



acknowledged by the Manager of Licensing.

The NWB strongly recommends that the Licensee consult the comments received by interested persons on issues identified. This information is attached for your consideration.<sup>1</sup>

Sincerely,

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Lootie Toomasie  
Nunavut Water Board  
Chair

LT/kk/rqd

Enclosure: Licence No. **2BB-MEA1828**  
Comments – DFO, ECCC, INAC

Cc: Kivalliq Distribution List

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<sup>1</sup> Fisheries and Oceans Canada (DFO), Email from January 9, 2018; Indigenous and Northern Affairs Canada (INAC), January 18, 2018; Environment and Climate Change Canada (ECCC), Email from January 18, 2018.

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## DECISION

### LICENCE No. 2BB-MEA1828

This is the decision of the Nunavut Water Board (NWB) with respect to an application for a renewal of a Water Licence made by:

#### AGNICO EAGLE MINES LIMITED

to allow for the use of water and deposit of waste during camp operations and during mineral exploration activities consisting of prospecting, geological mapping, geophysical surveys, diamond and reverse circulation drilling, trenching and quarrying, bulk sampling, water crossings installation during road construction, operation of Storm-water Management Pond, development of portal/ramp, services and operations pads, storage of waste rock and ore on pads, fuel storage, laydown/garage/office/warehouse area for the ramp at Amaruq (IVR) Camp at the Meadowbank Advanced Exploration Project, located within the Kivalliq Region, Nunavut generally at the geographical coordinates as follows:

#### Project Extents

|     |                       |                        |
|-----|-----------------------|------------------------|
| NW: | Latitude: (65° 35' N) | Longitude: (97° 40' W) |
| NE: | Latitude: (65° 35' N) | Longitude: (94° 30' W) |
| SE: | Latitude: (64° 30' N) | Longitude: (94° 30' W) |
| SW: | Latitude: (64° 30' N) | Longitude: (97° 40' W) |

#### Camp Location

Amaruq Camp:

Latitude: 65° 24' 14" N Longitude: 96° 40' 50" W

## DECISION

After having been satisfied that the activities associated with this project proposal were previously reviewed by the Nunavut Planning Commission (NPC), and the Conformity Determination 148261 issued on May 12, 2016 still applies, and the project proposal is exempt from screening by the Nunavut Impact Review Board (NIRB) under section 235 of *Nunavut Planning and Project Assessment Act* (NuPPAA) because it does not change the general scope of the original project activities previously screened by NIRB (File 11EN010) on Oct. 5, 2016, the NWB decided that the application could proceed through the regulatory process. In accordance with s. 55.1 of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* (Act) and Article 13 of the *NLCA*, public notice of the application was given and interested persons were invited to make representations to the NWB.

After reviewing the submission of the Applicant and representations made by interested persons, the NWB, having given due regard to the facts and circumstances, the merits of the submissions made to it and to the purpose, scope and intent of the *Nunavut Agreement* and of the *NWNSRTA*, decided to waive the requirement to hold a public hearing, determined that pursuant to its authority under Article 13 of the *Nunavut Agreement* and the *Act*, the Nunavut Water Board hereby grants the following renewal Licence.

**Licence No. 2BB-MEA1318 be renewed as Licence No. 2BB-MEA1828 subject to the terms and conditions contained therein. (Motion #: 2017-B1-037)**

SIGNED this 7<sup>th</sup> day of February 2018 at Gjoa Haven, NU.

Sincerely,

Lootie Toomasie  
Nunavut Water Board  
Chair

LT/kk/rqd

## **WATER LICENCE No. 2BB-MEA1828**

### **I. BACKGROUND**

On December 13, 2017, the Agnico Eagle Mines Limited submitted to the Nunavut Water Board (NWB or Board) an application for the renewal of Water Licence 2BB-MEA1318, for the Meadowbank Advanced Exploration Project. The current licence was issued/renewed by the NWB on March 7, 2013.

The current licence allows for the use of water and deposit of waste during Amaruq camp operations and activities related to exploration that include the following: treatment and disposal of greywater and sewage, fuel storage, environmental baseline data collection, prospecting, geological mapping, geophysical surveys, diamond and reverse circulation drilling, underground development and underground exploration drilling, bulk sampling, construction of pads and handling and storage of waste rock and ore on pads, water crossings' installations, trenching and quarrying at the Meadowbank Exploration Project. The overall quantity of water permitted for all purposes is 299 cubic metres per day (m<sup>3</sup>/day).

### **II. FILE PROCEDURAL HISTORY**

On June 22, 1998, a new Water Licence NWB2MEA9899 was issued by Nunavut Water Board (NWB or Board) to Cumberland Resources Ltd. (Cumberland) to allow Cumberland for the use of up to 100m<sup>3</sup>/day of water and disposal of waste associated with Meadowbank exploration drilling. After amendments on June 30 and August 5, 1999, the licence was renewed on May 2, 2000 as Water Licence NWB2MEA0002 and renewed again on May 1, 2002, as Water Licence NWB2MEA0204. This licence was amended on July 14, 2003, and renewed as Water Licence NWB2MEA0507 on April 21, 2005.

On August 1, 2007, Cumberland amalgamated with Meadowbank Mining Corporation to continue as one corporation: Agnico Eagle Mines Limited. On February 13, 2008, the renewal Water Licence 2BE-MEA0813 was issued to Agnico Eagle Mines Limited (Agnico Eagle or Licensee or Applicant) to allow for the use of up to 215m<sup>3</sup>/day of water and disposal of waste associated with Meadowbank Exploration Project. An amendment was granted by NWB on July 2, 2008, and another amendment was granted on November 9, 2011.

On March 7, 2013 the licence was renewed as Water Licence 2BE-MEA1318 with an expiry date set at March 6, 2018, to allow for the use of up to 269m<sup>3</sup>/day of water and disposal of waste associated with Meadowbank Exploration Project. Activities included camp operation, fuel storage, mineral exploration - prospecting, geological mapping, geophysical surveys, diamond drilling, baseline data collection, trenching. The Amendment 1 was issued on July 31, 2014 to allow Agnico Eagle to enclose additional exploration area and to install and operate a new exploration camp (IVR Camp). The Amendment 2 was issued on February 27, 2015 to allow for the increase of water use for drilling purposes, installation and operation of a Wastewater Treatment System "Bionest" at Amaruq (IVR) Camp, development and operation of quarries for camp construction activities, construction of a gravel road between camp and quarries, and extension of exploration boundaries. The Amendment 3 to the licence was granted by NWB on January 27, 2016, to allow Licensee for diamond drilling on two lakes based on barge, water use

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global authorization for domestic and drilling purposes, installation and operation of additional Kodiak “BIONEST Kodiak” Wastewater Treatment System, installation of additional double wall fuel and gas tanks, and increase of Amaruq (IVR) Camp capacity with additional accommodations. On December 1, 2016, the NWB granted the Amendment 4 to allow for the use of water (299m<sup>3</sup>/day) and deposit of waste during camp operations and activities during mineral exploration activities consisting of prospecting, geological mapping, geophysical surveys, diamond and reverse circulation drilling, trenching and quarrying, bulk sampling, water crossings installation during road construction, operation of Storm-water Management Pond, development/construction of portal/ramp, services and operations pads, storage of waste rock and ore on pads, fuel storage, laydown/garage/office/warehouse area for the rump at Amaruq (IVR) Camp at the Meadowbank Advanced Exploration Project. With the Amendment 4 the licence was renamed as Water Licence 2BB-MEA1318 (current licence).

