



NUNAVUT WATER BOARD

WATER LICENCE NO: 2AM-BRP1831



TABLE OF CONTENTS

PART A:	SCOPE, DEFINITIONS AND ENFORCEMENT	1
1.	SCOPE	1
2.	DEFINITIONS	4
3.	ENFORCEMENT	4
PART B:	GENERAL CONDITIONS	4
PART C:	CONDITIONS APPLYING TO SECURITY	7
PART D:	CONDITIONS APPLYING TO CONSTRUCTION AND OPERATION	11
PART E:	CONDITIONS APPLYING TO WATER USE AND MANAGEMENT	14
PART F:	CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT	16
PART G:	CONDITIONS APPLYING TO MODIFICATIONS	20
PART H:	CONDITIONS APPLYING TO EMERGENCY RESPONSE AND CONTINGENCY PLANNING	21
PART I:	CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING	22
PART J:	CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE	25
SCHEDULES	27
Schedule A:	Scope, Definitions, and Enforcement	28
Schedule B:	General Conditions	38
Schedule D:	Conditions Applying to Construction	41
Schedule I:	Conditions Applying to General and Aquatic Effects Monitoring	42



Licence No. 2AM-BRP1831

Pursuant to the Nunavut Waters and Nunavut Surface Rights Tribunal Act and the Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada, the Nunavut Water Board, hereinafter referred to as the Board, hereby grants to

SABINA GOLD & SILVER CORP.

(Licensee)


#1800 – 555 BURRARD STREET. BOX 220 VANCOUVER, BC V7X 1M9

(Mailing Address)

hereinafter called the Licensee, the right to alter, divert or otherwise use water or deposit waste for a period subject to restrictions and conditions contained within this Licence:

Licence Number/Type:	2AM-BRP1831 / Type "A"
Water Management Area:	QUEEN MAUD GULF WATERSHED (30)
Location:	BACK RIVER PROJECT, KITIKMEOT REGION, NUNAVUT
Purpose:	WATER USE AND DEPOSIT OF WASTE
Description:	MINING UNDERTAKING
Quantity of Water not to be Exceeded:	578,000 CUBIC METRES ANNUALLY, 1,400,000 CUBIC METRES ANNUALLY FOR DEWATERING AND 675 CUBIC METRES PER KILOMETER PER YEAR FOR THE INTERCONNECTION WINTER ICE ROAD
Date of Issuance:	SEPTEMBER 21, 2018
Expiry of Licence:	DECEMBER 31, 2031

This Licence issued (Motion Number 2018-11-P19-06) and recorded at Gjoa Haven, Nunavut includes and is subject to the annexed conditions.


Lootie Toomasie
Nunavut Water Board
Chair

APPROVED 
BY: Minister of Crown-Indigenous Relations

DATE **NOV 06 2018**
LICENCE
APPROVED:



PART A: SCOPE, DEFINITIONS AND ENFORCEMENT

1. SCOPE

- a. This Licence authorizes the Licensee to the use of Waters and deposit of Waste in support of a Mining Undertaking classified, as per Schedule 1 of the *Regulations*, at the Back River Project as outlined in the Type “A” Water Licence Application (Application) submitted to the Nunavut Water Board (NWB) on October 4, 2017, and as reviewed throughout the regulatory process.

The Licensee may conduct mining and associated activities at the Back River Project in the Kitikmeot Region of Nunavut at the following project extents:

Project Extents	Latitude	Longitude
Back River Project Area	66° 42' N	107° 50' W
	66° 42' N	106° 11' W
	65° 29' N	106° 12' W
	65° 29' N	107° 50' W
Goose Main Camp Site	66° 38' 47.8'' N	107° 41' 19.4'' W
Marine Laydown Area Camp Site	65° 32' 27.4'' N	106° 30' 28.3'' W

In general, the scope of the activities, works and Undertakings authorized in accordance with the terms and conditions of the Licence are as follows:

For the Goose Property:

- Withdrawal and use of water from Big Lake and Goose Lake for camp, mining, construction, and associated activities;
- Dewatering of Llama Lake and Umwelt Lake;
- Quarrying of materials from specified locations;
- Operation of a camp;
- Construction, operation, maintenance of the following project components/activities:
 - Open pit mines at Llama, Umwelt, Echo, and Goose Main;
 - Underground mines at Llama, Umwelt, Echo, and Goose Main;
 - Mill;
 - Administration, warehousing, and equipment maintenance;
 - Camp;
 - Pads;
 - Quarry and borrow sites at specified locations;
 - All-weather roads and watercourse crossings;
 - Site specific Winter Ice Roads;
 - Rascal Stream Connectivity (culverts and/or channel realignment);
 - All-weather airstrip (including extension); and
 - Ice airstrip.



Nunavut Water Board | Water Licence No: 2AM-BRP1831

- Construction, operation, maintenance of the following Water Use and Management components/activities:
 - Goose Property Water Supply Facilities;
 - Watercourse crossings including pipelines, channel and bank alterations, culverts, spurs, and erosion control;
 - Flood control, diversion, alteration of flow, or storage by means of dykes or dams;
 - Runoff management for the Ore Stockpile, Waste Rock Storage Areas, laydown areas, bulk fuel storage, and other mine infrastructure;
 - Goose Property Water Treatment Facilities; and
 - Saline Water Storage.
- Construction, operation, maintenance of the following Waste Disposal and Management components/activities:
 - Goose Property Waste Management Facilities;
 - Sewage Treatment Plant;
 - Landfarm;
 - Landfills;
 - Waste Rock Storage Areas;
 - Tailings Storage Facility and Tailings Facilities; and
 - Effluent discharge.
- Construction, operation, maintenance of the following Materials Handling and Management components/activities:
 - Laydown areas;
 - Petroleum, oils, and lubricants (including bulk fuel storage);
 - Hazardous waste; and
 - Explosive storage/management.

For the Marine Laydown Area (MLA):

- Withdrawal and use of water from MLA Pond S1, Pond S2, Lake 3, and Lake 4 for camp, construction, and associated activities;
- Quarrying of materials from specified locations;
- Operation of a camp;
- Construction, operation, maintenance of the following project components/activities:
 - Administration, warehousing, and equipment maintenance;
 - Camp;
 - Pads;
 - Quarry and borrow sites at specified locations;
 - All-weather roads;
 - Site specific Winter Ice Roads; and



Nunavut Water Board | Water Licence No: 2AM-BRP1831

- Ice airstrip.
- Construction, operation, maintenance of the following Water Use and Management components/activities:
 - MLA Water Supply Facilities;
 - Watercourse crossings including pipelines, channel and bank alterations, culverts, spurs, and erosion control;
 - Flood control, diversion, alteration of flow, or storage by means of dykes or dams; and
 - Runoff management for the Ore Stockpile, Waste Rock Storage Areas, laydown areas, bulk fuel storage, and other mine infrastructure.
- Construction, operation, maintenance of the following Waste Disposal and Management components/activities:
 - MLA Waste Management Facilities;
 - MLA Wastewater Treatment Facilities;
 - Landfarm; and
 - Effluent discharge.
- Construction, operation, maintenance of the following Materials Handling and Management components/activities:
 - Floating barge terminal;
 - Laydown areas;
 - Petroleum, oils, and lubricants (including bulk fuel storage);
 - Hazardous waste; and
 - Explosive storage/management.

For the Interconnection Winter Ice Road:

- Withdrawal and use of water from source locations proximal to the Interconnection Winter Ice Road for Ice Road construction and maintenance.
- b. This Licence is issued subject to conditions contained herein with respect to the use of Waters and the deposit of Waste of any type in any Waters or in any place under any conditions where such Waste or any other Waste that results from the deposits of such Waste may enter any Waters. Whenever new Regulations are made or the existing *Regulations* are amended by the Governor in Council under the *Act*, or other statutes imposing more stringent conditions relating to the quantity, type or manner under which any such Waste may be so deposited, this Licence shall be deemed to be subject to such requirements.



Nunavut Water Board | Water Licence No: 2AM-BRP1831

- c. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with all applicable legislation, guidelines and directives.

2. DEFINITIONS

- a. The Licensee shall refer to [Schedule A](#) for definitions of terms used in this Licence.

3. ENFORCEMENT

- a. Failure to comply with this Licence may be a violation of the *Act*, subjecting the Licensee to the enforcement measures and the penalties provided for in the *Act*.
- b. All inspection and enforcement services regarding this Licence will be provided by Inspectors appointed under the *Act*.
- c. For the purpose of enforcing this Licence and with respect to the use of Waters and deposit of Waste by the Licensee, Inspectors appointed under the *Act* hold all powers, privileges and protections that are conferred upon them by the *Act* or by other applicable laws.

PART B: GENERAL CONDITIONS

1. The amount of Water use fees shall be determined and payment of those fees shall be made in accordance with section 12 of the *Regulations*.
2. The Licensee shall file an Annual Report with the Board no later than March 31st in the year following the calendar year being reported. The Annual Report shall be developed in accordance with [Schedule B](#).
3. The Licensee shall retain and have a copy of this Licence available at the site of operations at all times.
4. Any communication with respect to this Licence shall be made in writing to the attention of:

Manager of Licensing, Nunavut Water Board
P. O. Box 119
Gjoa Haven, NU X0B 1J0
Telephone: (867) 360-6338
Fax: (867) 360-6369
Email: licensing@nwb-oen.ca



5. Any notice made to an Inspector shall be made in writing to the attention of:

Water Resources Officer
Nunavut District, Nunavut Region
P.O. Box 100
Iqaluit, NU X0A 0H0
Telephone: (867) 975-4295
Fax: (867) 979-6445

6. The Licensee shall submit one (1) electronic copy of all reports, studies, and plans to the Board unless otherwise requested by the Board. Unless otherwise directed by the Board, reports or studies submitted to the Board by the Licensee shall include an executive summary in English, Inuktitut, and Inuinnaqtun.
7. This Licence is assignable as provided in Section 44 of the *Act*.
8. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the Board is received and acknowledged by the Manager of Licensing.
9. The Licensee shall submit to the Board, at least sixty (60) days prior to any of any changes in operating plans or conditions associated with this Project, written notification of such change.
10. The Licensee shall post signs in the appropriate areas to inform the public of the location of the Water Supply Facilities and the Waste Disposal Facilities. All signs must be in English, Inuktitut, and Inuinnaqtun and shall be located and maintained to the satisfaction of an Inspector.
11. The Licensee shall, for all Plans submitted under this Licence, include a proposed timetable for implementation. Plans submitted cannot be undertaken without subsequent written Board approval and direction. The Board may alter or modify a Plan if necessary to achieve the legislative objectives and will notify the Licensee in writing of acceptance, rejection or alteration of the Plan. With notice to the Board, the Licensee may rename or consolidate Plans listed in this Licence.
12. Unless otherwise directed by the Board in writing, if a Plan is not acceptable to the Board, the Licensee shall provide a revised version to the Board for review within thirty (30) days of notification by the Board.
13. The Licensee shall, for all Plans submitted under this Licence, implement the Plans as approved by the Board in writing. Any changes to the plans deemed significant shall be considered as an amendment to the plan(s) or as a modification and must be approved by the Board.



