



**Report Title:** The Nunavut Impact Review Board's 2017 – 2018 Annual Monitoring Report for the Meadowbank Gold Mine Project (NIRB File No. 03MN107) & Whale Tail Pit Project (NIRB File No. 16MN056)

**Projects:** Meadowbank Gold Mine Project (NIRB File No. 03MN107)  
Whale Tail Pit Project (NIRB File No. 16MN056)

**Project Location:** Kivalliq Region, Nunavut

**Project Owner:** Agnico Eagle Mines Ltd.  
P.O. Box 540  
Baker Lake, NU  
X0C 0A0

**Monitoring Officer:** Sophia Granchinho, M.Sc., EP

**Monitoring Period:** October 2017 – September 2018

**Date Issued:** November 7, 2018

**Cover photos:**

- 1) Baker Lake Marshalling Facility
- 2) Meadowbank Gold Mine
- 3) Haul Truck at Whale Tail
- 4) Bridge along Amaruq Haul Road

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## LIST OF ACRONYMS

Agnico Eagle	Agnico Eagle Mines Ltd.
ARD	Acid Rock Drainage
AWAR	All-weather private access road
CCME	Canadian Council of Ministers of the Environment
CIRNAC	Crown-Indigenous Relations and Northern Affairs Canada
CREMP	Core Receiving Environment Monitoring Program
DFO	Fisheries and Oceans Canada
ECCC	Environment and Climate Change Canada
EEM	Environmental Effects Monitoring
FEIS	Final Environmental Impact Statement
GN	Government of Nunavut
GN-DoE	Government of Nunavut, Department of Environment
HTO	Hunters and Trappers Organization
INAC	Indigenous and Northern Affairs Canada
KIA	Kivalliq Inuit Association
km	kilometre
MMER	Metal Mining Effluent Regulations
ML	million litre
Mt	million tonnes
NIRB	Nunavut Impact Review Board
<i>Nunavut Agreement</i>	<i>Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada</i>
<i>NuPPAA</i>	<i>Nunavut Planning and Project Assessment Act, S.C. 2013, c. 14, s. 2</i>
NWB	Nunavut Water Board
PEAMP	Post-environmental assessment monitoring program
SEMC	Socio-Economic Monitoring Committee
TSF	Tailings Storage Facility
TSS	Total suspended solids
VEC	Valued Ecosystemic Component

## 1.0 INTRODUCTION

The Nunavut Impact Review Board (NIRB or Board) was established through Articles 10 and 12 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and is responsible for the assessment of ecosystemic and socio-economic impacts of projects in the Nunavut Settlement Area pursuant to the *Nunavut Agreement*. The NIRB is responsible for post environmental assessment monitoring of projects in accordance with Part 7 of Article 12 of the *Nunavut Agreement* and s. 135 of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*).

The purpose of the NIRB's monitoring program as outlined in Section 12.7.2 of the *Nunavut Agreement* and s. 135(3) of the *NuPPAA* are:

- (a) measure the impact of the project on the ecosystemic and socio-economic environments of the designated area;
- (b) determine whether the project is carried out in accordance with the terms and conditions imposed under subsection 152(6) or set out in the original or amended project certificate;
- (c) provide the information necessary for regulatory authorities to enforce the terms and conditions of licences, permits or other authorizations that they issue in relation to the project; and
- (d) assess the accuracy of the predictions contained in the project impact statement.

As such, this report provides findings that resulted from the Board's monitoring programs for the Meadowbank Gold Mine Project from October 2017 to September 2018 and the Whale Tail Pit Project from March 2018 to September 2018.

### 1.1. PROJECT COMPONENTS

#### *1.1.1. Meadowbank Gold Mine Project*

The Meadowbank Gold Project as operated by Agnico Eagle Mines Ltd. (Agnico Eagle or the Proponent) consists of an open pit gold mine located approximately 70 kilometres (km) north of the Hamlet of Baker Lake on Inuit-owned surface lands. The project components include the Meadowbank mine site (main mine site); Vault mine site; marshalling facilities in Baker Lake; and a 110 km all-weather access road (AWAR) connecting the Hamlet of Baker Lake with the Meadowbank mine site. The main mine site is comprised of: camp facilities, mill, waste rock facility, landfill, landfarm remediation site, tailings storage facility and Portage attenuation pond, airstrip, fuel tank farm, airstrip, waste and hazardous materials storage area, incinerator and active mine areas including the Goose pit (mining ended early 2015) and the Portage pits. The Vault mine site consists of a maintenance shop, shelter/refuge facility, waste rock storage facility, water management facilities, and haul roads.

In addition to mining infrastructure and activities, ancillary Project infrastructure is located approximately two (2) km east of the hamlet of Baker Lake and consists of barge unloading facilities, a laydown storage and marshalling area, a 60 million litres (ML) fuel tank farm,

associated interconnecting roads and a 110 km AWAR from the Hamlet of Baker Lake to the Meadowbank mine site. Supplies are shipped from locations within Canada via sealift to Baker Lake where they are offloaded at Agnico Eagle's marshalling area and transported to the Meadowbank site via haul trucks along the 110 km AWAR.

### ***1.1.2. Whale Tail Pit Project***

The Whale Tail Pit Project as proposed by Agnico Eagle includes the development of an open pit gold mine located at the Amaruq property. Construction is proposed to take approximately one (1) year beginning in 2018, with operations expected to commence in early 2019 and continuing for three (3) to four (4) years, from 2019 to 2022, followed by closure of the site from approximately 2022 to 2029, ending in post-closure monitoring. Development of the pit is intended to allow for access to an estimated 8.3 million tonnes (Mt) of ore and produce 46.7 Mt of waste rock and 5.8 Mt of overburden.

Ore will be trucked from the Whale Tail site via an approximately 65 km private haul road (referred to in this report as the Amaruq haul road) at a rate of 9,000 to 12,000 tonnes per day to the existing Meadowbank Gold Mine for milling. Approximately 8.3 Mt of tailings produced from the milling process will be stored within the existing Meadowbank Gold Mine's Tailings Storage Facility (TSF).

Infrastructure used for the Whale Tail Pit Project would include Agnico Eagle's existing marine infrastructure to support open-water shipping during the construction phase and annual resupply during operations, with the mine product, doré gold bars, to be flown to market directly from site.

## **1.2. PROJECT HISTORY AND CURRENT STATUS**

On December 30, 2006 pursuant to Section 12.5.12 of the *Nunavut Agreement*, the Nunavut Impact Review Board (NIRB or Board) issued Project Certificate No. 004 for the Meadowbank Gold Mine Project (Meadowbank Project), allowing the Meadowbank Project to proceed in accordance with the Terms and Conditions issued therein. In November 2009, the NIRB formally amended Project Certificate No. 004 to include an amendment to Condition 32 pursuant to *Nunavut Agreement* 12.8.2 and an approval to change the name of the assignee from Cumberland Resources Ltd. to Agnico Eagle Mines Ltd. (NIRB 2009). In August 2016, the NIRB formally amended the Project Certificate No. 004 to include the Vault Pit Expansion Project proposal for the Project (NIRB 2016a).

In March 2018, pursuant to Section 12.5.12 of the *Nunavut Agreement* and s. 111(1) of the *NuPPAA* the NIRB issued Project Certificate No. 008 for the Whale Tail Pit Project (Whale Tail Project), allowing the Whale Tail Project to proceed in accordance with the Terms and Conditions issued therein (NIRB 2018a).

The NIRB Monitoring Officer for the Meadowbank and Whale Tail Projects along with another NIRB staff member conducted a site visit of the two (2) Projects from August 14 to August 16, 2018. Prior to the site visit, the NIRB staff held a community information session in Baker Lake on August 13, 2018 to update, discuss with, and receive feedback from community members on

the NIRB’s monitoring program for the Meadowbank Gold Mine project. This site visit report is summarized in [Appendix I](#) and the community meeting is summarized in [Appendix II](#).