### **III. RENEWAL APPLICATION**

On December 13, 2017, the NWB received an application for the renewal of Water Licence 2BB-MEA1318. The following documents were included within the renewal application:

- 160512 2BE-MEA1318 NPC Letter re Amaruq Exploration Project 148261
- 161005 2BE-MEA1318 11EN010 Screening Decision Report
- 2BB-MEA1318 Renewal English Summary
- 2BB-MEA1318 Renewal Inuktitut Summary
- 2BB-MEA1318 Water Licence Renewal Application
- 148642 - LUP - Renewal - No Conformity or Screening Required

Following an internal preliminary technical review, notice of the Renewal Application (Application) was posted and the Application was made available for general comment from December 13, 2017 to January 19, 2018. On January 9, 2018, submission was received from Fisheries and Oceans Canada (DFO), and on January 18, 2018, submissions were provided by Environment and Climate Change Canada (ECCC) and Indigenous and Northern Affairs Canada (INAC).

Based upon the results of the detailed assessment, including consideration of any potential accidents, malfunctions, or impacts to water that the overall project might have in the area, the Board approved the Application and has issued Licence 2BB-MEA1828.

### **IV. ISSUES**

The following section outlines the issues identified by the NWB and raised by interested parties and provides the background on the terms and conditions imposed within the body of the licence.

#### **Security**

In accordance with s. 76(1) of the NWNSRTA, the Board may require a Licensee to furnish and maintain security with the Minister, in a form determined by the Regulations or satisfactory to

the Minister<sup>2</sup>. Further, in a matter related to the posting of security, the Board may not issue a licence unless the Board is satisfied that the financial responsibility of the applicant, taking into account the applicant's past performance, is adequate for the mitigation measures and any costs associated with the closure or abandonment of the undertaking<sup>3</sup>. For other similar advanced exploration projects, the NWB required that reclamation security be posted<sup>4</sup>.

Within the Amendment 4 to current licence the Board included condition under Part B, Item 1, requiring the Licensee to furnish and maintain reclamation security in the amount of three million eight hundred eighty –three thousand dollars (\$3,883,000), in the form that is satisfactory to the Minister within thirty (30) days from the date of issuance of the licence.

The Licensee did not provide within the 2016 Annual Report security updates to the Board, which were to be included within the annual report required by Part B, Item 6(h) of existing licence. The Board is keeping within the renewal Licence the condition under Part B Item 1 to maintain reclamation security in the amount of three million eight hundred eighty-three thousand dollars (\$3,883,000), in the form that is satisfactory to the Minister.

### **Term of Licence**

In accordance with the *Nunavut Waters and Nunavut Surface Rights Tribunal Act* s. 45, the NWB may issue a Licence for a term not exceeding twenty-five years. In determining an appropriate term of a Water Licence, the Board considers a number of factors including, but not limited to the results of INAC site inspections and the corresponding compliance record of the Applicant, as well as intervener comments provided during the application review process.

In the renewal Application, Licensee requested a ten (10) year Licence renewal. In review of the comments received on the application, the NWB has noted that there were no concerns expressed with respect to the requested Licence term. In review of the information available during the renewal process, the NWB concurs with the Applicant that a Licence term of approximately ten (10) years could be appropriate. This term is consistent with the recent licences the NWB issued for advanced exploration projects.

The Licence duration will allow the Licensee to properly carry out the terms and conditions of the Licence and will ensure that sufficient time is given to permit the Licensee to develop, submit and implement the plans required under the Licence to the satisfaction of the NWB and carry out the proposed activities during this period.

### **Annual Reporting**

The NWB has imposed on the Licensee, the requirement to produce an Annual Report. These Reports are for the purpose of ensuring that the NWB has an accurate annual update of the Licensee's activities related to water use and waste disposal during a calendar year. This information is maintained on the Public Registry and is available to interested parties upon

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<sup>2</sup> Subsection 76(1) of the NWNSRTA states: 76(1) The Board may require an applicant, a licensee or a prospective assignee to furnish and maintain security with the Minister in the form, of the nature, subject to such terms and conditions in an amount prescribed by, or determined in accordance with, the regulations or that is satisfactory to the Minister.

<sup>3</sup> See subsection 57(b) of the NWNSRTA.

<sup>4</sup> Section 76(1) of the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, 2002.

request. A “Standardized Form for Annual Reporting” is to be used by the Licensee and is available from the NWB file transfer protocol (FTP) site under the Public Registry link at the NWB Website:

<ftp://ftp.nwb-oen.ca/other%20documents/Standardized%20Forms/>

This form provides the basis for annual reporting and format, however individual Licensees shall need to provide information in addition to that of the standard form to address project specific reporting requirements.

### **Water Use**

The licence issued/renewed on April 4, 2013, permitted a water use volume of 269m<sup>3</sup>/day that was increased to 299m<sup>3</sup>/day as per Amendment 2 and Amendment 3. Within the Amendment 4 the NWB included adjustments between water amounts for camp use and drilling/industrial use, however the overall quantity of water to be used wasn't changed. The maximum water use for the project is set at 299m<sup>3</sup>/day as described under Part C, Item 1 of the current licence.

The Licensee has not requested a change in total allowable water use as part of the renewal application. No concerns were expressed by interveners in their submissions with respect to the freshwater amount requested by the Licensee, or to the manner in which it is obtained or used. The monitoring station MEA-1 (Amaruq Camp Water Intake), raw water supply intake at Whale Tail Lake shall remain active and the Licensee shall employ accurate means of measuring water from these and any other water sources including sources proximal to drill rigs.

*In its comment, DFO stated that it is unable to assess the impacts to fish and fish habitat based on the information. To fully determine the impacts of this project on nearby aquatic species, they would require GPS coordinates for the sites of water taking ; the types of waterbodies from which water is being removed; information on the fish species and aquatic environment where the water is being taken; total volume and/or instantaneous flow measurements for the waterbodies/watercourses from which the water will be taken.*

On January 26, 2017, Agnico Eagle provided additional information regarding Whale Tail and Nemo Lakes used generally as water sources for domestic and drilling purposes, respectively.

On January 26, 2017, DFO advised the NWB that DFO is satisfied with the additional information provided.

