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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File: 2AM-BRP1831 / B12

August 14, 2024

Merle Keefe
Manager – Environmental Permitting
Sabina Gold & Silver Corp.
c/o B2Gold Corp.
Suite 3400 – 666 Burrard Street
Vancouver, BC V6C 2X8

Email: mkeefe@b2gold.com

RE: Type A Water Licence No: 2AM-BRP1831; Water Management Plan for the Back River Project

Dear Mr. Keefe:

On May 28, 2024, the Nunavut Water Board (NWB or Board) acknowledged the receipt of the updated Water Management Plan (updated Plan), dated May 2024, from B2Gold (previously Sabina Gold and Silver Corp.) and sent it out for review until June 19, 2024.

According to B2Gold, the reason for this update was to address the management of snow melt and runoff into open pits.

Comments and recommendations were received from Kitikmeot Inuit Association (KIA), Crown-Indigenous Relations and Northern Affairs Canada (CIRNA) and Fisheries and Oceans Canada (DFO) on or before the deadline of June 19, 2024. Environment and Climate Change Canada (ECCC) advised the Board on June 14, 2024 that they had no comments or concerns related to this Plan at this time.

B2Gold requested an extension on June 26, 2024 and provided responses to the Interveners' recommendations on July 10, 2024 and July 26, 2024. On July 12, 2024, B2Gold submitted the Rascal Stream West Construction Summary Report. By July 30, 2024, all Interveners had confirmed that their concerns were addressed by B2Gold's responses. B2Gold submitted an updated response to one of DFO's queries on August 6, 2024 as their previous response had a typo and needed correction.

Summary of comments:

Kitikmeot Inuit Association (KIA) June 12, 2024 and July 17, 2024

1. Discharge criteria

Update the plan to indicate that water collected in the open pits is considered contact water and to apply the discharge criteria outlined in Part F, Items 21 and 22 of the Water Licence. Discuss the applicability Part F Item 16 of the Licence to discharges of contact water from the open pits to tundra.

Response: B2Gold agreed to apply the discharge criteria outlined in Part F, Items 21 and 22 to the discharge of contact water. B2Gold does not believe Part F, Item 16 is applicable because... *“This naturally intercepted site water is mostly analogous to BRP-G (General Site Runoff) or potentially BRP-S (General Seeps from excavated/stockpiled material or quarries that does not gather in a collection system), rather than tailings effluent.”*

2. Culverts

KIA requested that B2Gold identify the fish bearing stream crossings and change the type of culvert for the fish bearing streams to open bottom.

Response: B2Gold stated that all fish-bearing watercourses were summarized in the Fisheries Act Authorization application and directed to Figure 5.2-1 in the Back River Project Fish Offsetting Plan (Golder 2019). Further, B2Gold stated that the only fish-bearing crossing was the Rascal Stream West crossing (C2) and that... *“An embedded, oblong culvert crossing design (twin culvert installation) was installed at the Rascal Stream West crossing location in 2023. Work was completed under an approval (Letter of Advice, dated July 15, 2022) from DFO.”*

3. Fish salvage

KIA raised concern about no mention of a fish salvage plan for dewatering of two lakes (Llama and Umwelt) and whether these lakes were fish bearing.

Response: B2Gold stated that a fish-out plan for Llama Lake and Umwelt Lake was prepared in coordination with DFO and executed during the 2023 open water season. The results of this plan were summarized in a report submitted to DFO on March 31, 2024. Dewatering of Llama and Umwelt Lakes is expected to commence in June 2025.

4. Treated sewage effluent

KIA raised concern about no mention of any erosion and sedimentation mitigation measures to prevent the deposited treated sewage from spreading directly to the nearest watercourse during open water season storm events.

Response: B2Gold stated that the treated effluent being discharged to tundra has a low sediment content. The discharge point is located in an area of fractured bedrock which promotes flow dispersion and is highly resistant to any erosion or sediment runoff. B2Gold further stated that they conduct monthly inspections to ensure erosion or sediment runoff is not occurring. If any erosion or sedimentation concerns are noted B2Gold may install a diffuser or consider alternate corrective actions.

5. Open pit closure – fish access

KIA requested details regarding fish access in Llama and Umwelt Lakes at closure.

Response: B2Gold stated that Llama and Umwelt Lakes will not be fish-bearing and will not be accessible to fish. Barriers will be constructed to allow water to exit the pits while restricting upstream access for fish.

6. KIA requested that B2Gold provide the rationale for using the arched or oblong closed bottom culverts at the Rascal Stream Crossing. (July 17, 2024).

Response: B2Gold stated that... *“the closed bottom design would have a higher bearing capacity, be structurally stronger, and be more durable than an open bottom design for haul road traffic.”* Further, the closed bottom culvert helps avoid a loss of fines and seepage. (July 26, 2024).