### 1.2.1. Meadowbank Gold Mine Project

[Table 1](#) provides a summary of the Meadowbank Project history and current status. To summarize, Agnico Eagle acquired Cumberland Resources Ltd.’s assets which included the Meadowbank Gold Mine in early 2007. Construction of an AWA from the Hamlet of Baker Lake to the Meadowbank mine site was completed in 2008 and the road opened to mine-related transportation in March 2008. The Meadowbank Gold Mine entered the operations phase of the project in February 2010 and is currently entering its eighth year of operations.

For the 2018 year, Agnico Eagle’s mining plan is to continue to operate Portage and Vault pits at the Meadowbank mine site with a total of 12.5 million tonnes (Mt) of rock to be hauled from these two pits during the year. The mine plan consists of moving 10.1 Mt of waste rock and 2.4 Mt of ore from the open pits and 1.0 Mt of ore from the stockpiles. In its 2017 Annual Report (as required by Appendix D), Agnico Eagle indicated that Meadowbank totalled 352,256 ounces of gold and produced 276,853 ounces of silver in the year (Agnico Eagle 2018a). Agnico Eagle further noted that production at the site has been extended into 2019 due to an extension of the mine plan at Vault and Phaser pits in 2018, and the Portage Pit in 2018 and 2019 (Agnico Eagle 2018a). As presented in the 2017 Water Management Report and Plan (Agnico Eagle 2018b), active re-flooding would potentially commence in 2018 for Goose and Portage Pit, and in 2019 for Vault Pit. The first phase of the flooding sequence is planned to be completed in 2025. However, in February 2018 Agnico Eagle submitted a proposal to change the method of tailings disposal for its operations at the approved Meadowbank Gold Mine and Whale Tail Pit Gold Mine from the current practice of placing all tailings within the Meadowbank TSF to also allow future disposal of tailings in three (3) mined-out pits: Portage Pit A, Portage Pit E, and Goose Pit. Following a technical review of the proposal, the NIRB concluded that the proposed amendment to the Meadowbank Gold Mine may proceed to the licensing and permitting regulatory phase with no revisions to the existing Terms and Conditions of Project Certificate No. 004 required (NIRB 2018b).

**Table 1: Meadowbank Gold Mine Project History**

DATE	ACTIVITY
December 2006	The NIRB issued Meadowbank Project Certificate No. 004 (NIRB 2006a).
June 2007	Agnico Eagle acquired Cumberland Resources Ltd.’s assets (Agnico Eagle 2007).
March 2008	Construction of the AWA from the Hamlet of Baker Lake to the Meadowbank mine site was completed and the road opened to mine-related transportation.
June 2008	Type “A” Water Licence No. 2AM-MEA0815 issued by the Nunavut Water Board (NWB).
November 2009	The NIRB issued an amendment to the Meadowbank Project Certificate to include an amendment to Condition 32 pursuant to <i>Nunavut Agreement</i> 12.8.2 and an approval to change the name of the assignee from Cumberland Resources Ltd. to Agnico Eagle Mines Ltd. (NIRB 2009).
February 2010	Operations of the Meadowbank Gold Mine commenced.

DATE	ACTIVITY
May 2010	Amendment to the water licence issued by NWB to allow for an expansion to the Baker Lake fuel tank farm facility which included two (2) additional 10 ML fuel tanks to a combined total of six (6) 10 ML fuel tanks.
September 2010	The NIRB issued a <i>Nunavut Agreement</i> 12.4.4(a) recommendation to the then-Minister of Indian and Northern Affairs indicating that the proposed expansion to the Meadowbank airstrip project could proceed subject to additional project specific terms and conditions. Additionally, the NIRB expanded its Part 7 <i>Nunavut Agreement</i> monitoring program for the Meadowbank Project to include the airstrip expansion (NIRB File No. 10XN039).
July 2011	The NIRB issued <i>Appendix D – Meadowbank Monitoring Program</i> to Agnico Eagle in accordance with the Project Certificate (NIRB 2011). The Meadowbank monitoring program includes responsibilities for Agnico Eagle, the NIRB, and several Regulatory Authorities and government departments.
January 2013	Agnico Eagle applied to the NWB to amend the site water licence and allow for the expanded airstrip. The request indicated a revision to the original 2010 request (NIRB File No. 10XN039) which substantially reduced the impact to Third Portage Lake and included construction of the expansion during the winter season.
April 2013	The NWB approved the proposed modification to the airport expansion and the airport extension was completed (Agnico Eagle 2014).
July 2014	Agnico Eagle applied to Fisheries and Oceans Canada (DFO) for a <i>Paragraph 35(2)(b) Fisheries Act Authorization (Normal Circumstances)</i> to expand its current Vault pit operations into Phaser Lake to access additional gold deposits and defer the operations closure date later in 2017.
June 2015	Dewatering of Vault Pit completed.
April 2015	Mining activities ceased in at Bay-Goose Pit.
August 2016	The NWB granted Agnico Eagle's request to renew and amend the water licence and issued the amended Licence No. 2AM-MEA1525 for a 10-year licence period.
August 2016	Following a technical review and a public hearing, the NIRB formally approved the Vault Pit Expansion and amendment to the Project and issued an amended Meadowbank Gold Mine Project Certificate on August 19, 2016 (NIRB 2016a). Dewatering of the Phaser Lake commences.
October 2016	Dewatering and fish-out program of the Phaser Lake complete (Agnico Eagle 2017a).
December 2017	Agnico Eagle submit application to the Nunavut Planning Commission that included a proposed modification of Agnico Eagle's tailings disposal from the current method (use of current TSF) to an in-pit tailings disposal in Portage Pit A, Portage Pit E and Goose Pit.
August 2018	Following technical review of the proposed modification and reconsideration, the NIRB concluded that the proposed amendment to dispose of tailings into three (3) pits may proceed to the licensing and permitting regulatory phase with no revisions to the existing Terms and Conditions of Project Certificate No. 004 required (NIRB 2018b).

### 1.2.2. Whale Tail Pit Project

[Table 2](#) provides a summary of the Whale Tail Pit Project history and current status. To summarize, Agnico Eagle submitted information regarding the Whale Tail Pit Project proposal on May 2016 to both the Nunavut Planning Commission and the NIRB. Following a technical

review and a Final Hearing, the NIRB determined that with appropriate mitigation, management and monitoring measures, the Whale Tail Pit Project can be conducted in a manner that protects and promotes the existing and future well-being of the residents and communities of the Nunavut Settlement Area while also adequately protecting the ecosystemic integrity of the Nunavut Settlement Area. On this basis, the NIRB issued Project Certificate No. 008 for the Whale Tail Pit Project on March 15, 2018 following acceptance of the Board’s Final Hearing Report and associated recommendations by the then-Minister of Crown-Indigenous Relations and Northern Affairs, and other Responsible Ministers (NIRB 2018a). Following receipt of the Project Certificate, Agnico Eagle applied for its permits and licences and commenced the construction of the Whale Tail Pit Project with the dike across the North and South Basin of Whale Tail Lake starting in July 2018. In addition, the Amaruq haul road expansion was initiated in early June 2018.

**Table 2: Whale Tail Pit Project History**

DATE	ACTIVITY
March 2018	The NIRB issued Project Certificate No. 008 for the Whale Tail Pit Project (NIRB 2018a).
May 2018	Type “A” Water Licence No. 2AM-WTP1826 issued by the NWB.
June 2018	Expansion of the Amaruq haul road commenced.
July 2018	<i>Paragraph 35(2)(b) Fisheries Act</i> Authorization (16-HCAA-00370) issued by the DFO. Construction of Whale Tail dike commenced.
August 2018	Fish-out program of the North Basin of Whale Tail Lake commenced.