The NWB requires that the Licensee use proper fish screens and follow DFO's measures found at the following link to avoid causing harm to fish and fish habitat:

<http://www.dfo-mpo.gc.ca/pnw-ppe/measures-mesures/measures-mesures-eng.html>

### **Waste Disposal**

#### *Waste Rock and Ore Storage*

The NWB acknowledged the inclusion within the application for Amendment 4 of the Technical

Memorandum completed by Golder Associates and entitled “*Evaluation of the Geochemical Properties of Waste Rock from the Underground Ramp, Whale Tail Underground Deposit, Amaruq Mining Project*” that presents the results of the preliminary geochemical assessment and provides recommendations on management of the waste rock from these areas. The Board noted that more information was required regarding waste rock and quarry management, specifically with respect to the management of potentially acid-generating (PAG) rock or rock with metal leaching (ML) potential.

The Board has decided to maintain under Part E, Item 6, the requirement to provide to the Board for review, at least sixty (60) days prior to construction, an Acid Rock Drainage and Metal Leaching (ARD-ML) Characterization Plan for Amaruq Site, including underground and operations and quarrying. The Board also acknowledges that the application for a Type “A” Water Licence 2AM-WTP---- which is currently before the Board for the development of Whale Tail Pit, included an Operational ARD/ML Sampling and Testing Plan – Whale Tail Pit Addendum.

#### *Waste Water Disposal*

The Amendment 4 application indicated that the services pad to hold infrastructure supporting underground development, laydown, bulk sample and the operational pad to hold piles of waste rock, aggregate and crusher, will be engineered such that all surface runoff is directed in one direction to simplify water management. Licensee indicated at that time that *the services pad will drain to the northwest to enter the drainage path from storm water management pond A-P5. The “Water Management and Water Balance Related to Amaruq Exploration Portal/Ramp Program, Quarry and Advanced Underground Exploration and Bulk Sample Amaruq Exploration Site, Nunavut” stated that all contact water (i.e. in A-P5 pond or Quarry 1) that does not meet Type B discharge criteria will be captured, monitored and stored in A-P5, prior to discharge. Based on the water balance results, the storm water storage pond A-P5 will be the main infrastructure of containment for contact water and has the capacity to store 180% of the overall projected contact water volumes between June 2018 and the end of 2020.*

The NWB has maintained all monitoring requirements regarding discharge from Storm-water Management Pond A-P5 at Monitoring Station MEA-4. All Effluent discharged from Storm-water Management Pond A-P5 and from trench-water containments and quarry sumps shall be carried out in accordance with Part D, Item 1 of the renewed Licence.

#### *Sewage Disposal*

The Board notes that Amendment 4 application package indicated that two “Bionest” Wastewater Treatment Systems (WWTS) will be installed in addition to existing three WWTS to increase the wastewater treatment capacity from 33,500 L/day to 53,500 L/day.

Previous licence included effluent quality criteria for the final point of control and compliance (MEA-2) for the WWTS effluent based on the generally accepted interpretation of Table 4.1 of the *Guidelines for the Discharge of Treated Municipal Wastewater in the Northwest Territories, 1992*, and to be consistent with similar licences with sewage treatment systems and discharges. The effluent quality criteria for the final point of control and compliance (MEA-2) are included within the renewal Licence as well.

The Licensee is advised that Part D, Item 18, requiring to provide a notification to Inspector prior to effluent release is applicable to the Wastewater Treatment System only prior to the beginning of continuous discharge once the treatment system is set up and operational.

## **OTHER**

### **Environmental Management**

#### *Spill Contingency Plan*

The Board notes that the Application for Amendment 4 already included an updated Spill Contingency Plan entitled “*Spill Contingency Plan Exploration Camp, Drill Sites, Portal/Ramp and Quarry*” dated March 2016 with additions regarding the development of a portal/ramp and quarry operations. This Plan was approved by the Board with the issuance of Amendment 4.

#### *Abandonment and Restoration Plan*

The application for Amendment 4 included also an updated Abandonment and Restoration Plan entitled: “*Conceptual Closure and Reclamation Plan & Reclaim Estimate*” Version 6, March 2016 with updates including the addition of the portal/ramp, two dormitory wings, two “Bionest” sewage treatment plants, two pads to be constructed with waste rock, a quarry, and a reclamation cost estimate. This Plan was also approved by the Board with the issuance of Amendment 4.

### **Monitoring**

To ensure consistency with other comparable advanced exploration and bulk sampling projects in Nunavut, the Board required within the Amendment 4 that the Licensee establish, implement and report on the Monitoring Program outlined in Part J of the licence. The Board advised that all Effluent discharged from Storm-water Management Pond A-P5 and Trench-water containment ponds shall be monitored at the Monitoring Station MEA-4.

The Board also included monitoring requirements for the run-off and/or discharge from the quarry sites to receiving environment in addition to the monitoring requirements associated with drillings.

The Licensee is advised that all monitoring requirements are applicable to the renewed Licence 2BB-MEA1828.

The Licensee was required to submit to the Board for review within the 2016 Annual Report, a Quality Assurance/Quality Control Plan (QA/QC) prepared in accordance with and in consultation with the accredited laboratory conducting the analyses, and to include a cover letter from the accredited laboratory, confirming approval of the Plan for analyses to be performed under this Licence. The Board acknowledges and is satisfied that this information has been included within the 2016 Annual Report.

### **Other Applicable Legislation**

The Licensee is directed to the written submissions received during the public review period, specifically to the comments received from Environment and Climate Change Canada (ECCC),

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Fisheries and Oceans Canada (DFO) and Indigenous and Northern Affairs Canada (INAC). The Licensee is reminded that compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all other applicable Federal, Territorial and Municipal legislation.

The Board notes INAC's comment that *many amendments (increase of camp with additional accommodations, installation and operation of additional Kodiak "Bionest" Wastewater Treatment System, construction of a gravel road between camp and quarries, etc.) have been completed since 2013, and expect the Licensee to clarify the information provided under Section 11 – Classification of Primary Undertaking (extent of drilling activities, fuel and gas transportation, municipal activities, etc.). As well as having the Licensee provide us with the most updated compliance studies/reports with respect to all the major mining infrastructures and operations.*

The Board concurs with INAC observation that the project site accommodations and infrastructures have been significantly developed since 2013, and requires that the Licensee provide within 2017 Annual Report updated compliance studies/reports with respect to all major mining infrastructures and operations.

The Board also advises that the Licensee give serious consideration to INAC Inspector's recommendations, and take necessary practical steps to prevent any impacts to the environment.



## NUNAVUT WATER BOARD RENEWAL WATER LICENCE

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### WATER LICENCE No. 2BB-MEA1828

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

AGNICO EAGLE MINES LIMITED

(Licensee)

C.P. 87, 765 CH. DE LA MINE GOLDEX, VAL-D'OR QUEBEC J9P 4N9

(Mailing Address)

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

Licence Number/Type: 2BB-MEA1828 / TYPE "B"

Water Management Area: THELON / BAKER LAKE / QUOICH / BACK / WATERSHEDS  
(5 / 8 / 9 / 31)

Location: MEADOWBANK ADVANCED EXPLORATION PROJECT -  
KIVALLIQ REGION, NUNAVUT

Classification: MINING UNDERTAKING

Purpose: DIRECT WATER USE AND DEPOSIT OF WASTE

Quantity of Water use not  
to Exceed: TWO HUNDRED AND NINETY-NINE (299) CUBIC METRES  
PER DAY

Date of Licence Issuance  
/ Effective: MARCH 7, 2018

Expiry of Licence: MARCH 6, 2028

This Licence renewal, issued and recorded at Gjoa Haven, Nunavut, includes and is subject to the annexed conditions.