Crown-Indigenous Relations and Northern Affairs Canada (CIRNA) June 19, 2024

1. Emergency discharge pond

R-01a – CIRNA recommends that B2Gold clearly reference the discharge criteria from the approved Water Licence and Water Management Plan to determine if it is applicable to the water in the Emergency Discharge Pond.

R-01b – CIRNA recommends that B2Gold provide details on if the Emergency Discharge Pond is acceptable for storing the runoff/snowmelt water while taking into consideration the original purpose of the Emergency Discharge Pond.

Response: B2Gold confirmed that discharge criteria outlined in Part F, Items 21 and 22 will be applied to any discharge to land from the Emergency Discharge Pond. Further, B2Gold stated that... *“To ensure the Emergency Discharge Pond is available in the event of a plant emergency, use of this pond for temporary storage of other contact water, runoff, or snowmelt will cease and all water be vacated prior to plant start-up, either through compliant discharge to tundra or by placement in another suitable water management facility.”*

2. Design report and drawings

R-02 – CIRNA inquired whether B2Gold has begun or completed construction of the Emergency Discharge Pond and to provide a Construction Summary Report to the Board within the next 90 days.

Response: B2Gold stated that... *“A final engineering inspection is pending. Once completed, a construction summary report will be submitted to the NWB within 90 days.”*

3. Revisions to the Water Management Plan to Include Emergency Dump Pond

R-03 – CIRNA recommends B2Gold provide further information regarding the construction of the Emergency Dump Pond to the Board.

Response: B2Gold stated that... *“A final engineering inspection is pending. Once completed, a construction summary report will be submitted to the NWB within 90 days.”*

4. Open Pits Discharge Criteria and Definitions

R-04a – CIRNA recommends that B2Gold confirm the management of the runoff/snowmelt water from the open pit and clarify if it is “contact water” that will be discharged to the land.

R-04b – CIRNA recommends that B2Gold revise the Water Management Plan to address these concerns accordingly and as per applicable terms of the approved Water Licence.

Response: B2Gold agreed to manage this water as contact water and apply the more extensive discharge criteria outlined in Part F, Items 21 and 22 of the Licence when discharging. Further, B2Gold committed to include this information in the next update to the Water Management Plan and submit it before or with the 2024 Annual Report.

Fisheries and Oceans Canada (DFO) June 19, 2024

1. DFO requested B2Gold to provide rationale on why the 1.5 m/s velocity value for the average June flow was used to inform culvert design, as it appears high and high flows may impede fish passage.

Response: B2Gold stated that... *“The only fish-bearing watercourse crossing is ‘C2’, which is Rascal Stream West. A twin oblong (embedded) culvert design was installed at the Rascal Stream West crossing in 2023. Work was completed under an approval (Letter of Advice, dated July 15, 2022) from DFO who was engaged throughout the design of the crossing. Fish passage was considered in the design of culvert hydraulics.”*

2. DFO requested B2Gold confirm which of the five proposed culvert crossings (C1, C2, C3, C4, or C5) are fish bearing and non-fish bearing and if they have already been installed. “Please provide culvert length and diameters”.

Response: B2Gold stated that the fish-bearing status of watercourses and waterbodies was summarized in the Fisheries Act Authorization application for the Back River Project. Further, B2Gold stated that C1 is not yet constructed, C2 is constructed and the Construction Summary Report is pending finalization. C3 has been removed, C4 and C5 are non-fish bearing, followed by their dimensions.

3. DFO requested confirmation that a request for review will be submitted for the construction of water intake structures.

Response: B2Gold stated that... *“B2Gold Nunavut is committed to the implementation of mitigation measures to avoid and mitigate residual effects to fish and fish habitat during the construction of the Winter Ice Road for the Back River Project, including those listed in the approval (Letter of Advice, dated December 20, 2018) issued to B2Gold Nunavut for the annual construction of the Winter Ice Road.”*

4. DFO recommends the proponent to use open bottom box culverts or provide rationale of why open bottom culverts were not used.

Response: B2Gold stated that the construction summary report is pending and will be submitted when it is available.

Copies of all documents received in support of the updated Water Management Plan can be accessed through the NWB’s Public Registry and FTP site using the following Link:

<ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-BRP1831%20B2Gold/3%20TECH/E%20WATER%20USE>

As stated above, B2Gold has submitted an updated Water Management Plan, on May 28, 2024 to address the management of snow melt and runoff into open pits. The NWB has reviewed the updated Plan, and finds it functional and generally satisfying Water Licence requirements. By copy of this letter, the Board provides its approval through the Board Motion No. 2024-A1-002, dated August 14, 2024, as per Part B, Item 12 of Water Licence. The NWB encourages the Licensee to address the intervenors’ recommendations in the next revision of the approved plan.

Should you have any questions regarding the above, please contact the NWB Licensing Department by email to licensing@nwb-oen.ca or by phone at (867) 360-6338.

Sincerely,



Mohammad Ali Shaikh
Technical Advisor,
Nunavut Water Board

as/rqd

Cc: Distribution List – Back River