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NUNAVUT WATER BOARD
NUNAVUT IMALIRIYIN KATIMAYINGI
OFFICE DES EAUX DU NUNAVUT

File No: **2AM-BRP1831**

July 26, 2023

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, Back River Project, Sabina Gold & Silver Corp.; Modifications to Schedule I.

Dear Mr. Keefe:

This letter is a response to the correspondence provided by Sabina Gold & Silver Corp. (Sabina or Licensee) to the Nunavut Water Board (NWB or Board) on May 30, 2023 requesting modifications to Schedule I (Request) of Water Licence No: 2AM-BRP1831 (Licence) related to the description and sampling frequency of the Monitoring Program Station BRP-17.

In its request, the Licensee notes that *“By sampling BRP-17 at the “discharge point for treated sewage onto land” (per Schedule I of the Licence), B2Gold Nunavut, and subsequently the NWB in Schedule I of the Licence, has unintentionally imposed more stringent requirements for regulating the effluent discharge than what is required to protect the freshwater receiving environment given that the overland flow path of the discharge effluent to the nearest freshwater receiving environment is intended to allow for continued treatment of effluent (i.e., increase retention time, settling of solids, filtration, and potential wetland treatment) prior to entering the freshwater receiving environment.”*.

The Licensee further states that *“compliance criteria would be more appropriately monitored at a point immediately prior to entry into the freshwater receiving environment to reflect the benefit of this additional treatment and the effluent quality at point of entry to freshwater.”*

The Licensee is requesting to change the description of BRP-17 to “discharge point for treated sewage into freshwater” and the frequency to monthly (currently “prior to discharge”).

Additionally, Sabina suggests that *“monitoring be undertaken monthly to 1) align with the request to sample post land treatment and, 2) to better reflect the sporadic nature of the discharge of treated STP effluent which is discharged on an as needed basis (e.g., via a float system) based on camp occupancy and water use, with discharge occurring once every few days to multiple*

times a day. As a result, requirement for “monthly” sampling would remove the ambiguity inherent in sampling “prior to discharge” with such intermittent discharge.”

As part of this request, Sabina proposes updating the Water Management Plan (April 2022) to *“allow Inspector approval of the location of discharge to the land. This would allow in-field selection of the optimal discharge point to land within the Goose Lake Watershed.”*

The NWB information relevant to the proposed modifications is available from the Board’s ftp site using the following link:

<ftp://ftp.nwb-oen.ca/registry/2%20MINING%20MILLING/2A/2AM%20-%20Mining/2AM-BRP1831%20Sabina/3%20TECH/I%20AQUATIC%20EFFECTS%20MONITORING>

On June 1, 2023, the Request was distributed for public review with a deadline set at June 15, 2023. On or before the deadline, the NWB received comments from the Kitikmeot Inuit Association (KIA), Environment and Climate Change Canada (ECCC), and Crown-Indigenous Relations and Northern Affairs (CIRNA). CIRNA, in their correspondence stated that they had no comments or recommendations at this time. The Licensee responded to comments on June 27, 2023. By July 4, 2023, Interveners had confirmed that their comments were addressed. The comments and Licensee’s responses are summarized below.

Kitikmeot Inuit Association (KIA) June 7, 2023

1. The KIA noted that the request for change to Schedule I of the Licence is minor and the proposed change in sampling frequency from “prior to discharge” to “monthly” is acceptable.

The KIA cautioned against shifting the point of compliance (BRP-17) from the end of pipe to the location where flows enter the aquatic receiving environment. They further state that... *“The permitted concentrations of phosphorus, biological oxygen demand (BOD) and fecal coliforms benefit from some degree of attenuation along the flow path as the discharge migrates towards the nearest watercourse or waterbody. KIA therefore recommends that the Nunavut Water Board maintain the point of compliance at the end of pipe to reduce the impact to the aquatic environment.”*

Sabina’s response: The Licensee appreciated KIA’s agreement that the requested changes were minor and their agreement in changing the sampling frequency. With regards to BRP-17, the Licensee stated that... *“B2Gold wants to reassure the KIA that we would continue to sample the discharge prior to entry into the freshwater receiving environment, the sampling location would just be moved downslope to allow direct characterization of the water that will enter the natural freshwater systems to reflect the benefit of land attenuation which is anticipated to reduce phosphorous, Biological Oxygen Demand, and Fecal Coliforms (as noted by the KIA), as well as any total suspended solids (TSS).*

In discussion with the KIA on the week of June 19, B2Gold Nunavut is proposing this ability to sample downslope of land attenuation particularly during plant start-up, while the biological component of the membrane system is developed and calibrated which is

expected to take up to 4 months. Upon completion of the 4 month timeline, B2Gold Nunavut will revert to sampling at end of pipe as stated in the current license.”