## 2.0 MONITORING ACTIVITIES

### 2.1. GENERAL REPORTING REQUIREMENTS

#### 2.1.1. Meadowbank Project Certificate No. 004

As per [Appendix III](#), Agnico Eagle demonstrated a general compliance with reporting requirements imposed through commitments resulting from the NIRB’s Review of the Meadowbank Project, including those contained in related reports, plans, and the NIRB’s Project Certificate No. 004 for the Meadowbank Project. The Proponent has provided the following updated items as required by the terms and conditions contained within the Meadowbank Project Certificate for the current monitoring period of October 2017 through September 2018 as outlined in [Table 3](#).

**Table 3: Reports submitted as required under the Meadowbank Gold Mine Project Certificate No. 004**

REPORT	SUBMISSION DATE	VERSION	RELATED PERMIT OR LICENCE
Mine Waste Rock and Tailings Management Plan	April 2018	Version 7	1) PC T&C # 15 2) Water Licence 2AM-MEA1525

REPORT	SUBMISSION DATE	VERSION	RELATED PERMIT OR LICENCE
Tailings Storage Facility - Operation, Maintenance and Surveillance Manual	February 2018	Version 8	1) PC T&C #9 2) Water Licence 2AM-MEA1525
Dewatering Dikes - Operation, Maintenance and Surveillance Manual	April 2018	Version 7	Water Licence 2AM-MEA1525
2017 Water Management Report and Plan (Appendix C2) including the Ammonia Management Plan and the Freshet Action Plan	April 2018		1) PC T&C #12 2) Water Licence 2AM-MEA1525
Groundwater Monitoring Plan	April 2018	Version 8	1) PC T&C #8 2) Water Licence 2AM-MEA1525
Oil Handling Facility: Oil Pollution Emergency Plan	May 2017	Version 8	1) PC T&C #44 2) Water Licence 2AM-MEA1525
Emergency Response Plan	January 2018	Version 12	1) PC T&C #44 2) Water Licence 2AM-MEA1525
Terrestrial Ecosystem Management Plan	June 2018	Version 5	PC T&C 54
Noise Monitoring and Abatement Plan	June 2018	Version 3	PC T&C 62

#### 2.1.1.1. Annual Report as per Project Certificate No. 004 – Appendix D

Appendix D of Project Certificate No. 004 is designed to provide direction to the Proponent, the NIRB's Monitoring Officer, government departments, and regulatory authorities with regard to the monitoring program established for the project pursuant to Section 12.7 of the *Nunavut Agreement*. Appendix D also outlines the Proponent's responsibilities to establish a monitoring program for the Meadowbank Project, the requirement of the NIRB's Monitoring Officer to support the production and interpretation of various monitoring reports, and also outlines the NIRB's requirements of various authorizing agencies in reporting compliance monitoring activities. As outlined in Appendix D, the Proponent is required to submit an annual report that provides an updated status of the Meadowbank Project operations, an overview of the site and its operation during the reporting period, as well as a discussion of the observations made as a result of, or illustrated through, the monitoring program (NIRB 2011).

On May 5, 2018 the NIRB received Agnico Eagle's *Meadowbank Gold Project 2017 Annual Report* (2017 Annual Report). On May 15, 2018 the NIRB distributed the report to interested parties with a request that they provide comments relating to effects and compliance monitoring as well as other areas of expertise or mandated responsibility. On or before June 22, 2018 the NIRB received comments from the following parties:

- Kivalliq Inuit Association (KIA)
- Government of Nunavut (GN)

- Environment and Climate Change Canada (ECCC)
- Fisheries and Oceans Canada (DFO)
- Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)

Comments received by parties identified specific areas that may require further attention and/or discussion; these are addressed throughout the remainder of this report and are considered in the recommendations set forth by the Board under separate cover, for subsequent action, attention, or remedial activity by the Proponent.

### 2.1.2. Whale Tail Pit Project Certificate No. 008

As per [Appendix IV](#), Agnico Eagle demonstrated a general compliance with reporting requirements imposed through commitments resulting from the NIRB’s Review of the Whale Tail Project, including those contained in related reports, plans, and the NIRB’s Project Certificate No. 008 for the Whale Tail Project. The Proponent has provided the following plans and reports as required by the terms and conditions contained within the Whale Tail Pit Project Certificate for the current monitoring period of March 2018 through September 2018 as outlined in [Table 4](#).

**Table 4: Reports submitted as required under the Whale Tail Pit Project Certificate No. 008**

REPORT	SUBMISSION DATE	VERSION	RELATED PERMIT OR LICENCE
Air Quality and Monitoring and Management Plan	June 2018	Version 3	PC T&C #1
Greenhouse Gas Emissions Reduction Plan	May 2018	Version 1	PC T&C #3
Noise Monitoring and Abatement Plan	June 2018	Version 3	PC T&C #4 PC T&C #5
Water Management Plan	September 2018	Version 3	1) PC T&C #6 2) Water Licence 2AM-WTP1826
Mine Waste Rock Management Plan	May 2018; September 2018	Version 2 Version 3	1) PC T&C #7 2) Water Licence 2AM-WTP1826
Operational ARD-ML Sampling and Testing Plan, Whale Tail Addendum	June 2018	Version 2	PC T&C #8
Site-Specific Geotechnical Investigations Report	June 2018	n/a	PC T&C #9
Erosion Management Plan	June 2018	Version 1	PC T&C #11
Thermal Monitoring Plan	May 2018	Version 1	PC T&C #14
Groundwater Monitoring Plan	June 2018	Version 1	PC T&C #15 PC T&C #16
Water Quality and Flow Monitoring Plan	May 18, 2018	Version 3	PC T&C #17 & PC T&C #18
Core Receiving Environmental Program – Whale Tail Pit Addendum	May 18, 2018		PC T&C #19

REPORT	SUBMISSION DATE	VERSION	RELATED PERMIT OR LICENCE
Whale Tail Fisheries Habitat Offsetting Plan	May 2018	Version 1	Part of PC T&C #24
Terrestrial Ecosystem Management Plan	June 2018	Version 5	PC T&C 28
Shipping Management Plan	April 2018	Version 2	PC T&C #37 and #40
Analysis of risk of temporary mine closure	September 2018	n/a	PC T&C #47
Staff Schedule	June 2018		PC T&C #48

## 2.2. COMPLIANCE MONITORING

Compliance monitoring involves an assessment undertaken by regulators and other agencies to establish whether a project is being carried out within the legislation, regulations, instruments, commitments and agreements as such are applicable to certain project activities, and further, is a requirement of the NIRB’s Post-Environmental Monitoring Program for each Project Certificate. [Appendix III](#) provides the terms and conditions and compliance achievements by Agnico Eagle for the Meadowbank Project under Project Certificate No. 004 while [Appendix IV](#) provides the terms and conditions and compliance achievements by Agnico Eagle for the Whale Tail Project under Project Certificate No. 008.

### 2.2.1. Compliance with the NIRB Screening Decision Reports

#### 2.2.1.1. Screening Decision Report 11EN010

One of the recommendations of the NIRB’s March 7, 2017 Screening Decision Report for Agnico Eagle’s “Amaruq Exploration Access Road – Additional Quarry Amendment” project (File No. 11EN010; now referred to as the “Amaruq” project) is that Agnico Eagle include a summary of activities undertaken within its annual report for the Meadowbank Gold Project (File No. 03MN107). Agnico Eagle included within its 2017 Annual Report a comprehensive report of the activities associated with the “Amaruq” project that occurred in 2017 (Agnico Eagle 2018c).