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**Lootie Toomasie,  
Nunavut Water Board,  
Chair**

## **PART A: SCOPE, DEFINITIONS AND ENFORCEMENT**

### **1. Scope**

This Licence allows for the use of water and the deposit of waste for a Mining Undertaking classified as per Schedule I of the Regulations at the Meadowbank Advanced Exploration Project, located approximately 70-125 km north of the Hamlet of Baker Lake within the Kivalliq Region, Nunavut. Activities associated with the project include camp operation, treatment and disposal of greywater and sewage, fuel storage, environmental baseline data collection, prospecting, geological mapping, geophysical surveys, diamond and reverse circulation drilling, underground development and underground exploration drilling, bulk sampling, construction of pads and handling and storage of waste rock and ore on pads, water crossings' installations, trenching and quarrying.

- a. This Licence is issued subject to the conditions contained herein with respect to the taking of water and the depositing 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 existing *Regulations* are amended by the Governor in Council under the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*, or other statutes imposing more stringent conditions relating to the quantity or type of waste that may be so deposited or under which any such waste may be so deposited, this Licence shall be deemed, upon promulgation of such Regulations, to be subject to such requirements; and
- b. Compliance with the terms and conditions of this Licence does not absolve the Licensee from responsibility for compliance with the requirements of all applicable Federal, Territorial and Municipal legislation.

### **2. Definitions**

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

“**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.

“**Amendment**” means a change to original terms and conditions of this Licence requiring correction, addition or deletion of specific terms and conditions of the Licence; modifications inconsistent with the terms of the set terms and conditions of the Licence;

“**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 the *Nunavut Land Claims Agreement* and the *Nunavut Waters and Nunavut Surface Rights Tribunal Act*;

“**Bulk Sampling**” means the activities described in the Application for Amendment 4 and supporting documents dated March 31, 2016.

**“Effluent”** means treated or untreated liquid waste material that is discharged into the environment from a structure such as a settling pond, landfarm or a water treatment plant;

**“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*;

**“Fuel Storage Facility”** means the fuel storage facility as described in the Application for Amendment 4 and supporting documents dated March 31, 2016;

**“Greywater”** means all liquid wastes from showers, baths, sinks, kitchens and domestic washing facilities, but does not include toilet wastes;

**“High Water Mark”** means the usual or average level to which a body of water rises at its highest point and remains for sufficient time so as to change the characteristics of the land (ref. Department of Fisheries and Oceans Canada, Operational Statement: Mineral Exploration Activities);

**“ICP Scan”** means the laboratory method for determining trace metals in water through Emission Spectroscopy using inductively coupled plasma (including from approximately 22 to 32 elements, depending on the laboratory performing the analysis);

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

**“Licensee”** means the holder of this Licence;

**“Minister”** means the Minister of Indigenous and Northern Affairs Canada (INAC)

**“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, but does not include an expansion;

**“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;

**“Regulations”** means the *Nunavut Waters Regulations* (SOR/2013/669 18th April, 2013);

**“Sewage”** means all toilet wastes and greywater;

**“Spill Contingency Plan”** means a Plan developed to deal with unforeseen petroleum and hazardous materials events that may occur during the operations conducted under the Licence;

**“Storm-water Management Pond A-P5”** means a facility designed to temporarily contain runoff from areas impacted by activities, and site infrastructure, specifically the services

and operation pads with waste rock and ore stockpiles and groundwater as described in the Application for Amendment 4, Application for Renewal and supporting documents dated March 31, 2016, and December 13, 2017, respectively;

**“Sump”** means an excavation in impermeable soil for the purpose of catching or storing water or waste;

**“Toilet Wastes”** means all human excreta and associated products, but does not include greywater;

**“Trench Water Containment”** means the lined sump or sumps, poly tank or other means of containment for water that has collected within the blasted and excavated trench(s) and subsequently removed for disposal upon confirmation of water quality;

**“Waste”** means, as defined in S.4 of the *Act*, any substance that, by itself or in combination with other substances found in water, would have the effect of altering the quality of any water to which the substance is added to an extent that is detrimental to its use by people or by any animal, fish or plant, or any water that would have that effect because of the quantity or concentration of the substances contained in it or because it has been treated or changed, by heat or other means.

**“Wastewater Treatment System (WWTS)”** means the wastewater treatment system as described in the Application for Amendment 4, Application for Renewal and supporting documents dated March 31, 2016, and December 13, 2017, respectively;

**“Water” or “Waters”** means waters as defined in section 4 of the *Act*.

**“Water Supply Facilities”** means the Fresh Water Intake and associated infrastructure as described in the Amendment Application, Application for Renewal and supporting documents dated March 31, 2016, and December 13, 2017, respectively.

### 3. **Enforcement**

- a. Failure to comply with this Licence will 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*; and
- c. For the purpose of enforcing this Licence and with respect to the use of water and deposit or discharge 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 law.

## **PART B: GENERAL CONDITIONS**

1. The Licensee shall maintain security with the Minister in the form in accordance with the Regulations, or that is satisfactory to the Minister in the amount of three million and eight hundred eighty-three thousand dollars (\$3,883,000).
2. The Licensee shall furnish and maintain such further or other amounts of security as may be required by the Board based on annual estimates of current Meadowbank Advanced Exploration Project restoration liability using the current version of RECLAIM, its equivalent or other similar method approved by the Board, in accordance with principles of INAC's "Mine Site Reclamation Policy for Nunavut" (2002).
3. The Licensee may, submit to the Board for approval, a written request for a reduction to the amount of security. The submission shall include supporting evidence to justify the request.
4. The security deposit shall be maintained until such time as the Minister is satisfied that the Licensee has complied with all provisions of the approved Abandonment and Restoration Plan. This clause shall survive the expiry of this Licence.
5. 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*.
6. The Licensee shall file an Annual Report on the Appurtenant Undertaking with the Board no later than March 31st of the year following the calendar year being reported, containing the following information:
  - a. The daily, monthly and annual quantities in cubic metres of all freshwater obtained for all purposes;
  - b. The daily, monthly and annual quantities in cubic metres of water pumped from the underground;
  - c. An estimate of the current volume of waste rock and ore stockpiled on site;
  - d. Tabular summary of all data generated under the Monitoring Program, Part J;
  - e. A summary of modification and/or major maintenance work carried out on the Water Supply Facilities, Bulk Fuel Storage and Containment Facilities, and Wastewater Treatment Facility, including all associated structures, and an outline of any work anticipated for the next year;
  - f. A list of unauthorized discharges and a summary of follow-up actions taken;
  - g. Any revisions to the Spill Contingency Plan, Water Management Plan, Waste Management Plan, Quarry Management Plan, Abandonment and Restoration Plan, as required by Part B, Item 12, submitted in the form of an Addendum;
  - h. An updated estimate of the current Meadowbank Advanced Exploration Project restoration and liability, as required under Part B, Item 2, based upon the results of the restoration research, project development monitoring, and any modifications to the site plan;
  - i. A summary of drilling/trenching activities and progressive reclamation of drill/trench sites;
  - j. Report all artesian flow occurrences as required under Part F, Item 7;
  - k. A description of all progressive and or final reclamation work undertaken, including photographic records of site conditions before, during and after completion of