14. The Board has approved the following Plans for implementation under the relevant sections in the Licence.
 - a. *Aquatic Effects Management Plan* (October 2017);
 - b. *Borrow Pits and Quarry Management Plan* (October 2017);
 - c. *Environmental Management and Protection Plan* (October 2017);
 - d. *Fuel Management Plan* (October 2017);
 - e. *Hazardous Materials Management Plan* (October 2017);
 - f. *Incineration Management Plan* (October 2017);
 - g. *Interim Closure and Reclamation Plan* (including Interim Closure Cost Estimate) (October 2017);
 - h. *Landfarm Management Plan* (October 2017);
 - i. *Landfill and Waste Management Plan* (October 2017);
 - j. *Mine Waste Rock Management Plan* (October 2017);
 - k. *Ore Storage Management Plan* (October 2017);
 - l. *Risk Management and Emergency Response Plan* (October 2017);
 - m. *Road Management Plan* (October 2017);
 - n. *Spill Contingency Plan* (October 2017);
 - o. *Tailings Management Plan* (October 2017); and
 - p. *Water Management Plan* (October 2017).
15. The Board has accepted the following Plan for implementation under the relevant Part in the Licence.
 - a. *Quality Assurance / Quality Control Plan* (October 2017).
16. Every Plan to be carried out pursuant to the terms and conditions of this Licence shall become a part of this Licence, and any additional terms and conditions imposed upon approval of a Plan by the Board become part of this Licence. All terms and conditions of the Licence should be contemplated in the development of a Plan where appropriate.
17. The Licensee shall review the Plans referred to in this Licence as required by changes in operation and/or technology and modify the Plans accordingly. Revisions to the Plans are to be submitted in the form of an Addendum to be included with the Annual Report required by Part B, Item 2, complete with a revisions list detailing where significant content changes are made.
18. The expiry or cancellation of this Licence does not relieve the Licensee from any obligation imposed by the Licence, or any other regulatory requirement.
19. The Schedules attached to this Licence provide details regarding the requirements associated with specific items in the main body of the Licence and are included in the Schedule to provide greater clarity and as an aid to interpretation for the Licensee. 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.

20. Unless otherwise stated, references in the Licence to any specific legislation, policy, guideline or other regulatory requirement are deemed to refer to the regulatory requirement as may be amended or as may be expressly replaced by successor legislation, policy, guidelines or other regulatory requirements after the Licence is approved by the Minister.

PART C: CONDITIONS APPLYING TO SECURITY

1. The Licensee shall furnish and maintain the specified additional reclamation security amounts with the Minister under the Licence in accordance with the schedule and specific stages of infrastructure construction (as defined in Schedule A: Scope, Definitions, and Enforcement) set out below:

Timing	Stage of Infrastructure Construction	Reclamation Security to Be Added to Security Held Under the Licence For Each Stage	Total Reclamation Security For Each Stage (Licence and KIA Instruments Combined)
Within 30 days of the cancellation of Water Licence No.: 2BC-BRP1819	Pre-Existing Infrastructure	\$0	\$1,485,666
Sixty (60) days prior to construction	Initial Infrastructure	\$2,400,005	\$3,576,939
Sixty (60) days prior to construction	Umwelt Open Pit	\$3,969,014	\$7,498,853
Sixty (60) days prior to construction	Tailings Storage Facility	\$14,223,495	\$16,813,080
Sixty (60) days prior to construction	Llama Open Pit	\$3,060,990	\$6,296,575
Sixty (60) days prior to construction	Llama Underground	\$93,198	\$549,425
Sixty (60) days prior to construction	Umwelt Underground	\$1,786,555	\$2,140,925



Timing	Stage of Infrastructure Construction	Reclamation Security to Be Added to Security Held Under the Licence For Each Stage	Total Reclamation Security For Each Stage (Licence and KIA Instruments Combined)
Sixty (60) days prior to construction	Goose Main Open Pit	\$1,696,673	\$2,216,886
Sixty (60) days prior to construction	Goose Main Underground	\$720,096	\$881,832
Sixty (60) days prior to construction	Echo Open Pit and Underground	\$1,055,704	\$1,729,171
TOTAL (ALL STAGES CONSTRUCTED)		\$29,005,730	\$43,189,352

2. The Licensee shall provide confirmation in writing, in a form acceptable to the Board, that the following specified additional reclamation security amounts have been furnished to the Kitikmeot Inuit Association in accordance with the schedule and specific stages of infrastructure construction (as defined in Schedule A: Scope, Definitions, and Enforcement) as follows:

Timing	Stage of Infrastructure Construction	Reclamation Security to Be Confirmed as Added to Security Held By the KIA For Each Stage	Total Reclamation Security For Each Stage (Licence and KIA Instruments Combined)
Within 30 days of the cancellation of Water Licence No.: 2BC-BRP1819	Pre-Existing Infrastructure	\$1,485,666	\$1,485,666
Sixty (60) days prior to construction	Initial Infrastructure	\$1,176,934	\$3,576,939
Sixty (60) days prior to construction	Umwelt Open Pit	\$3,529,839	\$7,498,853
Sixty (60) days prior to construction	Tailings Storage Facility	\$2,589,585	\$16,813,080



Timing	Stage of Infrastructure Construction	Reclamation Security to Be Confirmed as Added to Security Held By the KIA For Each Stage	Total Reclamation Security For Each Stage (Licence and KIA Instruments Combined)
Sixty (60) days prior to construction	Llama Open Pit	\$3,235,585	\$6,296,575
Sixty (60) days prior to construction	Llama Underground	\$456,227	\$549,425
Sixty (60) days prior to construction	Umwelt Underground	\$354,370	\$2,140,925
Sixty (60) days prior to construction	Goose Main Open Pit	\$520,213	\$2,216,886
Sixty (60) days prior to construction	Goose Main Underground	\$161,736	\$881,832
Sixty (60) days prior to construction	Echo Open Pit and Underground	\$673,467	\$1,729,171
TOTAL (ALL STAGES CONSTRUCTED)		\$14,183,622	\$43,189,352

3. The Licensee shall furnish and maintain security with the Minister, under Part C, Item 1, in the form, of the nature, subject to such terms and conditions and in an amount prescribed by, or determined in accordance with, the Act and Regulations or that is satisfactory to the Minister.
4. The security held by the Kitikmeot Inuit Association under Part C, Item 2 shall be held for the purposes of reclamation consistent with the purposes set out in s. 76(2)(b) of the Act, and the provisions of the Act and Regulations applicable to reclamation of the Mining Undertaking described in the Licence.
5. Once the Licensee has commenced construction of all stages of infrastructure set out in Part C, Items 1 and 2 and as defined in Schedule A: Scope, Definitions, and Enforcement, the Licensee shall ensure that the security furnished and maintained under Part C, Items 1 and 2 combined is not less than **forty three million one hundred eighty-nine thousand three hundred and fifty-two dollars (\$43,189,352)**.
6. Within ten (10) days after furnishing security with the Minister under Part C, Item 1, the Licensee shall provide evidence to the NWB and the Kitikmeot Inuit Association, that the



security has been received by the Minister, indicating the amount, form, nature and conditions of the security.

7. Within ten (10) days after furnishing security with the Kitikmeot Inuit Association under Part C, Item 2, the Licensee shall provide written confirmation to the NWB and to the Minister, that the security has been received by the Kitikmeot Inuit Association, indicating the amount, form, nature and conditions of the security.
8. If the Licensee fails to provide written confirmation required under Part C, Item 7 that the required security under Part C, Item 2 has been furnished to the Kitikmeot Inuit Association, the Licensee shall, within thirty (30) days of the failure, furnish such additional security to the Minister under the Licence as is required to replace the amount that should have been held by the Kitikmeot Inuit Association.
9. The Licensee shall submit to the Board, at least ninety (90) days prior to any material changes to the Undertaking or material changes to the risk of environmental damage associated with the Undertaking that could result in a material change to the reclamation liability associated with the Undertaking (including, but not limited to, updates to the reclamation cost estimate arising from unexpected changes or modifications of the works, activities or stages of infrastructure construction associated with the Undertaking), written notification of such changes.
10. The Licensee shall submit, within the updated *Interim Closure and Reclamation Plan* as per Part J, Item 1, an updated reclamation cost estimate of the total mine closure restoration liability, using the most current version of CIRNAC's RECLAIM Reclamation Cost Estimating Model, its equivalent or other similar method approved by the Board in writing, in accordance with principles of the INAC (as CIRNAC was previously known as) "Mine Site Reclamation Policy in Nunavut" (2002).
11. The Licensee shall submit, within the Final Closure and Reclamation Plan as per Part J, Item 2, an updated reclamation cost estimate of the total mine closure restoration liability, using the most current version of CIRNAC's RECLAIM Reclamation Cost Estimating Model, its equivalent or other similar method approved by the Board in writing, in accordance with principles of the "Mine Site Reclamation Policy for Nunavut" (2002). Upon the Project entering into or being maintained in Care and Maintenance, an updated estimate of total mine closure reclamation liability shall be submitted, as above, within twelve (12) months of entering Care and Maintenance and every three (3) years thereafter.
12. Upon the Board receiving an updated reclamation cost estimate as required under Part C, Item 10 or 11, the Board may, on its own initiative, or upon application by the Licensee, the Minister and/or the Kitikmeot Inuit Association, conduct a periodic review of the outstanding reclamation liability associated with the Undertaking and may, as the Board considers appropriate, amend the amount of security held under Part C, Item 1. Any submission requesting an amendment to the security provisions of the Licence shall include supporting evidence to justify the amendment and will be processed by the Board as an amendment to the terms and conditions of the Licence.