### 2.2.2. Compliance with NIRB Project Certificate No. 004 – Meadowbank Project

#### 2.2.2.1. Proponent’s Responses to the Board’s 2017 Recommendations

On November 24, 2017 the Board issued several recommendations to Agnico Eagle as a result of its 2016-2017 monitoring efforts including the 2017 site visit (NIRB 2017). The following provides an overview of Agnico Eagle’s responses to the Board’s recommendations as provided to the NIRB on January 25, 2018.

##### a. Spill Management – Condition 26

**Recommendation 1:** The Board requested that Agnico Eagle provide a written submission explaining the conditions which contributed to increased spills being reported on site for 2016, and describe the measures and training implemented since to address spill prevention and the associated results.

In response to the Board's recommendation, Agnico Eagle noted that it began a Spill Reduction Action Plan with Key Performance Indicators developed to monitor the reported spills. Further, general awareness on spill management and reporting with management and operations were expanded by meeting equipment users and stakeholders.

b. Participation in Surveys – Conditions 51 and 54

**Recommendation 2:** The Board requested that Agnico Eagle provide a plan on how Agnico Eagle will meet the objectives of both Conditions 51 and 54 moving forward. The plan shall include a clear indication of timelines, next steps in development of the Creel Surveys and the Hunter Harvest Survey (HHS), measures for success and contingency planning. Limitations on the effectiveness of the current studies employed at the Meadowbank Project as well as the feasibility of alternative studies to ensure that a gap in available knowledge is not developing should be clearly highlighted within the submission.

In its response, Agnico Eagle noted that the HHS monitoring program was suspended for two years (2016 and 2017) to allow participants to rest and to develop new approaches and direction. In 2018, Agnico Eagle will be exploring other ways to gather harvest data in consultation with the Baker Lake Hunters and Trappers Organization (HTO), Kivalliq Inuit Association (KIA), Government of Nunavut (GN), and potentially other agencies.

The objectives for the 2018 HHS are:

- Facilitating greater involvement/partnership of the local community, including the HTO;
- Involving the GN Wildlife Officer or a suitable GN representative in the study;
- Increasing Agnico Eagle's community affairs involvement in the study development and unveiling; and
- Ensure consistency and compatibility with the previous HHS

c. Suppression of surface dust – Condition 74

**Recommendation 3:** The Board reminded Agnico Eagle that Condition 74 applies to the suppression of dust on all surface roads including the all-weather access road (AWAR). As such, Agnico Eagle shall provide a plan of action on how it will meet the objectives of Condition 74 along the AWAR. This plan shall include a clear indication of timelines, next steps and adaptive management measures/contingency planning should Agnico Eagle not meet this condition.

**Recommendation 4:** The Board requested that Agnico Eagle provide a submission to the NIRB, which describes its assessment of the effectiveness of dust suppression efforts using water to date and demonstrates its consideration for the use of alternative dust suppressants (e.g., TETRA flakes, Dust Stop®, EnviroKleen®) and more frequent application. Limitations on the effectiveness of current dust suppression employed for

the Meadowbank Project as well as the feasibility of alternative dust suppression compounds should be clearly highlighted.

**Recommendation 5:** The Board requested that Agnico Eagle report on the quality assurance and quality control protocols used to ensure data reliability and proper functioning of the dust monitoring equipment used for the dust sampling program along the all-weather access road.

In response to recommendation #3, Agnico Eagle noted that through consultation in 2016, Agnico Eagle and the Hamlet of Baker Lake identified six locations along the Meadowbank AWAR that are high priorities for dust suppression. Following a pilot study in 2016, Agnico Eagle determined from both visual observations and dustfall monitoring that TetraFlake® was the optimal product for dust suppression along this roadway. As a result, a single application of this dust suppressant was planned for each of the six locations in 2017. However, to provide optimal coverage throughout the driest months, and after consulting with the community, Agnico increased the planned frequency of application, and two applications were made (June 11 and July 22, 2017). Agnico Eagle plans to continue this approach to dust suppression along the AWAR (two summertime applications of an approved chemical dust suppressant in the identified priority locations), pending results of 2017 monitoring. Agnico Eagle noted in its response that this approach is similar to other project sites in Nunavut where chemical suppressants are used in a discontinuous fashion along a long-distance roadway in priority areas only. Furthermore, Agnico Eagle indicated that dustfall and terrestrial monitoring along the Meadowbank AWAR did not exceed FEIS predictions.

Further discussion on the NIRB's conclusions concerning the suppression of surface dust as related to the 2016 – 2017 monitoring period and to Condition 74 is discussed in [Section 2.2.2.2](#). Results of the dust monitoring and terrestrial monitoring completed in 2017 were provided in the 2017 Annual Report and further discussed in [Section 2.3.1.3](#) of this report.

In response to recommendation #4, Agnico Eagle noted that it employs two water trucks to continuously water onsite haul roads, pit areas, and the airstrip (15-30 minutes prior to and immediately after landing). The monitoring data indicated that dust is effectively being controlled onsite and from this data, Agnico Eagle has not considered regular application of alternative dust suppressants.

In response to recommendation #5, Agnico Eagle indicated that the AWAR dustfall sampling methodology differs slightly from methods employed at other sites (e.g., Meadowbank onsite, Meliadine, Mary River Project). Even though the sampling canisters are likely identical across these projects and provided by an accredited laboratory in all cases, sampling along the AWAR is done by placing the canisters at ground level rather than at 2-3 metre height. Agnico Eagle rationalize this methodology to be more effective due to the difficulty of constructing and deploying tall, secure stands to hold the large number of sample containers (84 locations in 2016) in the remote AWAR locations. Further, Agnico Eagle noted that the stations were not designed to be permanent sampling stations. In addition, the original study in 2012 compared dustfall collected at ground level and at two (2) metres (m) height to ensure proper functioning of the dust monitoring equipment (dustfall canister) using this technique. Agnico Eagle indicated that no statistical correlations were found between rates of dustfall on

stands and those on the ground. Therefore, dustfall collection at ground level generally appeared to provide comparable estimates of dustfall to those obtained at two (2) m height (and was more conservative in 3 of 4 cases). Based on these results and the reasons described in guidance documents for mounting dust canisters at 2 – 3 m height, collection at ground level appears to be generally conservative, and was employed in all future AWAR studies by Agnico Eagle.

d. Appendix D and the Annual Report

**Recommendation 6:** The Board required that Agnico Eagle provide a full discussion and summary on the post-environmental assessment monitoring program for the Project. This must include a discussion that references the baseline and previous years' monitoring data and further indicates whether any trends have been observed at the mine site for each Valued Ecosystem Component where an impact has been observed. The discussion should include whether any identified trends of effects over time are indicating the potential for impacts from or associated with the Meadowbank Project.

In response to the Board's recommendation, Agnico Eagle indicated that a full discussion and summary is already included within the Meadowbank annual report. Agnico Eagle is confident that these discussions reference any potential impacts observed. Further, Agnico Eagle recommended that Agnico Eagle and the NIRB discuss this point further. Finally, Agnico Eagle noted that in addition the annual report is based on an extensive review of our FEIS and associated Terms and Conditions from the environmental assessment.

Further discussion on Agnico Eagle's response and conclusions concerning its PEAMP from the 2017 Annual Report is available in [Section 2.3.3.1](#).

e. Aquatic Environment

**Recommendation 7:** The Board requires Agnico Eagle to provide a full trend analyses and discussion on the observed project effects on the aquatic environment based on the data collected to date under the Core Receiving Environment Monitoring Program. Further, a clear indication regarding whether any impacts are being observed from the proposal and whether the analyses meet or exceed the predictions made within the Final Environmental Impact Statement must be included. This is required under Appendix D for the post-environmental assessment monitoring program.

