



May 29, 2019

Richard Dwyer  
Manager of Licencing  
Nunavut Water Board  
PO Box 119  
Gjoa Haven, NU  
X0B 1J0

**Re: April 2019 Monthly Monitoring Report for Water Licence 2AM-BRP1831**

Dear Richard,

This report is provided by Sabina Gold and Silver Corp. (Sabina) to address the requirements of Part I, Item 18 of the Back River Project (the Project) Type A water licence 2AM-BRP1831 (the Licence).

These requirements include:

- All data and information required by Part I and Tables of Schedule I;
- An assessment of data to identify areas of non-compliance with regulated discharge parameters referred to in this Licence; and
- Documentation of conditions during spring freshet, major rain events, and periods of sustained precipitation including flow measurements, photographs, and notes.

Clauses under Part I of the Licence specifically applicable to monthly monitoring include Items 4, 8, 9, 12, and 20. These items are addressed individually below as are the tables of Schedule I. It is noted that, at this time, activities have not yet commenced under this Licence with the exception of winter ice road construction which was initiated in January of 2019.

**Part I, Item 4 Monitoring Program as outlined in Schedule I Tables 1 and 2**

An overview of monitoring activity by station is provided in Table 1 located at the end of this report. The majority of the sampling required under Schedule I Table 2 of the Licence was not applicable this month due to frozen winter conditions combined with the fact that activities under this licence have not yet been initiated, with the exception of winter ice road construction.

**Part I, Item 8 Monthly Volumes of Water Used and Discharge of Greywater, Sewage Sludge, Effluent and Contact Water**

In April of 2019, 18,862 m<sup>3</sup> of water was withdrawn for winter road construction from lakes proximal to the road. Water withdrawal was monitored daily and monthly usage by lake is provided in Table 2. No exceedance of lake-specific withdrawal limits or total ice road water usage allowance occurred. No other water use or waste discharge occurred under this Licence this month.

Marine Laydown Area (MLA) camp water use and greywater and sewage sludge disposal occurred under, and in accordance with, water licence 2BE-GEO1520.

**Part I, Item 9 Monthly Quantity of Landfill, Landfarm, Waste Rock, Tailings Deposited and Ore Stockpiled and Processed**

No waste was deposited in the Landfarm this month. The landfill, waste rock piles, and tailings storage area have not been constructed at this time, and no ore has been mined under this Licence.

**Part I, Item 12 Monitoring During Discharge at BRP-15, 16, 43-45, 49, or 51**

Due to frozen winter conditions and the fact that many of these facilities have not yet been constructed, no water was discharged from these stations this month. See details for each station in Table 1 of this report.

**Part I, Item 18 Assessment of Discharge Compliance and Documentation During Freshet and Major/Sustained Rain Events**

No water was discharged under this Licence this month. Freshet and rainfall-related monitoring conditions were not applicable this month due to frozen winter conditions. Other aspects of Part I Item 18, namely the requirement to report monthly, are addressed by this report as a whole.

**Part I, Item 20 Additional Monitoring Imposed by Inspector**

No additional monitoring has been requested by the Inspector at this time.

Should you require any additional information please feel free to contact me.

Regards,

Merle Keefe  
Manager, Environmental Permitting  
Sabina Gold & Silver Corp.  
#1800 – 555 Burrard Street  
Vancouver, BC V7X 1M9