13. The Licensee, the Minister, or the Kitikmeot Inuit Association may apply to amend the amount of security required to be held under the Licence. Any submission requesting a review of the security provisions of the Licence shall include supporting evidence to justify the amendment and will be processed by the Board as an amendment to the terms and conditions of the Licence.
14. The security referred to in Part C, Item 1 shall be maintained until such time as the Minister is satisfied that the Licensee has complied with all provisions of the approved Final Reclamation and Closure Plan and as it is fully or in part refunded by the Minister pursuant to Section 76(5) of the Act. This clause shall survive the expiry of the Licence or renewals thereof and until full and final reclamation has been completed to the satisfaction of the Minister.
15. The Licensee shall submit to the Board, at least sixty (60) days prior to construction of the Tailings Storage Facility, Llama Open Pit, Llama Underground, Umwelt Underground, Umwelt Open Pit, Goose Main Open Pit, Goose Main Underground, and Echo Open Pit and Underground, a written notification of intent to initiate a new stage of infrastructure construction as per Part C, Item 1.

PART D: CONDITIONS APPLYING TO CONSTRUCTION AND OPERATION

1. The Licensee shall implement the *Road Management Plan* and *Borrow Pits and Quarry Management Plan* as approved by the Board.
2. The Licensee shall submit to the Board for review, at least sixty (60) days prior to Construction, final design and Construction drawings accompanied with a detailed report for the following:
 - a. Water works;
 - b. Waste Disposal/management facilities; and
 - c. Bulk fuel storage facilities.
3. The detailed reports referred to in Part D, Item 2 shall include:
 - a. Design rational, requirements, criteria, parameters, standards analysis, methods, assumptions and limitations;
 - b. Site specific data and analysis to support the design and management decisions;
 - c. Geochemical analysis of Waste Rock and fill, demonstrating their Acid Rock Drainage and Metal Leaching characteristics;
 - d. Construction methods and procedures regarding how infrastructure will be put in place, including quality assurance and quality control measures and equipment to be used;
 - e. Technical specifications for sedimentation, erosion control and bank stabilization measures, including proposed materials, location and extent, place methods and quantities required;



- f. Timetable for submission, including date of Construction and proposed date of commissioning of infrastructure; and
 - g. Where required, signature and seal by the appropriately qualified Engineer.
-
- 4. The Licensee shall include in the submission under Part D, Item 2 for the Tailings Storage Facility (TSF) Dam, the results of the Infill Geotechnical Characterization Program as discussed during the Application review. This submission shall include a description of the necessary monitoring instrumentation to confirm performance of the TSF Dam.
 - 5. The Licensee shall use Waste rock and fill material for Construction only from approved sources that have been demonstrated, by appropriate geochemical analyses, to not produce Acid Rock Drainage and to be Non-Metal Leaching, and free of contaminants.
 - 6. The Licensee shall identify and demark potentially acid generating rock identified through the *Borrow Pits and Quarry Management Plan* for removal and disposal into the Waste Rock Storage Areas, or backfill in the underground mines or Tailings Storage Facility and/or Tailings Facilities or as otherwise approved by the Board.
 - 7. The Licensee shall implement sediment and erosion control measures prior to and during Construction, and Operations where necessary, to prevent entry of sediment into Water.
 - 8. The Licensee shall conduct Construction monitoring, including daily inspections, during Construction activities.
 - 9. The Licensee shall conduct visual inspections for runoff/seepage, and conduct sampling where turbidity is observed, for all construction activity during spring freshet and during and after remarkable rainfall events.
 - 10. The Licensee shall, during the construction of all engineered structures, provide the required supervision and field checks by an appropriately qualified and experienced Engineer in such a manner that the project specification can be enforced and, where required, the quality control measures can be followed. The Licensee shall maintain all construction records of all engineered structures to be made available at the request of the Board and/or an Inspector.
 - 11. The Licensee shall submit to the Board for review, within ninety (90) days of completion of each facility designed to contain, withhold, divert or retain Waters or Wastes during the construction phase, a Construction Summary Report prepared by a qualified Engineer(s) in accordance with [Schedule D, Item 1](#).
 - 12. The Licensee shall prevent any chemicals, petroleum products, fuel or wastes associated with the Undertaking from entering any waterbody.
 - 13. The Licensee shall not remove any material from below the ordinary High Water Mark of any Water body unless authorized by the Board in writing.



14. The Licensee shall minimize disturbance to terrain, permafrost and drainage during movement of contractor's equipment and personnel around the site during construction activities.
15. The Licensee shall not store material on the surface of frozen streams or lakes except what is for immediate use.
16. The Licensee shall locate equipment storage areas on gravel, sand or other durable land, a distance of at least thirty-one (31) metres above the ordinary High Water Mark of any waterbody in order to minimize impacts on surface drainage and water quality, unless otherwise authorized by the Board in writing.
17. The Licensee shall undertake appropriate corrective measures to mitigate impacts on surface drainage resulting from the Licensee's operations.
18. The Licensee shall limit any in-stream activity to low Water periods. In-stream activity is prohibited during fish migration.
19. The Licensee shall, for the purposes of bridge construction, ensure that all activities remain outside of the natural channel width by the placement of abutments, footings or armouring above the ordinary High Water Mark so that there is no restriction to the natural channel processes.
20. The Licensee shall operate the Bulk Fuel Storage Facility in accordance with all applicable legislation and industry standards, including:
 - a. Environmental Code of Practice for Aboveground and Underground Storage Tank Systems Containing Petroleum and Allied Petroleum Products, 2003 (Updated in 2013) or most recent; CCME; and
 - b. National Fire Code, 2010 or most recent.
21. All Project related surface runoff and/or discharge from drainage management systems where flow may directly or indirectly enter a waterbody, shall be sampled Weekly and not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration	Maximum Concentration of Any Grab Sample
Total Suspended Solids (TSS) (mg/L)	50.0	100.0
Oil and Grease	No Visible Sheen	No Visible Sheen
pH	Between 6.0 and 9.5	Between 6.0 and 9.5

22. The Effluent quality limits in Part D, Item 21 apply during construction activities at Monitoring Program Stations BRP-G-01 to BRP-G-TBD.



23. The Effluent quality limits in Part D, Item 21 apply during road construction and culvert installation or maintenance at Monitoring Program Stations BRP-18, BRP-19, and BRP-23 (or any replacement Monitoring Program Stations as described in an update to Schedule I).
24. The Licensee shall implement quarry seepage and runoff management in accordance with the approved *Water Management Plan*.
25. The Licensee shall consider the principles of adaptive management in construction and operations.
26. The Licensee shall direct all effluent from the dewatering of Llama Lake and Umwelt Lake to the Water Treatment Plant for treatment, or discharge to the environment if treatment is not required. The Discharge of Effluent from lake dewatering into Goose Lake at Monitoring Program Station BRP-01 (or any replacement Monitoring Program Station as described in an update to Schedule I), shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration	Maximum Concentration of Any Grab Sample
Total Suspended Solids (TSS) (mg/L)	15	30
Turbidity (NTU)	15	30
Aluminum (mg/L)	1.5	3.0
pH	Between 6.0 and 9.5	

27. The Licensee shall operate the Sewage Treatment Plant in accordance with the conditions provided in Part F, Item 4 with Effluent compliance at monitoring station BRP-17 (or any replacement Monitoring Program Station as described in an update to Schedule I), during discharge to the tundra.

PART E: CONDITIONS APPLYING TO WATER USE AND MANAGEMENT

1. The Licensee shall implement the *Water Management Plan* as approved by the Board.
2. The Licensee shall submit for Board Approval, within sixty (60) days following approval of this Licence by the Minister, a revised *Water Management Plan*. The updates are to take into account commitments made with respect to submissions received during the technical review of the Application, as well as final submissions and issues raised during the Public Hearing Process, where applicable and include at a minimum:
 - a. updated *Saline Water Management Plan* appendix; and
 - b. further detail respecting potential management and treatment options related to water quality in the effluent discharged from flooded pits and the downstream receiving environment.



3. The Licensee shall obtain fresh Water for domestic, construction, operation and associated uses or as otherwise approved by the Board in writing from the following sources at the specified volumes. Use at the Goose Property shall include mining and milling. Total combined Water Use for these purposes shall not exceed five hundred seventy-eight thousand (578,000) cubic metres *per year*.
 - a. The Licensee shall obtain fresh Water from Goose Lake at Monitoring Program Station: BPR-24 (or any replacement Monitoring Program Station as described in an update to Schedule I). The use of Waters from Goose Lake, for all purposes, shall not exceed a total of three hundred and ninety thousand (390,000) cubic metres *per year*.
 - b. The Licensee shall obtain fresh Water from Big Lake at Monitoring Program Station: BPR-12 (or any replacement Monitoring Program Station as described in an update to Schedule I). The use of Waters from Big Lake, for all purposes, shall not exceed a total of seventy-eight thousand (78,000) cubic metres *per year*.
 - c. The Licensee shall obtain fresh Water from MLA Pond S1, Pond S2, Lake 3, and Lake 4 at Monitoring Program Stations: BRP-52, BRP-53, BRP-54, BRP-55 (or any replacement Monitoring Program Stations as described in an update to Schedule I). The total combined use of Waters from MLA Pond S1, Pond S2, Lake 3, and Lake 4, for all purposes, shall not exceed a total of one hundred and ten thousand (110,000) cubic metres *per year*.
4. The Licensee shall obtain fresh Water from Llama Lake and Umwelt Lake for the purposes of dewatering the lakes at Monitoring Program Stations: BRP-02 and BRP-06 (or any replacement Monitoring Program Stations as described in an update to Schedule I). Total combined Water Use for this purpose shall not exceed one million four hundred thousand (1,400,000) cubic metres *per year* during dewatering (Construction Phase).
5. The Licensee shall obtain fresh Water from water sources proximal to the Interconnection Winter Ice Road for the purposes of construction, maintenance, and operation of the Interconnection Winter Ice Road. Total combined Water Use for this purpose shall not exceed six hundred and seventy-five (675) cubic metres *per year per kilometre* of road. Annual construction plans, including water sources and predicted volumes of water use, shall be provided as per Part E, Item 13.
6. The Licensee shall not use streams as a Water source unless authorized and approved by the Board in writing.
7. The Licensee shall equip all Water intake hoses with a screen of an appropriate mesh size to ensure that fish are not entrained and shall withdraw water at a rate such that fish do not become impinged on the screen.
8. The Licensee shall not remove any material from below the ordinary High Water Mark of any Water body unless authorized by the Board in writing.