- operations;
- l. A summary of any specific studies or reports requested by the Board, and a brief description of any future studies planned or proposed;
  - m. A summary of public consultation/participation, describing consultation with local organizations and residents of the nearby communities, if any were conducted; and
  - n. Any other details on water use or waste disposal requested by the Board by the 1<sup>st</sup> of November of the year being reported.
7. The Licensee shall notify the NWB of any changes in operating plans or conditions associated with this project at least thirty (30) days prior to any such change.
  8. The Licensee shall install flow meters or other such devices, or implement suitable methods required for the measuring of water volumes as required under Part J, Item 1.
  9. The Licensee shall post signs in the appropriate areas to inform the on-site personnel and public of the location of the Water Supply Facility, Wastewater Treatment System and Monitoring Stations. All signs shall be in English and Inuktitut.
  10. 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.
  11. The Licensee shall, for all Plans submitted under this Licence, implement the Plan as approved by the Board in writing.
  12. The Licensee shall review the Plans referred to in this Licence, as required by changes in operation and/or technology, and modify the Plan accordingly. Revisions to the Plans shall be submitted in the form of an Addendum to be included with the Annual Report.
  13. 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.
  14. The Licensee shall ensure a copy of this Licence is maintained at the site of operations at all times. Any communication with respect to this Licence shall be made in writing to the attention of:

**(a) 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](mailto:licensing@nwb-oen.ca)

**(b) Inspector Contact:**

Manager of Field Operations, AANDC  
Nunavut District, Nunavut Region  
P.O. Box 100  
Iqaluit, NU X0A 0H0  
Telephone: (867) 975-4295  
Fax: (867) 979-6445

15. The Licensee shall submit one paper copy and one electronic copy of all reports, studies, and plans to the Board. Reports or studies submitted to the Board by the Licensee shall include a detailed executive summary in Inuktitut (and/or Inuinnaqtun).
16. The Licensee shall ensure that any document(s) or correspondence submitted by the Licensee to the NWB is received and acknowledged by the Manager of Licensing.
17. This Licence is assignable as provided for in section 44 of the *Act*.

**PART C: CONDITIONS APPLYING TO WATER USE**

1. The Licensee shall obtain all domestic freshwater for the Amaruq Camp from Whale Tail Lake as outlined in the application. Drill/industrial water shall be obtained from local water source(s), proximal to the drilling targets as outlined in the application. The volume of water for the purposes of this Licence shall not exceed two hundred and ninety-nine (299) cubic metres *per day*.
2. The Licensee shall implement the Plan entitled: “Water Management and Water Balance related to Amaruq Exploration Portal/Ramp Program, Quarry and Advanced Underground Exploration and Bulk Sample Amaruq Exploration Site, Nunavut” dated November 15, 2016 and originally approved by the Board.
3. Streams cannot be used as a water source unless authorized and approved by the Board in writing.
4. If the Licensee requires water in sufficient volume that the source water body may be drawn down, the Licensee shall, at least thirty (30) days prior to commencement of use of water, submit to the Board for approval in writing, the following: volume required, hydrological overview of the water body, details of impacts, and proposed mitigation measures.
5. 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.
6. The Licensee shall not remove any material from below the ordinary High Water Mark of any water body unless authorized.
7. The Licensee shall not cause erosion to the banks of any body of water and shall provide necessary controls to prevent such erosion.

8. Sediment and erosion control measures shall be implemented prior to and maintained during the undertaking to prevent entry of sediment into water.

**PART D: CONDITIONS APPLYING TO WASTE DISPOSAL**

1. The Licensee shall locate areas designated for waste disposal at a minimum distance of thirty-one (31) metres from the ordinary High Water Mark of any water body such that the quality, quantity or flow of water is not impaired, unless otherwise approved by the Board in writing.
2. The Licensee shall not practice on-site land filling of domestic waste, unless otherwise approved by the Board in writing.
3. The Licensee is authorized to dispose of all acceptable food waste, paper waste and untreated wood products in an incinerator.
4. 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, unless otherwise approved by the Board in writing.
5. The Licensee shall provide to the Board, documented authorization from the community of Baker Lake, prior to the backhauling and disposal of any waste.
6. 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.
7. The Licensee shall maintain records of all waste backhauled and records of confirmation of proper disposal of backhauled waste. These records shall be made available to an Inspector upon request.
8. The Licensee shall dispose of all Greywater to a sump located a distance of at least thirty-one (31) metres above the ordinary High Water Mark of any water body, at a site where direct flow into a water body is not possible and no additional impacts are created, unless otherwise approved by the Board in writing. Upon commissioning of the Wastewater Treatment System “Bionest” (WWTS), the Licensee shall direct all Greywater to the WWTS, unless otherwise approved by Board in writing.
9. The Licensee shall collect and remove all Toilet Wastes to the Meadowbank Mine site for disposal, or contain in latrine pits or treat, using incineration, chemical, portable or composting toilets. Latrine pits shall be located at a distance of at least thirty-one (31) metres above the ordinary High Water Mark of any water body, treated with lime and covered with native material to achieve the pre-existing natural contours of the land prior to abandonment. Upon commissioning of the Wastewater Treatment System “Bionest” (WWTS), the Licensee shall direct all Toilet Wastes to the WWTS, unless otherwise

approved by Board in writing.