**Recommendation 8:** The Board requests that Agnico Eagle provide a discussion on the apparent mine-related changes observed at the near-field stations, the changes observed over time at these stations since operations commenced, what the cause may be for the changes observed at these stations, and whether Agnico Eagle intends to establish other near-field stations that could be used for baseline/reference conditions.

**Recommendation 9:** The Board requests that Agnico Eagle provide a discussion and additional evidence to support its contention that the parameters measured at Meadowbank which have been observed to be above the CCME guideline levels are not a serious concern for aquatic life.

In response to recommendation 7, Agnico Eagle noted that trend analysis is done on an annual basis as part of the Core Receiving Environment Monitoring Program (CREMP) program and a historical trend assessment was provided at length in the 2012 CREMP report. Agnico Eagle noted that the CREMP continues to detect changes in some general water quality parameters that appear to be related to mining activity. These changes are also reflected in higher concentrations of some parameters when compared to the model predictions in FEIS. The FEIS water quality predictions are estimates of change water quality in Third Portage Lake, Second Portage Lake, and Wally Lake assuming different mixing scenarios and loading estimates from water releases and dike leaching. Agnico Eagle provided a summary of the trends observed at the different lakes noting that CREMP water quality results are consistent with the “low” significance rating applied to model predictions in the FEIS.

In response to recommendation 8, Agnico Eagle noted that the CREMP program has identified mine-related changes in a number of parameters. The study design for the CREMP is based on the BACI model but integrates the concepts of a gradient approach by including near-field (NF), mid-field (MF) and far-field (FF) stations. Given that the design is working as intended (i.e., identifying subtle mine-related changes), and that adding NF stations would not improve the design, Agnico Eagle noted that there are no plans to add stations at this time. Agnico Eagle further stressed that changes to the design were made after the widespread construction-related changes that occurred during dike construction; an additional reference area (Pipedream Lake) and a far-field area (Tehek Lake) were added to provide better spatial coverage. None of changes detected to date in water quality or sediment quality have translated into adverse changes to aquatic life in the receiving environment.

In response to recommendation 9, Agnico Eagle noted that as discussed in the response to recommendation 7, none of the changes in water quality detected in the 2016 CREMP program exceeded CCME guidelines and, as discussed in recommendation 8, those changes in water quality have not resulted in adverse effects to aquatic life. That said, changes in sediment chromium concentrations exceeding CCME guidelines have been observed at TPE following dike construction. It should be noted that sediment metals concentrations in mineralized regions are often elevated naturally, so exceedances relative to CCME need to be interpreted cautiously. In this case, there was a clear increasing trend in chromium that occurred over a number of years before stabilizing, with the most plausible source being the rock used for the dikes.

#### **2.2.2.2. Compliance Achievements**

The NIRB notes that Agnico Eagle has demonstrated general compliance with the reporting requirements imposed through the NIRB’s Project Certificate No. 004 as previously discussed in [Section 2.1.1](#) and as outlined in [Appendix III](#). However, the NIRB notes that Agnico Eagle is not in full compliance with the following Terms and Conditions of the Meadowbank Project Certificate, and that recommendations from the Board have been provided to the Proponent under separate cover.

##### **a. Spill Management – Condition 26**

In review of the annual report and the copies of spill reports submitted to the Government of Nunavut (Agnico Eagle 2018d), it is noted that there was a slight decrease in the number of reportable spills from 2016 to 2017 and this is likely based on the implementation of the Spill Reduction Action Plan. However, the number of spills still remain high. In addition, it is noted that the number of non-reportable spills have increased since 2014. No reason was provided by Agnico Eagle for the continued increase of the non-reportable spills. This concern was brought up by both the KIA and the CIRNAC. Agnico Eagle also acknowledged that there has been an increase in reported spills and noted that it continues to implement the Spill Reduction Action Plan and that mandatory spill training is included in the Meadowbank site induction and that the Environmental Department is working in a collaborative approach to ensure field personnel are reminded consistently on best practices in spill management. In addition, refresher training is being developed at the time of writing of the annual report. However, in review of the 2017 Annual Report, Agnico Eagle does not provide a discussion on the possible reasons for why the number of non-reportable spills continue to rise despite the implementation of the Spill Reduction Action Plan.

b. Placement of local area marine monitors – Condition 36

Condition 36 requires that Agnico Eagle place/hire local area marine mammal monitors onboard all vessels transporting fuel or materials for the Project through Chesterfield Inlet. In review of Appendix J5 of 2017 Annual Report (Agnico Eagle 2018e), only one marine mammal monitor was hired for the period of July 25 to July 28, 2017. In review of Figure 35 of Agnico Eagle's 2017 Annual Report, approximately 36 ships with fuel and goods arrived in Baker Lake from Chesterfield Inlet in 2017. Agnico Eagle did not provide a reason on why marine mammal monitors were not hired for the other ships that were travelling through Chesterfield Inlet.

c. Participation Surveys and Studies as per Condition 51 and Condition 54

It is noted that Condition 51 requires the Proponent to develop, implement, and report on the Creel Surveys within waterbodies affected by the Project while Condition 54 requires the Proponent to conduct a Hunter Harvest Survey (HHS) to determine the effect on ungulate populations from increased access via the all-weather access road (AWAR). In 2016 and 2017, Agnico Eagle suspended the harvest data collection for both the Creel Surveys (creel surveys involved the collection of recorded fish harvested by participants) and the Hunter Harvest Survey (HHS) due to decrease in participation rates. It is encouraging that Agnico Eagle will be working with stakeholders to improve the Creel Surveys and the HHS, however, no information was provided on the next steps for both programs save for an indication that the studies will be implemented in 2018 with the collaborative approach as summarized in the 2017 Annual Report.

This issue of non-compliance was brought up by the Board in 2017 as Agnico Eagle noted that the Hunter Harvest Survey would be implemented during the fall migration of 2017. However, the study was not implemented in 2017 and no reason other than participant fatigue and the overall need for renewal was noted. In response to the Board's 2017 Recommendations, Agnico Eagle noted that it will be exploring other ways to gather harvest data in consultation with stakeholders (see [Section 2.2.2.1](#)). This appears to contradict the

information that was provided in the 2017 Annual Report as it gives the impression that Agnico Eagle will not implement the Creel Surveys and the HHS in 2018 as required by Conditions 51 and 54 of Project Certificate No. 004. The NIRB is concerned that at the moment with both the creel and Hunter Harvest Survey surveys not being completed, the NIRB and other agencies are not seeing results and a gap in available knowledge is developing which needs to be addressed. This is important as Agnico Eagle is proposing additional development in the region and plans to be in the region for the long term.

Further, as requested by the Board in its 2017 Recommendations, a plan that includes a clear indication of timelines, next steps in development of the Creel Surveys and the Hunter Harvest Survey, measures for success, contingency planning and limitations on the effectiveness of the current studies employed at the Meadowbank Project was not provided by Agnico Eagle.

Further discussion on the NIRB's review of these two topics can be found in [Section 2.3.1.4](#).

d. Suppression of surface dust – Condition 74

As noted in previous NIRB annual reports, in review of annual reports and during site visits (see [Appendix I](#) for the 2018 site visit report), Agnico Eagle has limited its dust suppression techniques to haul roads at the mine site, between the Meadowbank gatehouse (at the airstrip) and Exploration Camp site, between the Baker Lake marshalling facility and the Baker Lake gatehouse, and the airstrip. Agnico Eagle utilizes calcium chloride at most of the aforementioned sites; however, it uses water on the mine site haul roads (including the Vault road) and the airstrip. Dust suppression has not been applied along the AWAR between Baker Lake and Meadowbank except at five (5) key areas identified to be of concern to the community of Baker Lake. Monitoring results in 2017 indicated that rates of dustfall were effectively reduced in those locations.