9. The Licensee shall undertake appropriate corrective measures to prevent and/or mitigate impacts to surface Water resulting from the undertaking.
10. The Licensee shall implement sediment and erosion control measures prior to and during the undertaking to prevent entry of sediment into Water.
11. The Licensee shall implement measures to minimize the generation and deposition of dust and/or sediment into Water arising from road use.
12. The Licensee shall carry out regular inspections of all Water management structures during periods of flow and keep the records for review upon request of an Inspector. More frequent inspections may be required at the request of an Inspector. This information may be included in the Annual report required by Part B, Item 2.
13. The Licensee shall submit to the Board for review, at least sixty (60) days prior to annual Interconnection Winter Ice Road construction, a technical memorandum. The memorandum will include approximate projected routing (subject to changes year to year based on construction and operational conditions), bathymetry, depth, potential locations of possible water withdrawal, proposed volumes to be extracted, and anticipated water level decreases. The contents of the memorandum may be altered at the request of the Board. The memorandum may be submitted as an appendix to the approved *Water Management Plan*.
14. The Licensee shall submit to the Board for review, at least sixty (60) days prior to initiation of dewatering, a Dewatering Plan. The Plan may be submitted as an appendix to the approved *Water Management Plan*.
15. The Licensee shall submit to the Board for review with the 2018 Annual Report in accordance with Part B, Item 2, an updated Water and Load Balance Model as an appendix to the approved *Water Management Plan*. The updates are to take into account the following:
 - a. updated 2017-2018 baseline data collection that takes into account seasonal variation; and
 - b. updated hydrodynamic model.
16. The Water and Load Balance Model shall be reviewed periodically, to reflect changes in operations and/or technology and submit results for review with the Annual Report in accordance with Part B, Item 2 as appendix to the approved *Water Management Plan*.

PART F: CONDITIONS APPLYING TO WASTE DISPOSAL AND MANAGEMENT

1. The Licensee shall implement the *Ore Storage Management Plan, Mine Waste Rock Management Plan, Tailings Management Plan, Landfill and Waste Management Plan, Incineration Management Plan, Landfarm Management Plan, and Hazardous Materials Management Plan* as approved by the Board.



2. The Licensee shall provide at least ten (10) days' notice to the Inspector prior to any planned discharges from any Facilities. The notice shall include the estimated volume proposed for discharge and location. The Inspector and the Licensee may agree in writing to alternate notification requirements for ongoing, frequent, or regularly scheduled discharges.
3. The Licensee shall perform all land applied discharges in a manner that prevents erosion at the point of discharge and downstream.
4. The Licensee shall direct all Sewage at the Goose Property to the Sewage Treatment Plant (STP) for treatment. STP Effluent may be discharged into the Tailings Storage Facility, Tailings Facility or onto land. The Discharge of Effluent onto land from the STP, at Monitoring Program Station BRP-17 or to the Tailings Storage Facility or Tailings Facility at BRP-17A (or any replacement Monitoring Program Stations as described in an update to Schedule I) shall not exceed the following Effluent quality limits:

Parameter	Monitoring Station BRP-17	Monitoring Station BRP-17A
	Maximum Allowable Concentration (mg/L)	Maximum Allowable Concentration (mg/L)
BOD ₅	30	100
Total Suspended Solids (TSS)	35.0	120
Fecal Coliform (CFU/100 mL)	1,000	10,000
Ammonia (NH ₃ -N)	4 ^a , 8 ^b	
Phosphorus	4 ^a , 8 ^b	
Total Oil and Grease	No Visible Sheen	
pH	Between 6.0 and 9.5	
Notes: a – Maximum average concentration; b – Maximum concentration of any grab sample.		

5. The Licensee shall direct all sludge from the STP to the incinerator, the Landfarms as a soil enhancement, or as otherwise approved by the Board in writing.
6. The Licensee shall direct all Greywater at the MLA to an oil and grease separator prior to discharge to the environment. The Discharge of MLA treated greywater onto land, at



Monitoring Program Station BRP-42 (or any replacement Monitoring Program Station as described in an update to Schedule I), shall not exceed the following Effluent quality limits:

Parameter	Maximum Allowable Concentration (mg/L)
BOD ₅	100
Total Suspended Solids (TSS)	120.0
Fecal Coliform (CFU/100 mL)	10,000
Total Oil and Grease	No Visible Sheen
pH	Between 6.0 and 9.5

7. The Licensee shall submit to the Board for approval, at least ninety (90) days prior to the Construction/installation of facilities, a site-specific Operation and Maintenance Manual(s) for the Water Treatment Plant and the Sewage Treatment Plant, prepared in accordance with the “*Guidelines for the Preparation of an Operation and Maintenance Manual for Sewage and Solid Waste Disposal Facilities in the Northwest Territories; 1996*”. The Manual(s) shall include sludge management and disposal information and contingency measures in the event of plant malfunction. These Manuals may be submitted under a single cover or as separate documents.
8. The Licensee shall, for all Project related non-hazardous solid wastes, backhaul to a licenced facility, dispose of and contain at the Landfill, or dispose of as otherwise approved by the Board in writing.
9. The Licensee shall maintain records of all Waste backhauled and confirmation of proper disposal through the use of Waste manifest tracking systems and registration with the Government of Nunavut, Department of Environment.
10. The Licensee shall backhaul and dispose of all Hazardous Wastes, waste oil and non-combustible waste generated through the course of the operation at a licensed waste disposal site.
11. The Licensee shall contain and remediate all Project related petroleum hydrocarbon contaminated soils at the Goose Property Landfarm or MLA Landfarm, or as otherwise approved by the Board in writing.



12. The Discharge of Effluent onto land from the Project areas and associated Monitoring Program Stations including:

Project Area	Location	Monitoring Program Station Number
Hazardous Waste Management Area	Goose Property	BRP-16
	MLA	BRP-45
Landfarm	Goose Property	BRP-51
	MLA	BRP-44
Fuel Tank Farm	Goose Property	BRP-15
	MLA	BRP-43
Temporary Fuel Storage Facility	MLA	BRP-49

(or any replacement Monitoring Program Station as described in an update to Schedule I), shall not exceed the following Effluent quality limits:

Parameter	Maximum Average Concentration (mg/L)	Maximum Concentration of Any Grab Sample (mg/L)
pH	Between 6.0 and 9.5	Between 6.0 and 9.5
Total Suspended Solids (TSS)	15	30
Total Oil and Grease	5, No Visible Sheen	5, No Visible Sheen
Benzene	0.370	0.370
Toluene	0.002	0.002
Ethylbenzene	0.09	0.09
Lead	0.1	0.1

13. Effluent that does not meet the Effluent quality limits in Part F, Item 12, shall be directed to the Tailings Storage Facility and Tailings Facilities.
14. Unless otherwise approved by the Board in writing, the Licensee shall not open burn plastics, wood treated with preservatives, electric wire, Styrofoam, asbestos or painted wood to prevent the deposition of waste materials of incomplete combustion and/or leachate from contaminated ash residual, from impacting any surrounding waters.
15. The Licensee shall dispose of all tailings and operate the Tailings Storage Facility and Tailings Facilities in accordance with the *Tailings Management Plan*, as approved by the Board under Part B, Item 14. The Licensee shall not discharge Effluent from the any Tailings Storage Facility and Tailings Facilities under normal operating conditions, unless approved by the Board as per Part F, Item 16.
16. The Licensee shall submit to the Board for approval, at least one hundred and twenty (120) days prior to a discharge of Effluent from any tailings management facility, a Temporary Tailings Effluent Discharge Plan. This Plan must include the following:



- a. Justification for temporary discharge;
 - b. Volume, rate, and quality of discharge;
 - c. Final discharge point and characteristics of the receiving environment;
 - d. Proposed Effluent quality limits; and
 - e. Mitigation options to avoid future discharges.
17. The Licensee shall direct all Effluent from all Waste Rock Storage Areas, all Ore Stockpiles, and the ANFO Plant to the Primary Water Pond, Tailings Storage Facility, or Tailings Facility, unless otherwise approved in writing by the Board.
 18. The Licensee shall direct all Effluent from the Primary Water Pond to the Tailings Storage Facility, Tailings Facility, or the Mill for re-use unless otherwise approved in writing by the Board.
 19. The Licensee shall direct all Effluent from the MLA Desalinization Plant to the marine environment.
 20. The Licensee shall direct all Saline Water (groundwater) from underground mines, open pit mines, or storage facilities to the Saline Water Pond or to Llama Underground, Llama Reservoir, Goose Main Underground, or Umwelt Underground.

PART G: CONDITIONS APPLYING TO MODIFICATIONS

1. The Licensee may, without written consent from the Board, carry out Modifications provided that such Modifications are consistent with the terms of this Licence and the following requirements are met:
 - a. The Licensee has notified the Board in writing of such proposed Modifications at least sixty (60) days prior to beginning the Modifications;
 - b. Such Modifications do not place the Licensee in contravention of the Licence or the *Act*;
 - c. Such Modifications are consistent with the applicable terms and conditions of the NIRB Project Certificate No. 007;
 - d. The Board has not, within sixty (60) days following notification of the proposed Modifications, informed the Licensee that review of the proposal will require more than sixty (60) days; and
 - e. The Board has not rejected the proposed Modifications.
2. Modifications for which any of the conditions referred to in Part G, Item 1 have not been met can be carried out only with approval from the Board in writing.
3. Applications for modifications shall contain:
 - a. A description of the facilities and/or works to be constructed;
 - b. The proposed location of the structure(s);



- c. Identification of any potential impacts to the receiving environment;
 - d. A description of any monitoring required, including sampling locations, parameters measured, and frequencies of sampling;
 - e. A proposed schedule for construction;
 - f. Drawings of any Engineered Structures stamped by a Professional Engineer; and
 - g. Proposed sediment and erosion control measures.
4. The Licensee shall provide to the Board, within ninety (90) days of completion of the Modification, as-built plans and drawings of the Modifications referred to in this Part. These plans and drawings shall be stamped by an Engineer.