10. All Wastewater effluent discharged from the Wastewater Treatment System (WWTS), at Monitoring Station MEA-2 shall not exceed the following Effluent quality limits:

| Parameter                        | Maximum Concentration of any Grab Sample |
|----------------------------------|------------------------------------------|
| pH                               | 6.0 to 9.5                               |
| Biochemical Oxygen Demand (BOD5) | 80 mg/L                                  |
| Total Suspended Solids (TSS)     | 100 mg/L                                 |
| Fecal Coliforms                  | 1000 CFU/100mL                           |
| Oil and Grease                   | 5 mg/L & No visible sheen                |

11. All solid waste (sludge) from WWTS shall be disposed of in latrine pits that shall be located at a distance of at least thirty-one (31) metres above the ordinary High Water Mark of any water body, treated with lime and covered with native material to achieve the pre-existing natural contours of the land prior to abandonment.
12. The Licensee shall direct all Water accumulated in blasted or excavated trenches to a Trench Water Containment to allow for sampling prior to release. Water collected in hand-dug trenches shall be directed to a natural depression sump, as required by Part D, Item 1.
13. All Effluent discharged from Fuel Storage Facility at Monitoring Station MEA-3, shall not exceed the following Effluent quality limits:

| Parameter      | Maximum Concentration of any Grab Sample (µg/L) |
|----------------|-------------------------------------------------|
| Benzene        | 370                                             |
| Ethylbenzene   | 2                                               |
| Toluene        | 90                                              |
| Lead           | 1                                               |
| Oil and Grease | 15,000 and no visible sheen                     |

14. All Effluent discharged from Storm-water Management Pond A-P5 at Monitoring Station MEA-4 and from trench-water containments and quarry sumps shall be carried out in accordance with Part D, Item 1, directed to a natural depression where direct flow into a water body is not possible and no additional impacts are created. All Effluent discharges shall not exceed the following Effluent quality limits:

| Parameter      | Maximum Average Concentration (mg/L) | Maximum Concentration of any Grab Sample (mg/L) |
|----------------|--------------------------------------|-------------------------------------------------|
| Total Ammonia  | 16                                   | 32                                              |
| Total Arsenic  | 0.5                                  | 1.00                                            |
| Total Chloride | 1000                                 | 2000                                            |
| Total Copper   | 0.30                                 | 0.60                                            |
| Total Lead     | 0.20                                 | 0.40                                            |

|                              |                  |                  |
|------------------------------|------------------|------------------|
| Total Nickel                 | 0.50             | 1.00             |
| Total Zinc                   | 0.50             | 1.00             |
| Total Suspended Solids (TSS) | 25               | 50               |
| Total Dissolved Solids (TDS) | 1400             | 1400             |
| Oil and Grease               | No visible sheen | No visible sheen |
| pH                           | 6.0-9.5          | 6.0-9.5          |

15. All discharges shall be released in such a manner to minimize surface erosion. Upon confirming compliance required of Part D, Item 14, water to be released to the environment may be used for other industrial purposes, including use for dust suppression activities on roads and quarries as well as drilling.
16. In the event that Effluent planned for discharge exceeds the limits provided in Part D, Items 10, 13 and/or 14, the Licensee shall investigate the cause of the noted exceedance and report any findings, along with planned mitigation measures to meet these limits, prior to any discharge.
17. The Licensee shall provide at least ten (10) days' notification to an Inspector, prior to initiating the release of Effluent from any facilities in this Part. The notice shall include water quality results, an estimate of volume and the proposed receiving location.
18. The Licensee shall maintain all constructed facilities, including the Wastewater Treatment Facilities, Bulk Fuel Storage Facility, Portal/Ramp, Services and Operation Pads, Quarry and Containment Pond(s), to the satisfaction of an Inspector.

**PART E: CONDITIONS FOR CAMPS, ACCESS INFRASTRUCTURES AND OPERATIONS**

1. The Licensee shall not erect camps or store material on the surface of frozen streams or lakes including the immediate banks except what is for immediate use. Camps shall be located such as to minimize impacts on surface drainage.
2. The Licensee shall conduct all activities in such a way as to minimize impacts on surface drainage and the Licensee shall immediately undertake corrective measures in the event of any impacts on surface drainage.
3. The Licensee shall construct all winter lake and stream crossings, including ice bridges, entirely of water, ice or snow. The Licensee shall minimize disturbance by locating ice bridges in an area that requires the minimum approach grading and the shortest crossing route. Stream crossings shall be removed or the ice notched prior to spring break-up.
4. With respect to access road, pad construction or other earthworks, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed at a distance of at least thirty-one (31) metres from the ordinary High Water Mark in such a fashion that they do not enter Water.

5. The Licensee shall not mobilize heavy equipment or vehicles for trenching or other activities unless the ground surface is capable of fully supporting the equipment or vehicles without rutting or gouging. Overland travel of equipment or vehicles shall be suspended if rutting occurs.
6. The Licensee shall submit to the Board for review, at least sixty (60) days prior to construction, an Acid Rock Drainage and Metal Leaching (ARD-ML) Characterization Plan for Amaruq site, including underground and operations and quarrying.
7. The Licensee shall implement the Plan entitled: “Amaruq Gold Project Quarrying Management Plan” dated November 2015 and originally approved by the Board.
8. The Licensee shall submit to the Board for review within thirty (30) days prior to construction, issued-for-construction drawings for all engineered project infrastructures (i.e. roads, camp pad construction, water crossings) stamped by a qualified Engineer. A Construction Summary Report including as-built plans and drawings stamped by a qualified Engineer shall be submitted to the Board within ninety (90) days of completing construction undertakings.
9. The Licensee shall maintain a minimum of thirty-one (31) metres large undisturbed buffer zone between the periphery of quarry sites and the high water mark of any water body. The Licensee shall not excavate and/or remove material from the quarry beyond a depth of one (1) meter above the high water mark or above the groundwater table, to prevent the contamination of groundwater. The quarrying shall be in accordance with all applicable legislation and industry standards including the *Northern Land Use Guidelines, Pits and Quarries* (INAC, 2010).
10. Sediment and erosion control measures shall be implemented prior to and maintained during the construction and operation where necessary to prevent entry of sediment into water.
11. The Licensee shall ensure that all containment and runoff control structures are constructed and maintained to prevent escape of wastes to the surface or groundwater systems.
12. The Licensee shall limit any in-stream activity including crossing/fording to low water period. Machinery fording the watercourse to bring equipment required for construction to the opposite side is limited to a one-time event (over and back) and should occur only if an existing crossing at another location is not available or practical to use. In-stream activity is prohibited during fish migration.
13. The Licensee shall only use rock for construction that is determined to be non-acid generating and non-metal leaching.
14. The Licensee shall, for the purposes of clear span bridge installation, ensure that all activities remain outside of the natural channel width by the placement of abutments, footings or armoring above the ordinary high water mark so that there is no restriction to the natural channel processes.

15. With respect to construction or other earthworks where direct or indirect flow into a water body is possible, the deposition of debris or sediment into or onto any water body is prohibited. These materials shall be disposed a distance of at least thirty-one (31) metres from the ordinary High Water Mark in such a fashion that they do not enter the water.
16. All surface runoff during the construction of any facilities, where flow may directly or indirectly enter a water body, shall meet the following Effluent quality limits:

| Parameter              | Maximum Average Concentration (mg/L) | Maximum Concentration of Any Grab Sample (mg/L) |
|------------------------|--------------------------------------|-------------------------------------------------|
| Total Suspended Solids | 50.0                                 | 100.0                                           |

17. The Licensee shall ensure that all construction of engineered structures is supervised and field checked by an appropriately qualified and experienced Engineer in such a manner that the project specification can be enforced and, where required, and the quality control measures can be followed. The Licensee shall maintain and make available at the request of the Board and/or an Inspector, all construction records of all engineered structures.