**Table 1 Monitoring Activity Overview by Station, April 2019**

Monitoring Program Station	Monitoring Type	Description	Mine Phase	Group Code*	Frequency	Monitoring Activity
BRP-G-01 to BRP-G-TBD	Regulated Monitoring	<b>General Site Runoff</b> Surficial runoff anywhere at both Goose Property and MLA, including quarries; monitoring for erosion and sedimentation.	Construction	C	Weekly if flow enters a waterbody	N/A - frozen winter conditions
BRP-S-01 to BRP-S-TBD	General Monitoring	<b>General Seeps</b> 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	N/A - frozen winter conditions
BRP-01	Regulated Monitoring	<b>Goose Lake Discharge</b> (discharge point for release of dewatering effluent with or without treatment)	Construction	A, B, G	Weekly during dewatering	N/A – dewatering activities have not been initiated
				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	<b>Llama Lake</b> (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	N/A – dewatering activities have not been initiated
BRP-03	Verification Monitoring	<b>Llama Pit</b> (representative of collected pit water prior to transfer to tailings management facility)	Operations Stage 1 to Operations Stage 2	A, G	At Licensee's discretion	N/A – facility construction has not been initiated/wrong mine phase
BRP-04	General Monitoring	<b>Llama Pit Lake</b> (representative of flooded pit during flooding and before overflow to the downstream environment)	Closure* to Post-Closure	A, D	Twice per year	N/A – facility construction has not been initiated/ n/a mine phase
BRP-05	Verification Monitoring	<b>Llama WRSA Pond</b> (representative of collected water quality)	Operations Stage 1 to Closure	A, G	At Licensee's discretion	N/A – facility construction has not been initiated/ n/a mine phase
BRP-06	General Monitoring	<b>Umwelt Lake</b> (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	N/A – dewatering activities have not been initiated
BRP-07	Verification Monitoring	<b>Umwelt Pit</b> (representative of collected pit water prior to transfer to tailings management facility)	Construction to Operations Stage 2	A, G	At Licensee's discretion	N/A – facility construction has not been initiated
BRP-08	General Monitoring	<b>Umwelt Pit Lake</b> (representative of flooded pit during flooding and before overflow to the downstream environment)	Closure to Post-Closure	A, D	Twice per year	N/A – facility construction has not been initiated/ n/a mine phase

<b>BRP-09</b>	Verification Monitoring	<b>Umwelt WRSA Pond</b> (representative of collected water quality, including landfill seepage/runoff)	Construction to Closure (early)*	A, G	At Licensee's discretion	N/A – facility construction has not been initiated
<b>BRP-10</b>	Verification Monitoring	<b>Primary Water Pond</b> (representative of collected water quality)	Construction to Closure (early)	A, D	At Licensee's discretion	N/A – facility construction has not been initiated
<b>BRP-11</b>	Verification Monitoring	<b>Saline Water Pond</b> (representative of stored water quality)	Construction (late) to Closure (early)	A, D	At Licensee's discretion	N/A – facility construction has not been initiated
<b>BRP-12</b>	General Monitoring	<b>Big Lake Intake</b> (intake point for potable and industrial water withdrawal)	Construction to Closure	A, D	Four times per year	N/A – facility construction has not been initiated
				B	Weekly	
<b>BRP-13</b>	Verification Monitoring	<b>Ore Stockpile Pond</b> (representative of collected water quality)	Construction to Closure (early)	A, D	At Licensee's discretion	N/A – facility construction has not been initiated
<b>BRP-14</b>	Verification Monitoring	<b>ANFO Plant</b> (representative of collected water quality)	Construction to Closure	A, E	At Licensee's discretion	N/A – facility construction has not been initiated
<b>BRP-15</b>	Regulated Monitoring	<b>Goose Fuel Tank Farm</b> (representative of collected water quality)	Construction to Closure	A, E	Prior to discharge or transfer of water	N/A – facility construction has not been initiated
<b>BRP-16</b>	Regulated Monitoring	<b>Goose Hazardous Waste Management Area</b> (representative of collected water quality)	Construction to Closure	A, E	Prior to discharge or transfer of water	N/A – facility construction has not been initiated
<b>BRP-17</b>	Regulated Monitoring	<b>Goose Property Sewage Treatment Plant</b> (discharge point for treated sewage onto land)	Construction to Closure	A, F	Prior to discharge	N/A – facility construction has not been initiated
<b>BRP-17A</b>	Regulated Monitoring	<b>Goose Property Sewage Treatment Plant</b> (discharge point for treated sewage into Tailings Storage Facility or Tailing Facility)	Construction to Closure*	A, F	Prior to discharge	N/A – facility construction has not been initiated
<b>BRP-18</b>	General Monitoring	<b>Llama Watershed Outflow</b> (representative of non-contact water, PN04 from Water and Load Balance)	Operations Stage 1 to Closure	A, D	Once during freshet	N/A- wrong mine phase
<b>BRP-19</b>	General Monitoring	<b>Echo Outflow</b> (representative of non-contact water). PN09 from water and load balance	Operations Stage 1 to Closure	A, D	Once during freshet	N/A- wrong mine phase
<b>BRP-20</b>	Verification Monitoring	<b>Echo Pit</b> (representative of collected pit water prior to transfer to tailings management facility)	Operations Stage 2	A, G	At Licensee's discretion	N/A – facility construction has not been initiated/ n/a mine phase
<b>BRP-21</b>	General Monitoring	<b>Echo Pit Lake</b> (representative of flooded pit during flooding and before overflow to the downstream environment)	Closure to Post-Closure	A, D	Twice per year	N/A – facility construction has not been initiated/ n/a mine phase
<b>BRP-22</b>	Verification Monitoring	<b>Echo WRSA Pond</b> (representative of collected water quality)	Operations Stage 2 to Closure (early)	A, G	At Licensee's discretion	N/A – facility construction has not been initiated/ n/a mine phase
<b>BRP-23</b>	General Monitoring	<b>Gander Pond Outflow</b> (representative of non-contact water, PN07 from Water and Load Balance)	Operations Stage 1 to Closure	A, D	Once during freshet	N/A- wrong mine phase
<b>BRP-24</b>	General Monitoring	<b>Goose Lake Intake</b> (intake point for potable and industrial water withdrawal)	Operations Stage 1 to Closure (early)	B	Weekly	N/A- no water withdrawn