In its response to the Board's 2017 recommendations Agnico Eagle noted that six (6) locations were identified to have high priorities for dust suppression. Clarification is required whether it is five (5) or six (6) locations that have been identified along the AWAR as high priorities for dust suppression. In addition, Agnico Eagle maintained that it is meeting Condition 74 and that the approach where chemical suppressants are used in an intermittent fashion along a long-distance roadway in priority areas only is similar to other project sites in Nunavut. No references to the other project sites were provided to be able to compare methodologies.

Apart from continuing the dustfall monitoring along the AWAR and applying dust suppressants along the high priority areas, Agnico Eagle has not indicated any further commitment to apply dust suppressant to the whole AWAR in the future. Condition 74, requires the application of dust suppression measures along all project roads including the AWAR. The Proponent has not fully met the requirements of Condition 74, as dust suppression techniques were not being applied along the AWAR from Baker Lake to the mine site. The NIRB stresses that Condition 74 applies to all mine roads including the AWAR.

### **2.2.3. Compliance with NIRB's Project Certificate No. 008 – Whale Tail Project**

#### **2.2.3.1. Compliance Achievements**

As the Project Certificate No. 008 for the Whale Tail Pit Project was released in March 2018, annual reporting on the compliance achievements for the terms and conditions under the Project Certificate will be provided for the 2018 – 2019 monitoring period. As noted in [Section 2.1.2](#) and [Appendix IV](#), Agnico Eagle has demonstrated a general compliance with the reporting requirements imposed through the NIRB's Project Certificate No. 008. However, the NIRB notes that Agnico Eagle is not in full compliance with the following Terms and Conditions of the Whale Tail Pit Project Certificate No. 008 and that recommendations have been provided to the Proponent under separate cover.

a. Update to existing Dust Management and Monitoring Plan – Condition 2

As required by Condition 2, Agnico Eagle has not provided the updated Dust Management and Monitoring Plan for the Meadowbank Mine site including verification of commitments made to the utilization of dust suppressants along the all-weather access road, the Amaruq haul road and other roads and trails associated with the Project.

b. Site-specific Permafrost Monitoring, Mapping and Thermal Analysis – Condition 10

Condition 10 requires the Proponent to consult with applicable regulatory agencies to undertake additional site-specific permafrost monitoring mapping and thermal analysis with the results of these studies provided to the NIRB at least 30 days prior to the start of construction of project infrastructure such as the Whale Tail pit, water management structures, mine site and haul roads, waste rock storage facilities, etc. During the 2018 site visit in August, construction of several of the above-mentioned infrastructures has commenced; however, the NIRB has not received any information from the Proponent on the results of the studies as requested. Agnico Eagle did provide a Thermal Monitoring Plan in May 2018 (Agnico Eagle 2018f) which summarized the current permafrost conditions based on data collected up to October 2017. Further, Agnico Eagle provided a copy of a presentation delivered to CIRNAC in July 2018 that covered the hydrogeological model (to meet Condition 6); however, the presentation does not appear to provide the information related to additional site-specific permafrost monitoring mapping and thermal analysis to document permafrost conditions, including season thaw and amount of ground ice (Agnico Eagle 2018g). Further, the presentation does not inform the detailed design of project infrastructure as outlined above. As NRCAN was not consulted on this information and the results not provided to the NIRB, it appears that Agnico Eagle has not met the requirements of Condition 10.

c. Viability of flooded South Basin as an effective offset for habitat loss – Condition 24

In review of the Whale Tail Fisheries Habitat Offsetting Plan (Agnico Eagle 2018h) submitted by Agnico Eagle in May 2018, it is not clear if the requirements under Condition 24 have been met. The NIRB would like confirmation from Fisheries and Oceans Canada that the plan as submitted meets the requirements of Condition 24 and whether the concern that the increased surface area of Whale Tail Lake is a viable offset to habitat losses resulting from

the development of the Project and whether Whale Tail end pit would support fish in the post closure scenario has been addressed.

d. Invasive Species Mitigation Plans – Condition 25

Agnico Eagle has not provided an Invasive Species Mitigation Plans, Protocols, Monitoring and Inspection Program as required by Condition 25 to date. This was to be provided to the NIRB for review at least 30 days prior to the first shipment of equipment and supplies to the site. In correspondence received in October 2018, Agnico Eagle indicated that it is working on developing a plan for the 2019 barge season (Agnico Eagle 2018i).

e. Finalized Terms of Reference – Condition 27

Condition 27 requires that Agnico Eagle provide a finalized Terms of Reference (TOR) for the Terrestrial Advisory Group (TAG) to the NIRB within six (6) months of issuance of the Project Certificate. Within the Terrestrial Ecosystem Management Plan (Agnico Eagle 2018j) provided to the NIRB in June 2018, Agnico Eagle noted that it is committed to the establishment of a TAG consisting with the appropriate representatives and that the TOR will be discussed and completed by Q4 of 2018 for the TAG. To date, the finalized TOR has not been provided to the NIRB.

f. Initial Listing of Formal Certificates and Licences – Condition 52

Condition 52 requires that Agnico Eagle develop and maintain an easily referenced listing of formal certificates and licences that may be acquired via on-site training or training during project employment. The initial listing was to be provided to the NIRB within six (6) months of the Project Certificate being issued. To date, no listing of formal certificates and licences have been provided for review. In correspondence received in October 2018, Agnico Eagle indicated that it is working on developing a listing which would be provided by November 2018 (Agnico Eagle 2018i).

g. Occupational Health and Safety Plan – Condition 57

An updated Occupational Health and Safety Plan was to be provided to the NIRB within six (6) months of issuance of the Project Certificate as per Condition 57. To date, no updated plan has been provided. In correspondence received in October 2018, Agnico Eagle indicated that it is working on developing a listing which would be provided by November 2018 (Agnico Eagle 2018i).

**2.2.4. *Compliance Monitoring by Regulatory Authorities for the Meadowbank Gold Mine Project***

On May 5, 2018 the NIRB requested that regulatory authorities with jurisdiction and/or area of expertise for the Meadowbank Gold Mine project provide comments and information with respect to compliance monitoring for the 2017 reporting period as required in Part D of Appendix D of the Meadowbank Project Certificate (NIRB 2011). Specifically, comments were requested regarding the following:

- a. Provide a summary of any compliance monitoring and/or site inspections undertaken in association with the Project, including specifically:
  - i. Identify the terms and conditions from the Project Certificate which have been incorporated into any permits, certificates, licences or other government approvals issued for the Project, where applicable;
  - ii. A summary of any inspections conducted during the 2017 reporting period, and the results of these inspections; and
  - iii. A summary of the Proponent's compliance status with regard to authorizations that have been issued for the Project.

The following is a *summary* of the comments received from parties regarding compliance monitoring.

#### **2.2.4.1. Environment and Climate Change Canada (ECCC)**

Environment and Climate Change Canada (ECCC) reported in its comments on compliance monitoring that an onsite inspection of the Meadowbank and Amaruq projects was conducted in July 2017 to verify compliance under the *Canadian Environmental Protection Act* and the *Fisheries Act*. No non-compliance issues were identified by ECCC during the inspections. ECCC further conducted five (5) report verifications of the 2017 quarterly reports and the annual report for the final discharge points and no compliance issues were identified.