**PART F: CONDITIONS APPLYING TO DRILLING OPERATIONS AND TRENCHING**

1. The Licensee shall not conduct any land-based drilling / trenching within thirty-one (31) metres of the ordinary High Water Mark of any water body, except drilling specified in Part F, Item 2, and unless otherwise approved by the Board in writing.
2. The Licensee is authorized to conduct land-based drilling within thirty-one (31) metres of the ordinary High Water Mark of any water body during winter conditions within the project area, as identified in the Amendment Application and associated documents received on April 8, 2011.
3. The Licensee shall, when conducting drilling within thirty-one (31) metres of the ordinary High Water Mark, carry out activities on stable ground such as frozen tundra or bedrock, to prevent disturbance to the natural ground and limit erosion and sedimentation.
4. The Licensee is authorized to conduct drilling based on barge within two lakes, as described in the Amendment Application and associated documents received in July / August, 2015.
5. The Licensee shall establish water quality conditions of adjacent Waters or Waters immediately downstream of any drilling program within thirty-one (31) metres of the ordinary High Water Mark of any water body:
  - a. prior to any such drilling program as per Part J, Item 9;
  - b. upon completion of any such drilling program; and
  - c. the summer season following any such drilling program.

6. The Licensee shall dispose of all drill waste, including water, chips, muds and salts ( $\text{CaCl}_2$ ) in any quantity or concentration, from land-based and on-ice drilling, in a properly constructed sump or an appropriate natural depression located at a distance of at least thirty-one (31) metres from the ordinary High Water Mark of any adjacent water body, where direct flow into a water body is not possible and no additional impacts are created.
7. If artesian flow is encountered, drill holes shall be immediately sealed and permanently capped to prevent induced contamination of groundwater or salinization of surface waters. The Licensee shall report all artesian flow occurrences within the Annual Report, including the location (GPS coordinates) and dates.
8. Drilling additives or mud shall not be used in connection with holes drilled through lake ice unless they are re-circulated or contained such that they do not enter the water, or are demonstrated to be non-toxic.
9. For “on-ice” drilling where drill additives are not being used, return water released must be nontoxic, and not result in an increase in total suspended solids in the immediate receiving waters, above the Canadian Council of Ministers for the Environment, Guidelines for the Protection of Freshwater Aquatic Life (i.e. 10 mg/L for lakes with background levels under 100 mg/L, or 10% for those above 100 mg/L).
10. The Licensee shall establish water quality conditions prior to and upon completion of any drilling program through lake ice.
11. The Licensee shall, during trenching activities utilizing blasting, provide mitigation measures to prevent the transport of rock material, explosives residues, sediment and other materials from entering water as required by Part C, Item 8 and Part E, Item 4.
12. The Licensee shall stockpile all overburden/topsoil generated during trenching using proper erosion prevention measures. Upon completion of operation, the Licensee shall backfill, reclaim/re-contour and re-vegetate all disturbed areas.
13. The Licensee shall provide to the Board for review, at least sixty (60) days prior to the beginning of trenching operations, a proposed Trenching Plan which shall include the following:
  - a. Size and location of trenches including GPS coordinates;
  - b. Approximate dimensions (length, width and depth) of each trench;
  - c. Proposed mitigation measures for the prevention of the transport of sediments, blasting residues, fly rock and other materials, from the trench area to nearby water bodies;
  - d. Projected volume and quality of water discharged from each trench with potential treatment required; and
  - e. Proposed monitoring program to be carried out on trench waste water prior to discharge.

## **PART G: CONDITIONS APPLYING TO MODIFICATIONS**

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1. The Licensee may, without written consent from the Board, carry out Modifications to the Water Supply Facilities and Waste Disposal Facilities 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 NIRB Screening Decision;
  - d. the Board has not, during the 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 all of the conditions referred to in Part G, Item 1 have not been met can be carried out only with written approval from the Board.
3. The Licensee shall provide as-built plans and drawings of the Modifications referred to in this Licence within ninety (90) days of completion of the Modification. These plans and drawings shall be stamped by an Engineer.

**PART H: CONDITIONS APPLYING TO SPILL CONTINGENCY PLANNING**

1. The Licensee shall implement the Plan entitled “*Amaruq Gold Project Spill Contingency Plan Meadowbank Exploration Camp, Drill Sites, Portal/Ramp and Quarry*”, updated March 2016 and originally approved by the Board.
2. The Licensee shall prevent any chemicals, petroleum products or wastes associated with the project from entering Water. All sumps and fuel caches shall be located at a distance of at least thirty-one (31) metres from the ordinary High Water Mark of any adjacent water body and inspected on a regular basis. An exception to this condition is provided for in Part H, Item 4.
3. The Licensee shall provide secondary containment for a limited fuel supply and all external pumps and motorized equipment used in drilling operations as authorized per Part F, Item 2 where drilling occurs within thirty-one (31) metres of the ordinary High Water Mark.
4. The Licensee shall conduct equipment maintenance and servicing in designated areas and shall implement special procedures (such as the use of drip pans) to manage motor fluids and other waste and contain potential spills.
5. 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 shall:
  - a. Employ the approved Spill Contingency Plan;

- b. Report the spill immediately to the 24-Hour Spill Line at (867) 920-8130 and to the Inspector at (867) 975-4295; and
- c. For each spill occurrence, submit to the Inspector, no later than thirty (30) days after initially reporting the event, a detailed report that will include 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.

**PART I: CONDITIONS APPLYING TO CLOSURE AND RECLAMATION OR TEMPORARY CLOSURE**

1. The Licensee shall implement the Plan entitled “*Conceptual Closure and Reclamation Plan & Reclaim Estimate*”, updated March 2016 and originally approved by the Board.
2. The Licensee shall complete all restoration work prior to the expiry of this Licence.
3. The Licensee shall carry out progressive reclamation of any components of the project no longer required for the Licensee’s operations.
4. The Licensee shall backfill and restore all sumps to the pre-existing natural contours of the land.
5. The Licensee shall remove from the site, all infrastructure and site materials, including all fuel caches, drums, barrels, buildings and contents, docks, water pumps and lines, material and equipment prior to the expiry of this Licence.
6. All roads and airstrip, if any, shall be re-graded to match natural contour to reduce erosion.
7. The Licensee shall remove any culverts and restore the drainage to match the natural channel. Measures shall be implemented to minimize erosion and sedimentation.
8. In order to promote growth of vegetation and the needed microclimate for seed deposition, all disturbed surfaces shall be prepared by ripping, grading, or scarifying the surface to conform to the natural topography.
9. 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. The use of reclaimed soils for the purpose of back fill or general site grading may be carried out only upon consultation and approval by the Government of Nunavut, Department of Environment and an Inspector.
10. The Licensee shall restore all drill holes, trenches and disturbed areas to natural conditions immediately upon completion of the drilling or trenching. The restoration of drill holes must include the removal of any drill casing materials and if having encountered artesian flow, the capping of holes with a permanent seal. Where drill casings cannot be removed the Licensee shall cut off the casings at ground level and identify with signage.