BRP-25	Verification Monitoring	<b>Goose Pit</b> (representative of collected pit water prior to transfer to tailings management facility)	Operations Stage 1 to Operations Stage 2	A, G	At Licensee's discretion	N/A – facility construction has not been initiated/wrong mine phase
BRP-26	General Monitoring	<b>Goose Pit Lake</b> (representative of flooded pit during flooding and before overflow to the downstream environment)	Closure* to Post-Closure	A, D	Twice per year	N/A – facility construction has not been initiated/ n/a mine phase
BRP-27	Verification Monitoring	<b>Goose Main Tailings Facility</b> (intake point for water treatment, represents pre-treatment water quality)	Operations Stage 3 to Closure	A, G	At Licensee's discretion	N/A – facility construction has not been initiated/ n/a mine phase
BRP-28	Verification Monitoring	<b>Goose Main Tailings Facility</b> (discharge point for water treatment, represents post-treatment water quality)	Operations Stage 3 to Closure	A, G	At Licensee's discretion	N/A – facility construction has not been initiated/ n/a mine phase
BRP-29	Verification Monitoring	<b>TSF WRSA Pond</b> (representative of collected water quality, including landfill seepage/runoff)	Operations Stage 1 to Closure	A, G	At Licensee's discretion	N/A – facility construction has not been initiated/ n/a mine phase
BRP-30	General Monitoring	<b>Goose Southeast Inflow</b> (representative of non-contact water, PN06 from Water and Load Balance)	Operations Stage 1 to Closure	A, D	Once during freshet	N/A mine phase
BRP-40	General Monitoring	<b>Bathurst Inlet Intake</b> (intake point in marine environment for potable and industrial water withdrawal)	Construction to Closure	A, D, B	At Licensee's discretion	N/A – water was not desalinated under this Licence this month
BRP-41	General Monitoring	<b>Bathurst Inlet Discharge</b> (discharge point in marine environment for effluent from desalinization plant)	Construction to Closure	A, J	At Licensee's discretion	N/A – water was not desalinated under this Licence this month
BRP-42	Regulated Monitoring	<b>MLA Greywater</b> (discharge point for treated greywater onto land)	Construction to Closure	A, F	Prior to discharge or transfer of water	N/A – Water was not discharged under this Licence this month.
BRP-43	Regulated Monitoring	<b>MLA Fuel Tank Farm</b> (representative of collected water quality)	Construction to Closure	A, E	Prior to discharge or transfer of water	N/A – facility construction has not been initiated
BRP-44	Regulated Monitoring	<b>MLA Landfarm</b> (representative of collected water quality)	Construction to Closure	A, E	Prior to discharge or transfer of water	N/A – facility construction has not been initiated
BRP-45	Regulated Monitoring	<b>MLA Hazardous Waste Management Area</b> (representative of collected water quality)	Construction to Closure	A, E	Prior to discharge or transfer of water	N/A – facility construction has not been initiated
BRP-49	Regulated Monitoring	<b>MLA Temporary Fuel Storage Facility</b> (representative of collected water quality)	Construction	A, E	Prior to discharge or transfer of water	N/A - frozen winter conditions
BRP-51	Regulated Monitoring	<b>Goose Landfarm</b> (representative of collected water quality)	Construction to Closure	A, E	Prior to discharge or transfer of water	N/A - frozen winter conditions
BRP-52	General Monitoring	<b>MLA Pond S1</b> (intake point for potable and industrial water withdrawal)	Construction to Closure	A, D	Once per quarter when in use	N/A - water was not withdrawn from this location under this Licence this month
				B	Weekly when in use	
BRP-53	General Monitoring	<b>MLA Pond S2</b> (intake point for potable and industrial water withdrawal)	Construction to Closure	A, D	Once per quarter when in use	N/A - water was not withdrawn from this location under this Licence this month
				B	Weekly when in use	