#### **2.2.4.2. Fisheries and Oceans Canada (DFO)**

Fisheries and Oceans Canada (DFO) stated in its comments that the Proponent currently operates under multiple *Fisheries Act* Authorizations (03- HCAA-CA7-00109, 03-HCAA-CA7-00191: NU-03-0191.3 and NU-03-0191.4, and 14-HCAA-01046) with multiple terms and conditions from the NIRB's Project Certificate No: 004 for the Meadowbank Gold Project incorporated into DFO's *Fisheries Act* Authorizations. DFO further indicated that it did not conduct site inspections during the 2017 monitoring period but acknowledges that Agnico Eagle is currently in compliance with the *Fisheries Act* Authorizations that were issued and for the terms and conditions under the NIRB Project Certificate No.:004. However, DFO noted, following review of the 2017 Annual Report, that Term and Condition 52 of the NIRB's project certificate No.:004 states "Cumberland shall enforce a no-fishing policy for employees while working on the job site" and that Condition 2.6 under Agnico's *Fisheries Act* Authorization NU-03-0191.3 states "The Proponent shall develop and enforce a policy that prohibits fishing on Second Portage Lake and Third Portage Lake and surrounding lakes and streams by individuals on the mine site in a capacity as mine employee, contractor or visitor during all phases of mining activities, unless otherwise agreed to by DFO." DFO noted that it is important to monitor worker fishing in order to demonstrate compliance with both the NIRB term and condition and Agnico Eagle's *Fisheries Act* Authorization.

#### **2.2.4.3. Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC)**

Crown-Indigenous Relations and Northern Affairs Canada (CIRNAC) noted that it is responsible for inspecting and enforcing terms and conditions contained within water licences issued in Nunavut but noted that the decision to implement the terms and conditions of a project certificate,

from the perspective of inland water management, rests with the NWB. CIRNAC noted that both the Crown Land Lease No. 66A/8-71-2, which was obtained for the development of portions of the all-weather access road, and the Crown Land Lease No. 66A8-72-2, which was obtained to construct quarries on the associated parcels of land located on Crown Land was issued in January 2007. CIRNAC provided a summary of the terms and conditions from Project Certificate No. 004 as an appendix in its letter, which were incorporated into the NWB water licence and the Crown land leases.

CIRNAC further noted that the 2017 Annual Report provided a good overview of Agnico Eagle's socio-economic monitoring initiatives and addresses the Project Certificate Appendix D Meadowbank Monitoring Program requirements. CIRNAC indicated that it participated in the Kivalliq Socio-economic Monitoring Committee and the Working Group to finalize the terms of reference.

With respect to compliance for the socio-economic Project Certificate terms and conditions, CIRNAC noted that the 2017 Annual Report's format does not provide the resolution status of all Project Certificate terms and conditions and commitments and recommended that Agnico Eagle include a table of concordance for Project Certificate terms and conditions, and commitments in future Annual Report submissions. This would facilitate the review of their resolution status.

CIRNAC further noted that as per Term and Condition #65, Agnico Eagle is required to provide data on the community of origin of hired Nunavummiut which was lacking from the 2017 Annual Report.

With respect to Term and Condition #68, CIRNAC noted that it is difficult to ascertain that policies and management plans are being reviewed and modified to incorporate Inuit societal values. CIRNAC recommended that a record of decisions and perhaps a policy on how Inuit societal values are to be adhered throughout mine operations should be included in future annual report submissions.

Contrary to the one (1) inspection as noted by Agnico Eagle in its 2017 Annual Report, CIRNAC's Water Resource Officer (WRO) performed three (3) inspections in May, July and October of 2017. No non-compliance with the Act or Licence was noted for the May and July inspections. However, for the October inspection, the WRO expressed concerns related to non-compliance with the water licence as there was failure to respect effluent quality limits prior to discharge.

Overall, CIRNAC noted that it was generally satisfied with Agnico Eagle's response to concerns raised by CIRNAC's inspectors in 2017 and will continue to work with Agnico Eagle to ensure compliance with all water license requirements associated with the project.

## **2.2.5. Compliance with Instruments**

### **2.2.5.1. Compliance with Licenses and Authorizations as Described in the 2016 Annual Report**

Agnico Eagle noted within the annual report that for the 2017 year all water quality results complied with Water License and MMER authorized limits, except for two TSS related results. On May 11th and September 22nd elevated levels of TSS were noted on analytical certificates received from our external laboratory from the ST-8/MMER-3 discharge into SPL. Discharge was immediately stopped, and stakeholders notified of the incident and TSS levels were reported to the GN spill report line.

Results from the incinerator stack testing, incinerator ash testing and waste oil testing complied with the applicable regulatory and guideline criteria.

Further, Agnico Eagle noted that following inspections conducted by ECCC, KIA, CIRNAC, and the GN either no follow-up reports were submitted by the agencies or no non-compliance issues were identified. The only exception was following an inspection conducted by KIA in September 2017 which resulted in a follow-up report outlining outstanding issues with items that will require follow-up in 2018.

## **2.3. EFFECTS MONITORING**

Effects monitoring can be described as an assessment of the measurable change to a particular environmental or socio-economic component, as compared to the potential effects that were predicted to result from a proposed development. In the case of Meadowbank, impact predictions and mitigation measures were outlined and developed throughout the environmental review of the Project and were recorded and presented through the Proponent's Final FEIS and other related documents.

On May 15, 2018 the NIRB also requested that regulatory authorities with jurisdiction and/or area of expertise for the Meadowbank Gold Mine project review Agnico Eagle's 2017 Annual Report and provide comments and information with respect to effects monitoring as required in Part D of Appendix D of the Meadowbank Project Certificate (NIRB 2011). Specifically, comments were requested regarding the following:

- a. Whether the conclusions reached by the Proponent in the 2017 Annual Report are valid;
- b. Any areas of significance requiring further studies; and
- c. Changes to the monitoring program which may be required.

The following section provides the NIRB's review of the 2017 Annual Report and a *summary* of the comments received from parties.

### ***2.3.1. NIRB's Review of Agnico Eagle's 2017 Annual Report for the Meadowbank Gold Mine Project***

Appendix D of the Project Certificate No. 004 provides an outline of the requirements for the Proponent's annual report for the Meadowbank Project. Particularly, the annual report should include a summary of the results from the PEAMP, including an analysis of the Project's impact upon the environment with reference to the predictions and environmental and socio-economic indicators referenced throughout the FEIS and the Final Hearing. As part of its Post Environmental Assessment Monitoring Plan (PEAMP), Agnico Eagle provided a summary on how the current environmental and socio-economic effects of the Meadowbank mine site compare to the impacts as predicted in the FEIS for the following:

- Aquatic Environment
- Terrestrial and Wildlife Environment
- Noise
- Air Quality
- Permafrost
- Socio-economic

The NIRB reviewed these items as presented in Agnico Eagle's 2017 Annual Report summarized as follows:

#### **2.3.1.1. Aquatic Environment**

Agnico Eagle reported in the PEAMP section of the 2017 Annual Report that observed impacts to surface water quantity, surface water quality, and fish and fish habitat measured in 2017 appeared to have been within FEIS predictions, or if not were not expected to result in adverse environmental impacts.

As in previous years, the PEAMP section of the 2017 Annual Report did not provide a discussion on the CREMP or Agnico Eagle programs or any discussion on the changes observed/detected at the aquatic stations. Further, there was no discussion on the changes observed over time at these stations since operations commenced, or what the cause may be for the changes observed at these stations. A year-to-year comparison by Agnico Eagle in its Annual report would assist in the analysis and identification of trends in the data collected for the aquatic environment, specifically for the water quality and sediment quality data. Agnico Eagle concluded in the annual report that since observed impacts to water quantity, water quality, fish and fish habitat measured in 2017 are within the FEIS predictions or are not expected to result in adverse environmental impacts, a trend analyses are not required for any components of the aquatic environment.