11. The Licensee may leave the casings on site, if it intends to continue drilling in existing casings, but shall add signaling to keep the area safe for the other territory users. The drill casings left cannot stay on the field for more than 2 years after the drilling.
12. The Licensee may store drill cores produced by the appurtenant undertaking in an appropriate manner and location at least thirty-one (31) metres above the ordinary High Water Mark of any adjacent water body, where any direct flow into a water body is not possible and no additional impacts are created.
13. The Licensee shall contour and stabilize all disturbed areas to a pre-disturbed state upon completion of work.

**PART J: CONDITIONS APPLYING TO THE MONITORING PROGRAM**

1. The Licensee shall measure and record, in cubic metres, the daily quantities of water utilized for camp at Monitoring Station MEA-1, and for drilling and other purposes.
2. The Licensee shall, at a minimum, maintain Monitoring Stations at the following locations:

| Monitoring Station | Description                                                                                  | Status                      |
|--------------------|----------------------------------------------------------------------------------------------|-----------------------------|
| MEA-1              | Amaruq (IVR) Camp Water Intake and sources for industrial/drilling                           | Volume                      |
| MEA-2              | Effluent discharged from the Wastewater Treatment System “Bionest” (WWTS)                    | Volume and Effluent Quality |
| MEA-3              | Effluent discharged from the Bulk Fuel Storage Facilities                                    | Volume and Effluent Quality |
| MEA-4              | Effluent discharged from Storm-water Management Pond A-P5 and Trench-water containment ponds | Volume and Effluent Quality |

3. The Licensee shall sample the effluent discharging from the WWTS at Monitoring Station MEA-2 prior to its release into environment in order to provide confirmation of effluent quality as required by Part D, Item 10, for the following parameters:

|                                               |                             |
|-----------------------------------------------|-----------------------------|
| pH                                            | Fecal Coliforms             |
| Biochemical Oxygen Demand (BOD <sub>5</sub> ) | Oil and Grease (and visual) |
| Total Suspended Solids (TSS)                  |                             |

4. The Licensee shall sample the effluent discharging from the Bulk Fuel Storage Facilities at Monitoring Station MEA-3 prior to its release into environment in order to provide confirmation of effluent quality as required by Part D, Item 13.
5. The Licensee shall sample the effluent discharging from Storm-water Management Pond A-P5 and other containment ponds at Monitoring Station MEA-4 prior to its release into environment in order to provide confirmation of effluent quality as required by Part D, Item 14.
6. The Licensee shall provide the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where sources of water are utilized for all purposes.
7. The Licensee shall provide the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all locations where wastes associated with camp operations and exploration activities are deposited including sump locations associated with drilling and drill casings left as stuck and cut off and for further drilling in casings.
8. The Licensee shall determine the GPS co-ordinates (in degrees, minutes and seconds of latitude and longitude) of all drill holes located within thirty-one (31) metres of the ordinary High Water Mark, as per Part F, Item 2, and provide these locations on a map of suitable scale for review as part of the annual report.
9. The Licensee shall establish background and post drilling water quality for pH, conductivity, temperature and dissolved oxygen at the nearest downstream water body to drill locations. Monitoring is to be done just prior to commencement of drilling and weekly thereafter, concluding one week after drilling has been completed and the site restored.
10. The Licensee shall obtain representative samples of the water column below any ice where required under Part F, Items 9 and 10. Monitoring shall include, at a minimum, the following:

| Group                      | Parameters                                                                                                                                                                                                             |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Physical Parameters</b> | pH, electrical conductivity, total suspended solids.                                                                                                                                                                   |
| <b>Major Ions</b>          | Calcium, chloride, magnesium, potassium, sodium, sulphate.                                                                                                                                                             |
| <b>Total Metals</b>        | Aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, copper, iron, lead, lithium, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, tin, titanium, uranium, vanadium and zinc. |

11. The Licensee shall establish baseline water quality conditions prior to drilling within thirty-one (31) metres of the ordinary High Water Mark as per Part F, Items 2 and 3. Monitoring shall include the following:

| Group                      | Parameters                                                                                                                                                                                                             |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Physical Parameters</b> | pH, electrical conductivity, total suspended solids, turbidity.                                                                                                                                                        |
| <b>Major Ions</b>          | Calcium, chloride, magnesium, potassium, sodium, sulphate.                                                                                                                                                             |
| <b>Total Metals</b>        | Aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, copper, iron, lead, lithium, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, tin, titanium, uranium, vanadium and zinc. |

12. The Licensee shall, where turbidity is observed in adjacent waters or waters immediately downstream of any drilling program conducted within thirty-one (31) metres of the ordinary High Water Mark of any water body, during summer following any such drilling program as per Part F, Item 5 (c), conduct additional monitoring of the parameters listed in Part J, Item 10 to determine whether any further mitigation is required.
13. The Licensee shall monitor runoff and/or discharge from the quarry sites to receiving environment, during blasting activities, during periods of flow and following significant precipitation events, on a monthly basis, for the following parameters:

| Group                      | Parameters                                                                                                                                                                                                             |
|----------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Physical Parameters</b> | pH (field and laboratory), temperature (field), alkalinity, bicarbonate, carbonate, electrical conductivity, hardness, hydroxide, ion balance, total dissolved solids, total suspended sediments.                      |
| <b>Nutrients</b>           | Ammonia-nitrogen, nitrate nitrogen, nitrite-nitrogen, ortho-phosphate.                                                                                                                                                 |
| <b>Major Ions</b>          | Calcium, chloride, magnesium, potassium, sodium, sulphate.                                                                                                                                                             |
| <b>Total Metals</b>        | Aluminum, antimony, arsenic, barium, beryllium, boron, cadmium, chromium, copper, iron, lead, lithium, manganese, mercury, molybdenum, nickel, selenium, silver, strontium, tin, titanium, uranium, vanadium and zinc. |

14. The Licensee shall, during periods of flow and just after a major rainfall event, conduct water quality testing immediately upstream and downstream of the water crossings, any significant water seeps in contact with the road and any flows originating from borrow pits or rock quarries on a monthly basis prior to construction, during the construction and upon completion for the parameters listed under Part J, Item 11.
15. The Licensee shall implement a water crossings visual inspection and maintenance program prior to, during spring freshet and after heavy rainfall events to identify issues related to watercourse crossings structural integrity and hydraulic function.

16. The Licensee shall annually review the approved by accredited laboratory Quality Assurance/Quality Control plan and modify it as necessary. Proposed changes shall be submitted to an accredited laboratory for approval.
17. All sampling, sample preservation and analyses shall be conducted in accordance with methods prescribed in the current edition of *Standard Methods for the Examination of Water and Wastewater*, or by such other methods approved by the Board in writing.
18. All analyses shall be performed in a laboratory accredited according to ISO/IEC Standard 17025. The accreditation shall be current and in good standing.
19. The Licensee shall include in the Annual Report required under Part B, Item 2 and in Construction Summary Report required under Part E, Item 8 all data, monitoring results and information required by this Part.
20. Additional monitoring may be requested by the Inspector.