**PART H: CONDITIONS APPLYING TO EMERGENCY RESPONSE AND
CONTINGENCY PLANNING**

1. The Licensee shall implement the *Risk Management and Emergency Response Plan*, *Fuel Management Plan*, and *Spill Contingency Plan* as approved by the Board.
2. The Licensee shall prevent any chemicals, petroleum products or unauthorized Wastes associated with the Project from entering Water.
3. The Licensee shall provide secondary containment for fuel and chemical storage as required by applicable standards and acceptable industry practice.
4. The Licensee shall perform regular inspections in accordance with the Approved *Environmental Protection Plan* and *Fuel Management Plan* of petroleum products storage and containment facilities, fuel tanks and connectors, for leaks and settlement and shall keep a written log of inspections to be made available to an Inspector upon request. More frequent inspections may be requested by an Inspector.
5. If the Licensee provides notification under Part J, Item 3, the Licensee shall submit to the Board Addendums for the *Risk Management and Emergency Response Plan*, *Fuel Management Plan*, and *Spill Contingency Plan* detailing the changes in operations, personnel, responsibilities, availability of equipment and access to the site for assistance.
6. The Licensee shall keep a copy of the *Risk Management and Emergency Response Plan* and the *Spill Contingency Plan* at each site of operation.
7. The Licensee shall conduct emergency maintenance and servicing on equipment, in designated areas, and shall implement measures to collect motor fluids and other Waste to prevent and contain spills.
8. The Licensee shall, subject to Section 16 of the *Regulations*, report any unauthorized deposits or foreseeable unauthorized deposits of waste and/or discharges of Effluent, and:
 - a. Employ the *Spill Contingency Plan*;



- b. Report the incident immediately via the 24-Hour NWT/NU Spill Reporting Line (867) 920-8130 and to the Inspector at (867) 975-4295; and
 - c. For each spill occurrence, submit a detailed report to the Inspector and the NWB, no later than thirty (30) days after initially reporting the event, which includes the amount and type of spilled product, the GPS location of the spill, and the measures taken to contain and clean up the spill site.
9. The Licensee shall, in addition to Part H, Item 8, regardless of the quantity of release of a harmful substance, report to the NWT/NU Spill Reporting Line and the NWB if the release is near or into a waterbody.

PART I: CONDITIONS APPLYING TO GENERAL AND AQUATIC EFFECTS MONITORING

1. The Licensee shall implement the *Environmental Management and Protection Plan* and *Aquatic Effects Management Plan* as approved by the Board and the *Quality Assurance / Quality Control Plan* as accepted by the Board.
2. The Licensee shall submit for Board approval, prior to March 31, 2019, an updated *Aquatic Effects Management Plan*. The update shall address all comments and commitments made during the regulatory review of the Application.
3. The Licensee shall install and maintain flow meters or other such devices, or implement suitable methods required for the measuring of Water use and Effluent discharge volumes, to be operated and maintained to the satisfaction of an Inspector.
4. The Licensee shall undertake the Monitoring Program provided in the Tables 1 and 2 of [Schedule I](#).
5. The Licensee shall submit to the Board, at least sixty (60) days prior to a change in Project Phase (Construction, Operations Stage 1, Operations Stage 2, and Operations Stage 3), a written notification of the intent to change project phase. Notification may be provided separately or in accordance with the monthly monitoring report as per Part I, Item 18.
6. The Licensee shall establish the locations and GPS coordinates for all Monitoring Program Stations in consultation with an Inspector. Additional and replacement Monitoring Program Stations may be added in consultation with an Inspector.
7. The Licensee shall install signs that identify Monitoring Program Stations. All signs must be in English, Inuktitut, and Inuinnaqtun and shall be located and maintained to the satisfaction of an Inspector.
8. The Licensee shall measure and record the following on a Monthly basis in cubic metres:
 - a. The volume of fresh Water obtained from Big Lake;



- b. The volume of fresh Water obtained from Goose Lake;
 - c. The volume of fresh Water obtained from MLA Pond S1, Pond S2, Lake 3, and Lake 4;
 - d. The volume of fresh Water obtained from Llama Lake and Umwelt Lake for dewatering;
 - e. The volume of fresh Water obtained from each water source for the Interconnection Winter Ice Road;
 - f. The volume of Reclaim Water obtained from the Primary Water Pond, Tailings Storage Facility and/or Tailings Facility(s) for process water at the process plant;
 - g. The estimated volume of greywater and sewage released to the environment and/or to the Tailings Storage Facility and Tailings Facilities;
 - h. The volume of sludge removed from the STP and the location and method of disposal;
 - i. The volume of effluent discharged from Landfarms and Fuel Tank Farms, and Fuel Storage Facilities; and
 - j. The estimated volume of contact water, WRSA Effluent, Ore Stockpile Effluent, or other Effluent/Water streams pumped into the Primary Water Pond, Tailings Storage Facility and/or Tailings Facilities.
9. The Licensee shall measure and record the following on a Monthly basis in tonnes:
 - a. Quantity of Waste placed within the Landfill(s) and Landfarm(s);
 - b. Tonnes of Waste Rock placed into, and total stored at, each Waste Storage Area and other locations approved by the Board;
 - c. Dry tonnes of tailings placed into, and stored at, the Tailings Storage Facility and Tailings Facilities; and
 - d. Tonnes of ore stockpiled and ore processed through the processing plant.
10. The Licensee shall undertake a geotechnical inspection, to be carried out annually by a Geotechnical Engineer, between the months of July and September. The inspection shall be conducted in accordance with the *Canadian Dam Safety Guidelines* where applicable and take into account all major earthworks and address the following:
 - a. Tailings Storage Facility and associated ponds, dams, and dykes;
 - b. Geotechnical instrumentation and associated monitoring data;
 - c. Geophysical and permafrost conditions;
 - d. Tailings Storage Facility and Tailings Facilities;
 - e. Open Pit walls;
 - f. All-weather roads and watercourse crossings;
 - g. Waste Rock Storage Area;
 - h. Landfill(s);
 - i. Landfarm(s)
 - j. Fuel Tank Farms and Fuel Storage Facilities;
 - k. Quarries and borrow pits;
 - l. Water management structures;
 - m. Underground openings;
 - n. Underground groundwater conditions;
 - o. Perimeter berms and collection ponds; and
 - p. Stream diversions;



11. The Licensee shall submit to the Board for approval, within ninety (90) days of completion of the Inspection in accordance with Part I, Item 10, the Geotechnical Engineer's Inspection Report. The Report shall include a cover letter from the Licensee outlining an implementation plan to address the recommendations of the Geotechnical Engineer.
12. The Licensee shall visually monitor and record observations in accordance with the approved *Environmental Management and Protection Plan*, to be made available to an Inspector upon request, during periods of discharge to the land at Monitoring Program Station BRP-15, BRP-16, BRP-43, BRP-44, BRP-45, BRP-49, BRP-51 (or any replacement Monitoring Program Stations as described in an update to Schedule I), as described in Part F, Item 12.
13. The Licensee shall keep a digital photographic record of all the Project's watercourse crossings before, during, and after Construction.
14. The Licensee shall maintain and implement the Quality Assurance / Quality Control Plan (QA/QC) dated October 2017 that was accepted by the Board as part of the Application.
15. The Licensee shall annually review the QA/QC Plan and modify the Plan as necessary. Proposed changes shall be submitted to an Accredited Laboratory for approval.
16. All analyses shall be conducted as described in the most recent edition of "*Standard Methods for the Examination of Water and Wastewater*" or by other such methods approved by an Analyst.
17. All compliance analyses shall be performed in an accredited laboratory according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
18. The Licensee shall submit to the Board, within thirty (30) days following the month being reported, a Monthly Monitoring Report. The Report shall include:
 - a. All data and information required by this Part and generated by the Monitoring Program in the Tables of Schedule I;
 - b. An assessment of data to identify areas of non-compliance with regulated discharge parameters referred to in this Licence; and
 - c. Reports should document conditions during spring freshet, major rain events, and periods of sustained precipitation including flow measurements, photographs, and notes.
19. As noted in Part B, Item 19, changes to the Schedules, including Schedule I, which provides details of the Monitoring Program, may, at the Board's discretion, be considered without requiring an Amendment to the Licence. However, the Board must approve any changes to the Monitoring Program, as outlined in Part I and Schedule I; any request for changes to the Monitoring Program should be submitted to the NWB in writing, and should include the justification for the change.
20. Additional monitoring may be imposed by the Inspector.



PART J: CONDITIONS APPLYING TO ABANDONMENT, RECLAMATION AND CLOSURE

1. The Licensee shall implement the approved *Interim Closure and Reclamation Plan*. The Licensee shall submit to the Board for approval within twelve (12) months following the commencement of the Operation Phase an updated *Interim Closure and Reclamation Plan*.
2. The Licensee shall submit to the Board for approval, at least twelve (12) months prior to the expected end of planned mining, a Final Closure and Reclamation Plan. The Final Closure and Reclamation Plan shall incorporate revisions, which reflect the pending closed status of the mine, and include:
 - a. Soil Quality Remediation Objectives reflecting the applicable *CCME Guidelines* and the *Government of Nunavut Environmental Guideline for Site Remediation*;
 - b. Environmental Site Assessment plans in accordance with the applicable Canadian Standards Association (CSA) criteria; and
 - c. An evaluation of the human health and ecological risks associated with the Closure options proposed.
3. The Licensee shall submit to the Board, at least sixty (60) days prior to, or as soon as practically possible, written notification of the Licensee's intention to enter into a Care and Maintenance Phase.
4. The Licensee shall provide the Board, within thirty (30) days of the Licensee providing notice of intent to enter into Care and Maintenance under Part J, Item 3, a Care and Maintenance Plan that details the Licensee's plans for maintaining compliance with the Terms and Conditions of the Licence.
5. The Licensee shall, should the Project remain, or be in Care and Maintenance, submit an updated estimate of total mine closure restoration liability, within twelve (12) months of entering Care and Maintenance and every three (3) years thereafter.
6. The Licensee shall review the Plans referred to in this Part as required by changes in operation and/or technology and modify the Plans accordingly. Revisions to the Plans should incorporate design changes and adaptive engineering required and implemented during Construction and reflect actual site conditions and monitoring results over the life of the Project.
7. The Licensee shall include, with the Plan submitted under Part J, Items 1, 2, and 5, an updated reclamation cost estimate of the total mine closure restoration liability, using the most current version of CIRNAC's RECLAIM Reclamation Cost Estimating Model, its equivalent or other similar method approved by the Board in writing, in accordance with principles of the INAC (as CIRNAC was previously known as) "Mine Site Reclamation Policy in Nunavut" (2002).