Environment and Climate Change Canada (ECCC) June 15, 2023

1. ECCC requested the Licensee to clarify the description for SNP station BRP-17 to accurately describe the intent and location of monitoring.

Sabina’s response: The proposed description for BRP-17 should be “Goose Property Sewage Treatment Plant (representative drainage immediately prior to point of entry to the freshwater environment)”

2. ECCC recommended that in-case the effluent quality at the new monitoring point did not meet the Effluent Quality Criteria (EQC), the Licensee should ensure contingency measures in their Water Management Plan. If such measures do not exist then the Water Management Plan should be updated.

Sabina’s response: The Licensee stated that the Water Management Plan provides such mitigation measures. The Licensee highlighted section 7.4.3.1 of the Water Management Plan which states... *“Off-specification treated sewage during upset conditions will be discharged to the closest collection pond. Any discharges of sewage effluent from the collection pond will need to meet the applicable discharge criteria. In-pond treatment by coagulation can be applied if required as a contingency”*.

To prepare the Board’s response as to whether the proposed changes meet the requirements for a Modification as set out in Part G of the Licence, the NWB has reviewed the information provided with Sabina’s May 30, 2023 Request and the Licence for consistency with the proposed changes. Part B, Item 19 of the Licence states:

“If the Board subsequently determines that an item in any of the Schedules requires revision in order to better reflect the intent and objectives of the Licence, the Board may at its discretion, and upon consulting and providing written notice to the Licensee and interested parties, revise the Schedule accordingly. Unless the Board directs otherwise, such revision may not necessarily be considered as an “Amendment” to the Licence.”

The Board’s opinion is that proposed modifications generally meet the requirements of Part G of the Licence, including provision of at least sixty (60) day advance notice for the proposed modifications. On the basis of technical review, the Board accepts that the changes proposed in Sabina’s May 30, 2023 Request do constitute modifications that are consistent with the existing terms and conditions of the Licence and has approved these modifications through the Board Motion No. 2023-A1-002, dated July 12, 2023, as required by Part G, Item 2 of the Licence.

The Board notes that all relevant documents and plans shall be updated to reflect the changes in Schedule I. All updated documents shall be included within the 2023 Annual Report.

Additionally, the Board accepts Sabina's proposal to update section 7.4.3.1 of the Water Management Plan to allow Inspector approval of the location of discharge to the land.

The NWB would also like to highlight that any Licence terms and conditions referring to the Monitoring Stations should be read with taking into account the enclosed modified Table 2.

Should you have any questions regarding this matter, please contact the undersigned at (867) 360-6338 (extension 33) or by e-mail ali.shaikh@nwb-oen.ca, at your earliest convenience.

Sincerely,

A handwritten signature in blue ink, appearing to read 'M. Ali', with a horizontal line underneath.

Mohammad Ali Shaikh
Technical Advisor,
Nunavut Water Board

AS/rqd

Cc: Distribution List – Back River Project

MODIFIED TABLE 2 MONITORING PROGRAM

Monitoring Program Station	Monitoring Type	Description	Mine Phase	Group Code	Frequency
BRP-G-01 to BRP-G-TBD	Regulated Monitoring	General Site Runoff Surficial runoff anywhere at both Goose Property and MLA, including quarries; monitoring for erosion and sedimentation.	Construction	C	Weekly if flow enters a waterbody
BRP-S-01 to BRP-S-TBD	General Monitoring	General Seeps Seepage or runoff from excavated and/or stockpiled material anywhere at both Goose Property and MLA, including quarries, that does not gather into a collection system or the site is reclaimed.	Construction and Operations	A, D	Monthly during flow, or as found
BRP-01	Regulated Monitoring	Goose Lake Discharge (discharge point for release of dewatering effluent with or without treatment)	Construction	A, B, G	Weekly during dewatering
				D	Four times during dewatering, at the same time as the weekly samples
				H	Once per month during dewatering, at the same time as Group D
				I	One time during dewatering, at the same time as Group D
BRP-02	General Monitoring	Llama Lake (intake point for dewatering, triggers need for treatment prior to discharge at BRP-01)	Construction	C (TSS only)	Weekly if treatment is required; no sample if treatment is not required
BRP-03	Verification Monitoring	Llama Pit (representative of collected pit water prior to transfer to tailings management facility)	Operations	A, G	At Licensee's discretion
BRP-04	General Monitoring	Llama Pit Lake (representative of flooded pit during flooding and before overflow to the downstream environment)	Closure* to Post-Closure*	A, D	Twice per year
BRP-05	Verification Monitoring	Llama WRSA Pond (representative of collected water quality)	Operations to Closure*	A, G	At Licensee's discretion
BRP-06	General Monitoring	Umwelt Lake (intake point for dewatering, triggers need for treatment prior to discharge at BRP-01)	Construction	C (TSS only)	Weekly if treatment is required; no sample if treatment is not required
BRP-07	Verification Monitoring	Umwelt Pit (representative of collected pit water prior to transfer to tailings management facility)	Construction to Operations	A, G	At Licensee's discretion