<b>BRP-54</b>	General Monitoring	<b>MLA Lake 3</b> (intake point for potable and industrial water withdrawal)	Construction to Closure	A, D	Once per quarter when in use	N/A - water was not withdrawn from this location under this Licence this month
				B	Weekly when in use	
<b>BRP-55</b>	General Monitoring	<b>MLA Lake 4</b> (intake point for potable and industrial water withdrawal)	Construction to Closure	A, D	Once per quarter when in use	N/A - water was not withdrawn from this location under this Licence this month
				B	Weekly when in use	
<b>BRP-I-01 to BRP-I-TBD</b>	General Monitoring	<b>Interconnection Winter Ice Road Proximal Water Bodies</b> (intake points for fresh water used in the construction of the Interconnection Winter Ice Road)	Construction to Closure	B	Weekly when in use	Water use was tracked daily and a monthly summary is provided, by lake, in Table 2

\* Refers to Group Code from Water Licence 2AM-BRP1831 Schedule I Table 1

Table 2 Monthly Water Usage by Water Source, April 2019

Source			Withdrawal Limit (m <sup>3</sup> )*	Monthly Usage (m <sup>3</sup> )	Winter 2018/2019 Cumulative Usage (m <sup>3</sup> )
Lake 40	UTM N 7378706	E 385690	8,643	0	0
Lake 39	UTM N 7373635	E 387680	868,067	0	0
Lake 38	UTM N 7367973	E 3900840	5,185	0	0
Lake 37	UTM N 7367584	E 391134	1,604	0	0
Lake 36	UTM N 7364930	E 391683	293,621	0	0
Lake 34	UTM N 7351852	E 400718	17,010,361	615	6,788
Lake 33	UTM N 7343073	E 403581	2,859	0	478
Lake 32	UTM N 7340003	E 404631	56,674	150	3,048
Lake 31	UTM N 7336793	E 403071	5,334	0	83
Lake 30	UTM N 7334245	E 403433	211,044	300	1,020
Lake 29	UTM N 7332392	E 403397	23,951	105	3,825
Lake 28	UTM N 7329276	E 401911	1,512	90	835
Lake 27	UTM N 7328257	E 401915	6,992	0	0
Lake 26	UTM N 7327338	E 401382	683	15	15
Lake 25	UTM N 7326281	E 400452	80,746	360	4,068
Lake 24	UTM N 7325353	E 400617	7,597	0	0
Lake 23	UTM N 7323246	E 400275	6,103	570	1,545
Lake 22	UTM N 7231054	E 402904	59,995	0	423
Lake 21	UTM N 7318800	E 403392	39,637	45	990
Lake 20	UTM N7314226	E 404075	1,060,454	180	2,180
Lake 19	UTM N 7311911	E 401691	9,827	90	2,645
Lake 18	UTM N 7309759	E 402495	7,174	60	60
Lake 17	UTM N 731007	E 401912	15,059	75	645
Lake 16	UTM N 7308843	E 401524	128,478	600	3,535
Lake 15	UTM N 7305916	E 402441	1,239,167	270	1,430
Lake 14	UTM N7303281	E 399696	447,685	520	2,373
Lake 13	UTM N 7298909	E 399919	237,327	628	3,148
Lake 12	UTM N7293431	E 401036	88,191	555	1,080
Lake 11	UTM N7287885	E 404204	359,780	585	960
Lake 10	UTM N7284074	E 407857	15,112	1,991	2,014
Lake 9	UTM N 7280643	E411983	98,188	3,821	3,821
Lake 8	UTM N7277741	E 418218	53,703	1,073	1,073
Lake 7	UTM N7276631	E 418218	113,798	1,140	1,140
Lake 6	UTM N 7277136	E 419314	424,972	540	540
Lake 5	UTM N 7277346	E 421197	25,362	353	353
Lake 4	UTM N 7275521	E 422778	19,379	0	0
Lake 3	UTM N 7273459	E 425284	79,375	1,185	1,185
Lake 2	UTM N 7273318	E 427649	53,507	855	855
Lake 1	UTM N7272263	E 428691	39,603	2,093	2,093
<b>Total</b>				<b>18,862</b>	<b>54,242</b>

\*Refers to lake-specific withdrawal limits based on methodology outlined in Sabina's ice road construction technical memorandum.

Total winter ice road water use is not to exceed 675 m<sup>3</sup>/km/year