8. The Licensee shall complete all reclamation work in accordance with the Plan(s) referred to in this Part, as and when approved by the Board in writing.
9. The Licensee shall implement Progressive Reclamation of any component of the Project no longer required by the Project.
10. The Licensee shall remove any culverts and restore, as practicable, the drainage to match the natural channel. Measures shall be implemented to minimize erosion and sedimentation.
11. All roads and airstrip, if any, shall be re-graded, as practicable, to match natural contours to reduce erosion.
12. Areas that have been contaminated by hydrocarbons from normal fuel transfer procedures shall be reclaimed to meet objectives as outlined in the Government of Nunavut's *Environmental Guideline for Site Remediation*, (2010 version or current version in place at the time of Reclamation).
13. To the extent practical, the Licensee shall contour and stabilize all disturbed areas to a pre-disturbed state upon completion of work.
14. The Licensee shall submit to the Board, at least sixty (60) days prior to the Licensee intending to seek Recognized Closed Mine status for the Project, written notification of the intent to seek closure status.



Schedule A: Scope, Definition, and Enforcement

Schedule B: General Conditions

Schedule C: No Schedule for Security

Schedule D: Conditions Applying to Construction

Schedule E: No Schedule for Water Use and Management

Schedule F: No Schedule for Waste Disposal and Management

Schedule G: No Schedule for Modifications

Schedule H: No Schedule for Emergency Response and Contingency Planning

Schedule I: Conditions Applying to General and Aquatic Effects Monitoring

Schedule J: No Schedule for Abandonment, Reclamation and Closure



Schedule A: Scope, Definitions, and Enforcement

In this Licence: **2AM-BRP1831**

“Abandonment” means the permanent dismantlement of a facility so it is permanently incapable of its intended use. This includes the removal of associated equipment and structures;

“Act” means the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“Acid Rock Drainage (ARD)” means the production of acidic leachate, seepage or drainage from underground workings, open pits, ore piles, waste rock, construction rock that can lead to the release of metals to land, groundwater or surface water during the life of the Project and after Closure;

“Acutely Lethal Effluent” means acutely lethal effluent as defined in the *Metal and Diamond Mining Effluent Regulations* SOR/2002-222 dated June 6, 2002, last amended on December 8, 2017 and as may be further amended from time to time;

“Adaptive Management” means a management plan that describes a way of managing risks associated with uncertainty and provides a flexible framework for mitigation measures to be implemented and actions to be taken when specified thresholds are exceeded;

“Addendum” means the supplemental text that is added to a full plan or report, usually included at the end of the document and is not intended to require a full resubmission of the revised report. It may also be considered as an appendix or supplement;

“Amendment” means a change to any terms and conditions of this Licence through application to the NWB, requiring a change, addition, or deletion of specific terms and conditions of the Licence not considered as a modification;

“Analyst” means an Analyst designated by the Minister under section 85 (1) of the *Act*;

“ANFO Plant” means the explosives storage and preparation facility for production of ammonium nitrate fuel oil (ANFO) explosives and includes the ANFO truck wash facility;

“Annually” means, in the context of monitoring frequency, one sampling event occurring every 365 days with a minimum of 200 days between sampling events;

“Application” for the purposes of this Licence includes the totality of relevant documents filed by the Licensee on the NWB and NIRB public registries in support of the Water Licence application filed in October 2017 and includes all documents subsequently submitted to the Board throughout the regulatory process;



“Appurtenant Undertaking” means an undertaking in relation to which a use of water or a deposit of Waste is permitted by a licence issued by the Board;

“Board” means the Nunavut Water Board established under Article 13 of the *Nunavut Agreement* and under section 14 of the *Act*;

“Borrow Pits” - means sites where materials, such as gravel or sand, are excavated for the purposes of constructing site infrastructure and facilities;

“Canadian Council of the Minister of Environment (CCME)” means the organization of the Canadian Ministers of Environment that sets guidelines for environmental protection across Canada such as the *Canadian Water Quality Guidelines for the Protection of Aquatic Life*;

“Care and Maintenance” in respect of a mine, means the status of the facility when the Licensee ceases gold production (Operations Phase) temporarily for an undefined period of time;

“Chief Administrative Officer” means the Executive Director of the Nunavut Water Board;

“Chief Executive Officer” means the Chair or Chairperson of the Nunavut Water Board;

“Closure” means when an Operator ceases operations at a facility without the intent to resume mining activities in the future;

“Closure Phase” means that period of time after the Operations Phase where the Project is no longer producing gold, there is no intention to resume mining activities, and reclamation and remediation of all mine facilities is undertaken. The Closure Phase is not within the scope of this Licence;

“Construction Phase” means that period of time where the Project facilities and infrastructure are under construction prior to producing gold during the Operation Phase. This phase can be broken into early construction and late construction. The Late Construction phase starts when the Saline Water Pond is ready for use;

“Contact Water” means any water that may be physically or chemically affected by mining activities, including all runoff and seepage from WRSA, Ore Stockpiles and other mine facilities;

“Dam Safety Guidelines” means the *Canadian Dam Association (CDA) Dam Safety Guidelines (DSG)*, (published in 2007, revised in 2013 or subsequent approved editions);

“Deleterious Substances” means a substance as defined in section 34(1) of the Federal *Fisheries Act*;

“Deposit” means the placement of waste rock, tailings or other solids materials on land or in water;

“Discharge” means the release of any water or waste to the receiving environment;



“Domestic Waste” means all solid waste generated from the accommodations, kitchen facilities and all other site facilities, excluding those Hazardous Wastes associated with the Project;

“Echo Open Pit and Underground” collectively means the Echo Open Pit and Echo Underground works;

“Echo Open Pit” means the open pit located adjacent to Goose Lake named the Echo Open Pit and all directly related facilities as generally described in the Application. The Echo Open Pit is general located above the Echo Underground works;

“Echo Underground” means the underground works located adjacent to Goose Lake named the Echo Underground and all directly related facilities as generally described in the Application. The Echo Underground is generally located below the Echo Open Pit;

“Effluent” means treated or untreated liquid waste material that is discharged into the environment from all site water management facilities;

“Engineer” means a professional engineer registered to practice in Nunavut in accordance with the *Consolidation of Engineers and Geoscientists Act S. Nu 2008, c.2* and the *Engineering and Geoscience Professions Act S.N.W.T. 2006, c.16 Amended by S.N.W.T. 2009, c.12*;

“Engineered Structure” means any facility, which was designed and approved by a Professional Engineer registered with the Association of Professional Engineers, Geologists and Geophysicists of Nunavut;

“Environmental Assessment” means, in respect of the Project, all material filed with the Nunavut Impact Review Board (NIRB) on the NIRB’s Public Registry (established under the authority of Article 12 of the *Nunavut Agreement*) that is associated with the NIRB’s impact assessment (Review) of the Project and associated with the scope of the activities, works and Undertakings authorized in accordance with the terms and conditions of the Licence;

“Final Discharge Point” in respect of an effluent, means, as defined in the *Metal and Diamond Mining Effluent Regulations*, SOR/2002-222 (as may be amended from time to time) an identifiable discharge point of a mine beyond which the operator of the mine no longer exercises control over the quality of the effluent;

“Fuel Storage Facility” means the fuel storage areas consisting of multiple double walled tanks, temporary berms, and all associated infrastructure;

“Fuel Tank Farm” means the fuel storage areas consisting of multiple large permanent tanks, engineered secondary containment areas, and all associated infrastructure;

“Geotechnical Engineer” means a professional engineer registered with the Association of Professional Engineers, Geologist and Geophysicists of Nunavut and whose principal field of specialization is the engineering properties of earth materials in dealing with manmade structures



and earthworks. Such structures and earthworks can include shallow and deep foundations, retaining walls, dams, and embankments;

“Goose Main Open Pit” means the open pit located adjacent to Goose Lake named the Goose Main Open pit and all directly related facilities as generally described in the Application. The Goose Main Open Pit is generally located above the Goose Main Underground works;

“Goose Main Underground” means the underground works located adjacent to Goose Lake named the Goose Main Underground and all directly related facilities as generally described in the Application. The Goose Main Underground is generally located below the Goose Main Open Pit;

“Goose Property” means the area adjacent to Goose Lake where the mining and milling operations for the Back River Project are located as generally described in the Application;

“Goose Property Waste Management Facilities” means the facilities at the Goose Property designed to sort and manage wastes such that combustible wastes are incinerated, Hazardous Wastes are stored prior to trans-shipping to the MLA, and non-combustible waste is sorted and/or stored prior to either trans-shipping to the MLA or disposal in an approved Landfill at the Goose Property;

“Goose Property Water Supply Facilities” means the facilities at the Goose Property designed to provide potable, construction, and industrial water. This includes permanent intake structures, pumps, and pipelines at Big Lake and Goose Lake;

“Goose Property Water Treatment Facilities” means the facilities at the Goose Property designed to reduce TSS and possibly address other water quality issues when dewatering Llama Lake and Umwelt Lake and then later when improving the water quality of the Goose Main Tailings Facility;

“Grab Sample” means an undiluted quantity of material collected at a particular time and place that may be representative of the total substance being sampled at the time and place it was collected;

“Greywater” means the component of effluent produced from domestic use (i.e. washing, bathing, food preparation and laundering), but excluding sewage;

“Ground Water” means water that occupies pores and fractures in rock and soil below the ground surface in a liquid or frozen state;

“Hazardous Waste” means materials or contaminants which are categorized as dangerous goods under the *Transportation of Dangerous Good Act* 1992 (1992, c. 34) and/or that are no longer used for their original purpose and are intended for recycling, treatment, disposal or storage;

“High Water Mark” means the usual or average level to which a body of water rises at its highest point and remains for a sufficient time so as to change the characteristics of the land (ref.



Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities);

“ICP Metals Scan” means elements detected using Inductively Coupled Plasma (ICP) mass spectrometer. Metal parameters chosen to be included in an ICP Metals Scan under the Licence should be consistent with baseline data previously collected and include any metals of concern or interest;

“Incinerator” means the controlled-air, batch, dual chamber incinerator at the MLA or the Goose Property as described in the *“Incineration Management Plan”* dated October 2017;

“Initial Infrastructure” means all Project facilities and infrastructure not directly related to the open pit mines or underground mines that is not existing or under construction as of the date this Licence was issued. This includes facilities for water management, waste management, milling, mine operations, fuel storage, and materials handling;

“Inspector” means an Inspector designated by the Minister under section 85 (1) of the *Act*;

“Interconnection Winter Ice Road” means the annual temporary winter ice road and associated water crossings intended to provide a seasonal transportation route between the Marine Laydown Area and the Goose Property as generally described in the Application;

“Interim Closure and Reclamation Plan” means a conceptual detailed plan addressing the Reclamation of mine components which will not be closed until the end of the mining operations, and operational detail for components which are to be progressively reclaimed throughout the mine life;

“Landfarm” means the facilities designed to remediate hydrocarbon contaminated soils located at the Goose Property and the Marine Laydown Area as generally described in the Application;

“Landfill” means the facility designed to contain non-salvageable, non-organic, non-hazardous solid waste from mining activities that cannot be incinerated located at the Goose Property as generally described in the Application;

“Licence” means this Type “A” Water Licence 2AM-BRP1831, issued by the Nunavut Water Board in accordance with the *Act*, to Sabina Gold & Silver Corp. (Sabina) for the Back River Project;

“Licensee” means the entity to whom the Licence is issued or to whom the Licence is subsequently assigned;

“Llama Open Pit” means the open pit located within the footprint of Llama Lake named the Llama Open Pit and all directly related infrastructure as generally described in the Application. The Llama Open Pit is generally located above the Llama Underground works;



“Llama Reservoir” means the waterbody at Closure that fills the Llama Open Pit and the previous Llama Lake;

“Llama Underground” means the underground works located within the footprint of Llama Lake named the Llama Underground and all directly related infrastructure as generally described in the Application. The Llama Underground is generally located below the Llama Open Pit;

“Marine Laydown Area (MLA)” means the Project area on the southwest shore of Bathurst Inlet intended to act as a connection to marine transport, as generally described in the Application;

“MLA Water Supply Facilities” means the facilities at the MLA designed to provide potable, construction, and industrial water as generally described in the Application. This includes temporary pumps and transportable tanks for withdrawal of water from MLA Pond S1, Pond S2, Lake 3 and Lake 4; and the desalination plant, marine water intake, and marine water discharge;

“MLA Waste Management Facilities” means the facilities at the MLA designed to sort and manage wastes such that combustible wastes are incinerated, Hazardous Wastes are stored prior to shipping South to an approved waste management facility, and non-combustible waste is sorted and/or stored prior to either shipping South to an approved waste management facility or shipping to the Goose Property for disposal in an approved Landfill, as generally described in the Application;

“MLA Wastewater Treatment Facilities” means facilities at the MLA designed to reduce the TSS of greywater prior to discharge to land as generally described in the Application. No sewage is treated at the MLA;

“Maximum Average Concentration” means the average concentration of any four consecutively collected samples taken from the identical sampling location and taken during any given timeframe;

“Maximum Monthly Mean” means the average concentration of all samples collected over a thirty day period from the identical sampling location;

“Metal Leaching” means the mobilization of metals into solution under neutral, acidic or alkaline conditions;

“Minister” means the Minister of Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC, formerly the Minister of Indigenous and Northern Affairs Canada);

“Modification” means an alteration to a physical work that introduces a new structure or eliminates an existing structure and does not alter the purpose or function of the work;

“Monitoring Program” means the program to collect data on surface water and Ground Water quality to assess impacts to the environment of an appurtenant Undertaking;



“Monthly” means, in the context of monitoring frequency, one sampling event occurring every thirty (30) days with a minimum of twenty one (21) days between sampling events;

“Non-Contact Water” means the runoff originating from areas unaffected by mining activity that does not come into contact with developed areas;

“Nunavut Agreement” means the *“Agreement Between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in Right of Canada,”* including its preamble and schedules, and any amendments to that agreement made pursuant to it;

“Operations” means the set of activities associated with mining, ore processing and recovery of gold; excluding Construction, decommissioning and permanent Closure activities;

“Operations Phase” means the period of time when the Project is producing gold. This phase is preceded by the Construction Phase and followed by the Closure Phase;

“Operations Phase Stage 1” means the period of time when the Project is producing gold and tailings deposit is occurring in the Tailings Storage Facility;

“Operations Phase Stage 2” means the period of time when the Project is producing gold and tailings deposit is occurring in the Umwelt Tailings Facility;

“Operations Phase Stage 3” means the period of time when the Project is producing gold and tailings deposit is occurring in the Goose Main Tailings Facility;

“Operator” means the person who operates, has control or custody of, or is in charge of a mine or recognized closed mine;

“Ore Stockpile” means a pile of mined ore placed at an underground mine laydown area or adjacent to the plant for later processing through the plant;

“Post-Closure Phase” means that period of time after the Closure Phase where confirmatory water quality, stability, aquatic effects, and ecosystem monitoring is conducted in order to ensure closure objectives have been met. The Post-Closure Phase is not within the scope of this Licence;

“Primary Water Pond” means the contact water pond located between the Llama WRSA and Umwelt WRSA designed to be a gathering point for contact water from the Goose Property mine infrastructure including WRSA(s), Ore Stockpiles, and open pits, as generally described in the Application;

“Progressive Reclamation” means actions that can be taken during mining operations before permanent Closure, to take advantage of cost and operating efficiencies by using the resources available from mine operations to reduce the overall reclamation costs incurred. It enhances environmental protection and shortens the timeframe for achieving the final Reclamation objectives and goals;



“Project” means the Back River Project as outlined in the Final Environmental Impact Statement and supplemental information submitted by Sabina Gold & Silver Corp. (Sabina) to the Nunavut Impact Review Board (NIRB) as well as the associated Water Licence Application, Supporting Documents, and Technical Meeting Information Supplement documents submitted by Sabina to the NWB throughout the regulatory process;

“Quarry or Quarries” means the areas of surface excavation for extracting rock material for use as construction materials in the development of infrastructure and facilities;

“Quality Assurance / Quality Control (QA/QC)” Quality Assurance means the system of activities designed to better ensure that quality control is done effectively; Quality Control means the use of established procedures to achieve standards of measurement for the three principle components of quality: precision, accuracy and reliability;

“Receiving Environment” means both the aquatic and terrestrial environments that receive any discharge resulting from the Project;

“Reclaim Water” means contact water, treated sewage, and tailings supernatant that is used in the Mill to offset intake of fresh water from the environment for the same use;

“Reclamation” means the process of returning a disturbed site to its natural state or one for other productive uses that prevents or minimizes any adverse effects on the environment or threats to human health and safety;

“Recognized Closed Mine” means a recognized closed mine as defined in the *Metal and Diamond Mining Effluent Regulations*, SOR/2002-222 (as may be amended from time to time);

“Regulations” means the *Nunavut Waters Regulations*, SOR/2013-69;

“Remediation” means the removal, reduction, or neutralization of substances, wastes or hazardous material from a site in order to prevent or minimize any adverse effects on the environment and public safety now or in the future;

“Saline Water Pond” means the facilities designed to store saline water (groundwater) at the site of the dewatered Umwelt Lake and the berms, dams, dykes intended to increase the capacity of the dewatered lake, as generally described in the Application;

“Saline Water Storage” means the facilities designed to store saline water (groundwater) including the Saline Water Pond and various mined out underground works, as generally described in the Application;

“Secondary Containment” means an impermeable structure, external to and separate from primary containment, which prevents unplanned spills of hazardous materials and provides a minimum capacity of 110% of the original vessel. Where multiple vessels are stored within the containment, it must provide a minimum capacity equal to the sum of the largest vessel and 10%



of the aggregate volume of all other vessels located in the containment. This structure shall also provide containment and control of hoses and nozzles;

“Seepage” means any water that drains through or escapes from any structure designed to contain, withhold, divert or retain water or waste. Seepage also includes any flows that have emerged through open pits, runoff from Waste Rock Storage Areas, ore stockpile areas, quarries, Landfill or Landfarm areas;

“Sewage” means all toilet wastes and greywater;

“Sewage Treatment Plant” means the package sewage treatment plant located at the Goose Property Plant Site as described in the Application document entitled *Landfill and Waste Management Plan* dated October 2017;

“Short Term Maximum” means the maximum concentration of all samples collected over a 24 hour period, or less, taken from the identical sampling location;

“Soil Quality Remediation Objectives (SQROs)” means the numerical concentration established as target value for soil quality remediation for contaminated sites as determined with guidance provided by the *Canadian Council of Ministers of the Environment (CCME)*;

“Sump” means a structure or depression that collects, controls, and filters liquid waste before it is released to the environment. This structure should be designed to prevent erosion while allowing percolation of liquid waste;

“Tailings Facility” means an open pit that is utilized to store tailings, waste rock, and/or acts as a water management facility as generally described in the Application;

“Tailings Storage Facility” means the purpose-built above ground facility designed to store tailings, waste rock and/or act as a water management facility as generally described in the Application;

“Traditional Knowledge” means the practical knowledge that has been gathered through the experience of living in close contact with nature and has been passed along or communicated orally, and handed down from generation to generation;

“Umwelt Open Pit” means the open pit located adjacent to Umwelt Lake named the Umwelt Open Pit and all directly related infrastructure as generally described in the Application. The Umwelt Open Pit is generally located above the Umwelt Underground works;

“Umwelt Underground” means the underground works located adjacent to Umwelt Lake named the Umwelt Underground and all directly related infrastructure as generally described in the Application. The Umwelt Underground is generally located below the Umwelt Open Pit;

“Undertaking or Undertakings” means an undertaking or undertakings in respect of which Water is to be used or Waste is to be deposited, as classified in Schedule 1 of the *Regulations*;



“Use” means use as defined in section 4 of the *Act*;

“Waste” means waste as defined in section 4 of the *Act*;

“Waste Disposal Facilities” means all facilities designated for the disposal of waste including: Goose Property Sewage Treatment Plant, Water Treatment Plant, Landfill, and Waste Rock Storage Area(s), Hazardous Waste Management Areas, Tailings Storage Facility, Tailings Facilities; Incinerators, as generally described in the Application;

“Waste Rock” means all unprocessed rock materials that are or were produced as a result of mining operations and that have no current economic value;

“Waste Rock Storage Area(s)” means facilities designed for the storage of Waste Rock and management of runoff and seepage from the Waste Rock;

“Wastewater” means the water generated by site activities or that originates on-site and that requires treatment or any other water management activity;

“Water Treatment Plant” means the facilities designed for the reduction of TSS (and other treatments if necessary) in dewatering water early in the Project and for reduction of TSS and metals in the Goose Main Tailings Facility later in the Project;

“Water” means water as defined in section 4 of the *Act*;

“Weekly” means, in the context of monitoring frequency, one sampling event occurring every 7 days with a minimum of 5 days between sampling events;

“Winter Ice Road” means a road constructed of snow or ice over land or Water.