Monitoring Program Station	Monitoring Type	Description	Mine Phase	Group Code	Frequency
BRP-08	General Monitoring	Umwelt Pit Lake (representative of flooded pit during flooding and before overflow to the downstream environment)	Closure to Post-Closure*	A, D	Twice per year
BRP-09	Verification Monitoring	Umwelt WRSA Pond (representative of collected water quality, including landfill seepage/runoff)	Construction to Closure (early)*	A, G	At Licensee's discretion
BRP-10	Verification Monitoring	Primary Water Pond (representative of collected water quality)	Construction to Closure (early)*	A, D	At Licensee's discretion
BRP-11	Verification Monitoring	Saline Water Pond (representative of stored water quality)	Construction (late) to Closure (early)*	A, D	At Licensee's discretion
BRP-12	General Monitoring	Big Lake Intake (intake point for potable and industrial water withdrawal)	Construction to Closure*	A, D	Four times per year
				B	Weekly
BRP-13	Verification Monitoring	Plant Site Pond (representative of collected water quality)	Construction to Closure (early)*	A, D	At Licensee's discretion
BRP-14	Verification Monitoring	ANFO Plant (representative of collected water quality)	Construction to Closure*	A, E	At Licensee's discretion
BRP-15	Regulated Monitoring	Goose Fuel Tank Farm (representative of collected water quality)	Construction to Closure*	A, E	Prior to discharge or transfer of water
BRP-16	Regulated Monitoring	Goose Hazardous Waste Management Area (representative of collected water quality)	Construction to Closure*	A, E	Prior to discharge or transfer of water
BRP-17	Regulated Monitoring	Goose Property Sewage Treatment Plant (treated sewage discharge/drainage immediately prior to the point of entry into freshwater)	Construction to Closure*	A, F	Monthly
BRP-17A	Regulated Monitoring	Goose Property Sewage Treatment Plant (discharge point for treated sewage into Tailings Storage Facility or Tailing Facility)	Construction to Closure*	A, F	Prior to discharge

Monitoring Program Station	Monitoring Type	Description	Mine Phase	Group Code	Frequency
BRP-18	General Monitoring	Llama Watershed Outflow (representative of non-contact water, PN04 from <i>Water and Load Balance</i>)	Operations to Closure*	A, D	Once during freshet and monthly during upstream construction while visible flow is present at the stations
BRP-19	General Monitoring	Echo Outflow (representative of non-contact water). PN09 from water and load balance	Operations to Closure*	A, D	Once during freshet and monthly during upstream construction while visible flow is present at the stations
BRP-20	Verification Monitoring	Echo Pit (representative of collected pit water prior to transfer to tailings management facility)	Operations	A, G	At Licensee's discretion
BRP-21	General Monitoring	Echo Pit Lake (representative of flooded pit during flooding and before overflow to the downstream environment)	Closure* to Post-Closure*	A, D	Twice per year
BRP-22	Verification Monitoring	Echo WRSA Pond (representative of collected water quality)	Operations to Closure (early)*	A, G	At Licensee's discretion
BRP-23	General Monitoring	Gander Pond Outflow (representative of non-contact water, PN07 from <i>Water and Load Balance</i>)	Operations to Closure*	A, D	Once during freshet and monthly during upstream construction while visible flow is present at the stations
BRP-24	General Monitoring	Goose Lake Intake (intake point for potable and industrial water withdrawal)	Operations to Closure (early)*	B	Weekly
BRP-25	Verification Monitoring	Goose Pit (representative of collected pit water prior to transfer to tailings management facility)	Operations	A, G	At Licensee's discretion
BRP-26	General Monitoring	Goose Pit Lake (representative of flooded pit during flooding and before overflow to the downstream environment)	Closure* to Post-Closure*	A, D	Twice per year
BRP-27	Verification Monitoring	Goose Main Tailings Facility (intake point for water treatment, represents pre-treatment water quality)	Operations to Closure*	A, G	At Licensee's discretion
BRP-28	Verification Monitoring	Goose Main Tailings Facility (discharge point for water treatment, represents post-treatment water quality)	Operations to Closure*	A, G	At Licensee's discretion
BRP-29	Verification Monitoring	TSF WRSA Pond (representative of collected water quality, including landfill seepage/runoff)	Operations to Closure*	A, G	At Licensee's discretion

