributed to the shipping companies and contractors.

	<p>“Prior to the 2023 shipping season, B2Gold provided a Marine Shipping SOP and Shipping Management Guidelines brochure to the shipping contractors, which describes the management and monitoring requirements for the site”.</p>	
Condition No. 64	<p>There is a risk of introducing aquatic invasive species through haul contamination from ships coming from other parts of Canada or internationally. It is unclear if The Proponent conducts monitoring for aquatic invasive species.</p> <p>Shipping companies contracted to supply the B2Gold through the annual shipping operations are required to comply with the Ballast Water Regulations.</p> <p>The Ballast water regulations reduces the risk of invasive species being introduced as a result of shipping activities, but does not eliminate this risk. Monitoring for the occurrence of aquatic invasive species would still be required.</p>	<p>DFO recommends B2Gold consider implementing a non-Indigenous Species/Aquatic Invasive Species Monitoring Program.</p> <p>Please provide specific monitoring and mitigation measures that are being conducted, including but not limited to any ballast water treatment, monitoring for aquatic invasive species, any haul clean-up and maintenance protocols, etc.</p> <p>Please provide details of the shipping companies used, where the ships are coming from (freshwater/marine), and the risks of the introduction of aquatic non-indigenous or invasive species</p>
Condition No. 64, SOP - Marine Shipping Wildlife Mitigation and Monitoring v 2.0, September 30, 2019, Section 3.4 (Monitoring Procedure)	Monitoring procedure description is limited.	B2Gold to work with DFO in identifying high risk areas where impacts to marine mammals could occur and effectively update their marine mammal monitoring protocol to include a seasonal component and increased monitoring efforts.
Condition No. 64	Underwater noise from shipping vessels has the potential to elicit disturbance effects on marine mammals by	DFO suggests underwater noise from shipping vessels be monitored and, if necessary, mitigated.

	reducing their ability to travel, communicate, and find food. During the 2023 shipping season, 9 vessels served the project. We currently do not know what noise level and characteristic is produced by those shipping vessels and the potential impact on marine mammals.	DFO to work with the Proponent to monitor and model their noise footprint using expert support. This model should aim at evaluating the impact of shipping noise on marine mammals present on the shipping route.
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DFO notes that the project is still under construction at this time, therefore numerous Terms and Conditions and their associated monitoring have yet to be triggered/initiated. DFO looks forward to reviewing the results of these monitoring programs when they become available.

## 2. Compliance Monitoring

### 2.1.Site Visit:

One site visit was conducted by DFO in August 2023. DFO visited the Rascal Stream West (RSW) where culverts were being installed, and assisted during the Llama Lake fish-out. Background information and a summary of the site visit is provided below:

#### 2.1.1. RSW:

Construction of RSW culverts (i.e., twin culverts at a primary channel and a single culvert at a secondary channel) commenced in early May 2023 under frozen conditions, and proceeded under DFO Letter of Advice 22-HCAA-00586, dated July 15, 2022. However, freshet occurred earlier than expected and on May 16, 2023, high flows resulted in surface water flowing into the isolated construction work area and Arctic Grayling moving through the construction area. The secondary channel culvert construction was finalized and a diversion channel allowed Arctic Grayling to migrate upstream through the secondary channel. DFO was notified by B2Gold and construction ceased on May 17, 2023. Monitoring of turbidity and Arctic Grayling passage/spawning was conducted from May 10-25, 2023, and fish rescues were completed on May 6 and 17, and on August 31, 2023. Construction resumed in late August/early September once Arctic Grayling had out-migrated and flow levels decreased.

DFO visited the culvert locations on August 6, 2023 with a B2Gold Environmental Supervisor and a WSP Fisheries Biologist. DFO conducted visual observations of the culvert locations, the secondary channel, the diversion channel, and the primary channel from the road to Gander Pond (upstream) and Goose Lake (downstream). The twin culvert location was still isolated with berms, as installation was halted. DFO observed that both channels were mostly dry (i.e., no flowing water but presence of small pools) due to

naturally occurring low water levels, and observed young Arctic Grayling within Gander Pond and in isolated pools within the primary channel upstream of the culvert location.

DFO is of the opinion that the proponent responded appropriately to the event, and that monitoring demonstrated Arctic Grayling migration was not impeded by the construction of the culverts, likely due to the presence of the diversion channel. B2Gold submitted the RSW culverts construction monitoring report to DFO on December 12, 2023.

#### 2.1.2. Llama-Umwelt Lake System Fish-out:

The fish-out of the Llama-Umwelt Lake system was required prior to dewatering under the *Fisheries Act* Authorization (12-HCAA-CA7-00007). A Fish-out Plan was submitted and approved by DFO in advance of the program. The fish-out was conducted by WSP biologists and Inuit field assistants over a 9-week period from July 8 to September 6, 2023. The program consisted of the removal of large and small-bodied fish species from a large water body (Llama Lake), shallow waterbodies (Umwelt Lake, Pond 1, Llama Pond, Llama Pond 3), and small watercourses (Llama Lake Outlet, Umwelt Lake Outlet, and Pond 1 Outlet).

DFO assisted during the Llama Lake fish-out from August 9 to August 11, 2024. DFO observed activities and participated with setting and retrieving gill nets, processing fish to collect biological data (length, weight, and aging structures) and collecting benthic invertebrates and plankton samples as part of a stable isotope study of arctic lakes.

DFO performed visual inspections of the surrounding waterbodies (Llama Pond 1 and Llama Pond 3) to confirm that the waterbodies did not have fish habitat potential as reported by WSP; DFO agreed with WSP's assessment.

DFO engaged daily with the Inuit field assistants to ensure their expectations for the project were met and if they would recommend any changes to the current fishing effort methods. No concerns were identified.

In general, the fish-out was conducted in accordance with the approved Fish-out Plan. The fish-out report was submitted to DFO on April 2, 2024.

#### 2.2. Amendments:

The proponent's *Fisheries Act* Authorization (FAA), issued by DFO in 2019 (File #12-HCAA-CA7-00007) and associated Letter of Credit were amended to reflect the Proponent's name change from Sabina Gold & Silver Corp to B2Gold Back River Corp.

#### 2.3. Monitoring Reports:

DFO received and is currently in the process of reviewing the following reports:

- 2023 FAA Annual report (WSP, July 3, 2024), required under the FAA.

- Nulahugyuk Creek Offset, Bernard Harbour, NU - Post-Remediation Monitoring Results for 2023 (WSP, March 15, 2024) required under the FAA.
- Back River Project Fish-out Report (WSP, April 2, 2024) required under the FAA.
- Rascal Stream West Culvert Installation Construction Monitoring Report (WSP, December 12, 2023).

In conclusion, the proponent was in compliance with the FAA in 2023. DFO will continue to work with the proponent to ensure compliance with the FAA, and that the conditions perform as intended to maintain and conserve fish and fish habitat.

If you have any questions about the content of this letter, please contact Anna-Maija Laflamme at [Anna-Maija.Laflamme@dfo-mpo.gc.ca](mailto:Anna-Maija.Laflamme@dfo-mpo.gc.ca). Please refer to the file number referenced above when corresponding with the Program.

Sincerely,



Tatiana Leclerc-Beaulieu  
Senior Biologist  
Fish and Fish Habitat Protection Program  
Fisheries and Oceans Canada  
CC:

José Audet-Lecouffe, DFO