Schedule B: General Conditions

The Annual Report referred to in Part B, Item 2, shall include:

CONSTRUCTION

1. For the dikes, dams and structures constructed to withhold water or waste:
 - a. An overview of methods and frequency used to monitor deformations, Seepage and geothermal responses;
 - b. A comparison of measured versus predicted performance;
 - c. A discussion of any unanticipated observations including changes in risk and mitigation measures implemented to reduce risk;
 - d. As-built drawings of all mitigation works undertaken;
 - e. Any changes in the design and/or as-built condition and respective consequences of any changes to safety, water balance and water quality;
 - f. Data collected from instrumentation used to monitor earthworks and an interpretation of that data;
 - g. A summary of maintenance work undertaken as a result of settlement or deformation of dikes and dams; and
 - h. The monthly and annual quantities of Seepage from dikes and dams in cubic metres.

WATER

2. Monthly and annual volume of fresh Water obtained from all sources.
3. Summary of Interconnection Winter Ice Road plans implemented in accordance with Part E, Item 13.
4. Summary of Dewatering Plans implemented in accordance with Part E, Item 14.
5. Summary update to the Water and Load Balance results, if any.

WASTE

6. Geochemical monitoring results including:
 - a. Operational acid/base accounting and associated test work used for Waste Rock designation (PAG and NPAG rock);
 - b. As-built volumes of Waste Rock used in construction and placed in the Waste Rock Storage Areas with estimated balance of acid generation to acid neutralization capacity in a given sample as well as metal toxicity;
 - c. All monitoring data with respect to geochemical analyses on site and related to roads and quarries;
 - d. Any Leaching observations and tests collected on pit slope and dike exposure; and
 - e. Any geochemical outcomes or observations that could imply or lead to environmental impact.
7. Volumes of ore stockpiled.



8. Summary of quantities and analysis of Seepage and runoff monitoring from the Tailings Storage Facility, Waste Rock Storage Areas, Landfill(s) and associated dikes/berms.
9. A summary report of all general Waste disposal activities including monthly and annual quantities in cubic metres of Waste generated and location of disposal.
10. Reporting of Incinerator test results including the materials burned and the efficiency of the Incinerator in relation to effects on Water and the potential Deposit of Waste into Water.

SPILLS

11. A list and description of all unauthorized discharges including volumes, spill report line identification number and summaries of follow-up action taken.

MODIFICATIONS

12. A summary of Modifications and/or major maintenance work carried out on all Water and Waste-related structures and facilities.

MONITORING

13. The results and interpretation of the Monitoring Program in accordance with Part I and Schedule I.
14. The results of monitoring related to the General and Aquatic Effects Monitoring Program in accordance with Part I Item 1.

CLOSURE

15. A summary of any progressive Closure and Reclamation work undertaken, including photographic records of site conditions before and after completion of operations, and an outline of any work anticipated for the next year, including any changes to implementation and scheduling.
16. An updated estimate of the current reclamation liability based on Project development monitoring, results of restoration research and any changes or modifications to the Appurtenant Undertaking.

PLANS/REPORTS/STUDIES

17. A summary of any studies requested by the Board that relate to Water use, Waste disposal or Reclamation, and a brief description of any future studies planned.
18. Where applicable, revisions as Addenda, with an indication of where changes have been made, for plans, reports, and manuals.
19. An executive summary in English, Inuktitut, and Inuinnaqtun of all plans, reports, or studies conducted under this Licence.



GENERAL

20. A summary of actions taken to address concerns or deficiencies listed in the inspection reports and/or compliance reports filed by an Inspector.

OTHER

21. A summary of public consultation and participation with local organizations and the residents of the nearby communities, including a schedule of upcoming community events and information sessions.
22. Any other details on Water use or Waste disposal requested by the Board by November 1st of the year being reported.



Schedule D: Conditions Applying to Construction

1. The Construction Summary Report referred to in Part D Item 11 shall include:
 - a All final design and construction drawings (must be stamped and signed by a Professional Engineer when related to an Engineered Structure).
 - b Site specific data and analysis, including Geochemical analysis of waste rocks and fills, demonstrating their Non Acid Rock Drainage and Non Metal Leaching characteristics, to support the design and management decisions;
 - c A summary of construction activities including photographic records before, during and after construction;
 - d As-built drawings;
 - e Documentation and detailed explanation of field decisions reflecting any deviations from original construction drawings and plans, and how such deviations may affect performance of engineered structures;
 - f Discussion of mitigation measures implemented during construction and effectiveness of measures taken;
 - g Monitoring undertaken in compliance with Part D and/or Part J of the Licence;
 - h Blast vibration monitoring for quarrying activities carried out in close proximity to fish bearing waters;
 - i Monitoring for sediment release from construction areas; and
 - j Monitoring and reporting on use of Water to manage dust emissions from crushing and construction activity.



Schedule I: Conditions Applying to General and Aquatic Effects Monitoring

TABLE 1 – MONITORING GROUP

Group Code	Group Descriptor	Parameters
A	Field Chemistry	pH, specific conductivity, and temperature.
B	Flow	Flow datalogger, calculated volume
C	General Surface runoff	Total Suspended Solids (TSS), Oil and Grease, pH
D	General Chemistry	<p><u>Conventional</u>: turbidity, hardness, alkalinity, calcium, chloride, fluoride, magnesium, potassium, sodium, sulphate, total dissolved solids (measured and calculated), TSS, total cyanide, free cyanide, and weak acid dissociable (WAD) cyanide.</p> <p><u>Nutrients</u>: ammonia, nitrate, nitrite, total phosphorus (TP), and dissolved organic carbon.</p> <p><u>Total and dissolved metals</u>: aluminum, arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, molybdenum, nickel, phosphate, selenium, silver, strontium, thallium, uranium, and zinc</p> <p><u>Other</u>: when required, lab pH and Conductivity</p>
E	Secondary Containment	TSS, pH, ammonia, total arsenic, total copper, total lead, total nickel, total zinc, benzene, toluene, ethylbenzene, xylene, Oil and Grease
F	Sewage	Biochemical Oxygen Demand (5-day), TSS, Fecal coliform, ammonia, phosphorus, Oil and Grease, pH
G	MDMER deleterious substances	TSS, total cyanide, total arsenic, total copper, total lead, total nickel, total zinc, and radium-226
H	MDMER toxicity	Acute toxicity (Rainbow Trout and Daphnia magna)
I	MDMER sublethal toxicity	Sublethal toxicity (Fathead Minnow or Rainbow Trout, Ceriodaphnia dubia, Lemna minor, Pseudokirchneriella subcapitata)
J	Discharge to Marine	Total Suspended Solids, Salinity, total metals (aluminum, arsenic, barium, cadmium, chromium, copper, iron, lead, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, thallium, uranium, and zinc), oil and grease, and lab pH
MDMER = Metal and Diamond Mining Effluent Regulations, SOR/2002-222 (as may be amended from time to time)		



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 Stage 1 to Operations Stage 2	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 Stage 1 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 Stage 2	A, G	At Licensee's discretion
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



Nunavut Water Board | Water Licence No: 2AM-BRP1831

Monitoring Program Station	Monitoring Type	Description	Mine Phase	Group Code	Frequency
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	Ore Stockpile 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 (discharge point for treated sewage onto land)	Construction to Closure*	A, F	Prior to discharge
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
BRP-18	General Monitoring	Llama Watershed Outflow (representative of non-contact water, PN04 from <i>Water and Load Balance</i>)	Operations Stage 1 to Closure*	A, D	Once during freshet
BRP-19	General Monitoring	Echo Outflow (representative of non-contact water). PN09 from water and load balance	Operations Stage 1 to Closure*	A, D	Once during freshet
BRP-20	Verification Monitoring	Echo Pit (representative of collected pit water prior to transfer to tailings management facility)	Operations Stage 2	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 Stage 2 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 Stage 1 to Closure*	A, D	Once during freshet
BRP-24	General Monitoring	Goose Lake Intake (intake point for potable and industrial water withdrawal)	Operations Stage 1 to Closure (early)*	B	Weekly



Nunavut Water Board | Water Licence No: 2AM-BRP1831

Monitoring Program Station	Monitoring Type	Description	Mine Phase	Group Code	Frequency
BRP-25	Verification Monitoring	Goose Pit (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
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 Stage 3 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 Stage 3 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 Stage 1 to Closure*	A, G	At Licensee's discretion
BRP-30	General Monitoring	Goose Southeast Inflow (representative of non-contact water, PN06 from <i>Water and Load Balance</i>)	Operations Stage 1 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 (discharge point for treated greywater onto land)	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



Nunavut Water Board | Water Licence No: 2AM-BRP1831

Monitoring Program Station	Monitoring Type	Description	Mine Phase	Group Code	Frequency
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
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)	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.					