Monitoring Program Station	Monitoring Type	Description	Mine Phase	Group Code	Frequency
BRP-30	General Monitoring	Goose Southeast Inflow (representative of non-contact water, PN06 from <i>Water and Load Balance</i>)	Operations to Closure*	A, D	Once during freshet
BRP-40	General Monitoring	Bathurst Inlet Intake (intake point in marine environment for potable and industrial water withdrawal)	Construction to Closure*	A, D	At Licensee's discretion
				B	At Licensee's discretion
BRP-41	General Monitoring	Bathurst Inlet Discharge (discharge point in marine environment for effluent from desalinization plant)	Construction to Closure*	A, J	At Licensee's discretion
BRP-42	Regulated Monitoring	MLA Greywater (representative drainage at point of entry to the marine receiving environment)	Construction to Closure*	A, F	Prior to discharge or transfer of water
BRP-43	Regulated Monitoring	MLA Fuel Tank Farm (representative of collected water quality)	Construction to Closure*	A, E	Prior to discharge or transfer of water
BRP-44	Regulated Monitoring	MLA Landfarm (representative of collected water quality)	Construction to Closure*	A, E	Prior to discharge or transfer of water
BRP-45	Regulated Monitoring	MLA Hazardous Waste Management Area (representative of collected water quality)	Construction to Closure*	A, E	Prior to discharge or transfer of water
BRP-49	Regulated Monitoring	MLA Temporary Fuel Storage Facility^a (representative of collected water quality)	Construction	A, E	Prior to discharge or transfer of water
BRP-51	Regulated Monitoring	Goose Landfarm (representative of collected water quality)	Construction to Closure*	A, E	Prior to discharge or transfer of water
BRP-52	General Monitoring	MLA Pond S1 (intake point for potable and industrial water withdrawal)	Construction to Closure*	A, D	Once per quarter when in use
				B	Weekly when in use
BRP-53	General Monitoring	MLA Pond S2 (intake point for potable and industrial water withdrawal)	Construction to Closure*	A, D	Once per quarter when in use
				B	Weekly when in use
BRP-54	General Monitoring	MLA Lake 3 (intake point for potable and industrial water withdrawal)	Construction to Closure*	A, D	Once per quarter when in use
				B	Weekly when in use
BRP-55	General Monitoring	MLA Lake 4 (intake point for potable and industrial water withdrawal)	Construction to Closure*	A, D	Once per quarter when in use
				B	Weekly when in use

Monitoring Program Station	Monitoring Type	Description	Mine Phase	Group Code	Frequency
BRP-56	General Monitoring	Llama Tailings Facility (collected at "inlet" to treatment facility Pre-treatment quality)	Operations to Closure	A, G	At Licensee's discretion
BRP-57	General Monitoring	Llama Tailings Facility (after treatment; collected at "outlet" of treatment facility; no discharge to the receiving environment Post-treatment quality to confirm treatment efficiency)	Operations to Closure	A, G	At Licensee's discretion
BRP-58a to BRP-58xx (TBD)	Regulated Monitoring	Final Discharge Point Goose Lake			As per Part F, Item 16
BRP-I-01 to BRP-I-TBD	General Monitoring	Interconnection Winter Ice Road Proximal Water Bodies (intake points for fresh water used in the construction of the Interconnection Winter Ice Road and WIR Service/Emergency Camps)	Construction to Closure*	B	Weekly when in use
Notes: * - The term of this Licence does not include the Closure Phase (either earl or late closure) or Post-Closure Phase. Closure and Post-Closure monitoring information is provided for discussion only; a - Monitoring Program Station BRP-49 will no longer be active once the MLA Fuel Tank Farm is operational and the MLA Temporary Fuel Storage Facility has been decommissioned and removed.					