In review of the Annual Report, and as noted by regulatory parties, there was an increase in a number of parameters that are exceeding predictions from the year to year since 2012 or trigger exceedances in several parameters for both water quality and sediment chemistry. In response, Agnico Eagle stated that the CREMP continues to detect changes in some general water quality parameters that appear to be related to mining activity or that trends observed in sediment samples are due to natural spatial heterogeneity. Agnico Eagle also noted that these changes were reflected in higher concentrations of some parameters when compared to the model predictions

in FEIS. Agnico Eagle set thresholds and/or triggers at the 95<sup>th</sup> percentile of baseline data and concluded while that these results represent mine related changes, the observed concentrations are still relatively low and unlikely to adversely affect aquatic life. Further, Agnico Eagle indicated that due to the low likelihood of adverse effects on aquatic life, a discussion was not required on the management actions with respect to trigger exceedances observed in water. Information regarding why Agnico Eagle considers the exceedances of these thresholds “relatively low” and materials to support the statement that Agnico Eagle is “unlikely to adversely affect aquatic life” by linking to the findings from the biotic surveys (i.e., phytoplankton and benthic invertebrate community) conducted in 2017 should be provided. In addition, Agnico Eagle should provide a discussion of management action with respect to trigger exceedances in water, even if the likelihood of adverse effects on aquatic life is low.

Further, similar to KIA’s concern, it was noted that the updated water quality model indicated that treatment may be required for aluminum, arsenic, cadmium, chromium, copper, fluoride, iron, nickel, and selenium so that the pit water quality will meet the CCME criteria at mine closure, while silver is no longer anticipated to be a problem at closure due to low loadings in the 2016 mill effluent. This represents a change from the previous annual reports and an explanation should be provided by Agnico Eagle on why there has been an increasing trend in the number of parameters predicted to require treatment at closure.

#### 2.3.1.2. Noise Quality Monitoring

In its 2017 Annual Report, Agnico Eagle indicated that the daytime target sound level (55 dBA) was not exceeded during any monitoring event. One night-time value at Station R1 slightly exceeded the target sound level (45 dBA), with a recorded  $L_{eq,night}$  value of 46.2 dBA. Agnico Eagle noted that an examination of the data indicated that 1-h  $L_{eq}$  values only exceeded 45 dBA in the early morning hours (6 – 7 am), which corresponds to shift change-over on the mine site and generally increased activity levels, and this was similar to what was recorded in previous years. Agnico Eagle stated that overall, since targets were only marginally exceeded on one occasion during peak helicopter season and only by a maximum of 1.2 dB, significant impacts to wildlife beyond impact predictions are not anticipated. Furthermore, regular wildlife monitoring continues to indicate that monitoring thresholds related to sensory disturbance are not being exceeded. No comparison of the data was provided to the FEIS predications for noise levels nor was a trend analyses provided. The NIRB noted that in previous years, measured sound levels exceeded predicted levels only on occasion at station R5; however, no discussion was provided on how this exceedance of the predicated sound levels were resolved.

In addition, in response to the NIRB’s recommendation from the 2016 Annual Report, Agnico Eagle committed to evaluating the noise model in the next annual report and predicted impacts within the FEIS would be discussed further. This information was not provided in the 2017 Annual Report.

### 2.3.1.3. Air Quality Monitoring

#### Dustfall Monitoring along the AWAR

Since 2012 Agnico Eagle has conducted dustfall monitoring to characterize dust deposition rates at various distances from the Meadowbank AWAR in order to determine the potential for impacts to habitat in excess of those predicted in the FEIS. The study also included dustfall measurements along the proposed Amaruq haul road to obtain measurements of background dustfall and to act as a reference for the AWAR. In 2016, Agnico Eagle initiated a dust suppression pilot study along the AWAR, in addition to the regular dustfall monitoring program. This study continued in 2017 and was expanded to assess the dustfall rates in five (5) AWAR dust suppression locations (km 11, 25, 50, 69 and 84) as well as two reference sites without dust suppression (km 18 and 78). The areas as selected were identified in consultation with the community of Baker Lake and noted as important. Agnico Eagle stated that the statistical analysis showed that for all transects with dust suppression, significant reductions in mean fixed dustfall rates occurred up to 150 m from the road, compared to reference sites without dust suppression. Rates of dustfall were comparable to reference sites without dust suppression, and to background rates of dustfall 300 m from the road. Overall, Agnico Eagle noted that the results of the dust sampling program showed that the applied dust suppressant is effectively reducing rates of dustfall for at least 2 months following application (Agnico Eagle 2018k).

Cumulative results to date indicate that without dust suppressant application, average rates of dustfall decline below Alberta Environment's guideline for recreational areas within 100 m of the AWAR. Further, the samples collected at the 300 m or 1000 m distance have been within the range of background values, with average dustfall rates meeting the range of observed background values at 200 m from the road. Agnico Eagle noted that based on these results, it is unlikely that FEIS predictions are being exceeded and that impacts to VECs (vegetation community productivity and wildlife) due to dust are not occurring beyond the smallest assumed zone of influence (100 m). Wildlife monitoring to date has indicated no significant road-related effects, dust monitoring has indicated no trend towards increasing rates of dustfall, and risk assessment has indicated no incremental risk for wildlife from chemical contaminants near the AWAR.

#### On-site air and dust monitoring

Agnico Eagle reported that there were no apparent trends towards increasing air quality concerns at the Meadowbank site for any measured air quality parameter. Only one (1) out of 47 samples exceeded the Alberta recreational area guideline.

Estimated green house gas emissions for the Meadowbank site were 197,678 tonnes CO<sub>2</sub> equivalent, which is similar to the value obtained in 2015 and 2016.

#### Incinerator

In its 2017 Annual Report, Agnico Eagle stated that the incinerator was operational throughout 2017 and that the Daily Report Logbook entries cover every month in 2017. Agnico Eagle outlined that approximately 50% of the material incinerated was food waste; the other 50% was dry waste comprised of food containers, cardboard boxes, paper, and absorbent rags. In total, 3,893 cubic metres of waste was burned in the incinerator.

In the review of the available 2017 Incinerator Daily Report Logbook (Agnico Eagle 2018l), the NIRB notes that there were several recorded temperatures below 1000°C temperature in the secondary chamber (October 3, October 4, November 16 and December 1) with the lowest temperature recorded as 251°C. In its 2017 Annual Report, Agnico Eagle noted that for 2017 there were no recorded temperatures below 1000°C in the secondary chamber and considers that maintenance work conducted at the incinerator between 2014 and 2016 was effective in improving efficiency of the unit. This contradicts the available record and Agnico Eagle should clarify the discrepancies.

Stack testing was conducted by Agnico Eagle in December 2017 by an outside agency and the results from the tests indicated that the application standards for dioxins and furans (PCDD/F) were met for all test. In addition, the mercury level average was below the ECCC guidelines during the stack testing (Agnico Eagle 2018m). Further, to prevent exceedances that were observed in 2014, Agnico Eagle will complete stack testing in 2018 and 2019 as well and return to biennial if all results are below the emission standards.

Finally, Agnico Eagle committed within the 2016 Annual Report that it would revise the Incinerator Management Plan with the operators and continue to stress to employees the importance of good waste segregation. However, this does not appear to have been done as Agnico Eagle notes in the 2017 Annual Report that the Incinerator Waste Management Plan would be updated to reflect the stack testing schedule and an updated plan has not been submitted.

In addition to stack testing, Agnico Eagle conducted ash sampling from the incinerator twice in 2017 instead and the results indicated no exceedance of the Government of Nunavut Environmental Guidelines for Industrial Discharge.

#### **2.3.1.4. Wildlife Monitoring**

##### *Creel Survey (Condition 51)*

In 2016 and 2017, Agnico Eagle suspended the fish harvest data collection as participation rates were decreasing. Considering possible participants fatigue and overall need for renewal, Agnico Eagle stated it intended to draft improved methodology that would involve the stakeholders within the program. Discussions were held to initiate learning based on past experiences and assess the path forward for the Hunter Harvest Survey (HHS), including the Creel Surveys. Agnico Eagle noted that it intends to continue working with the GN, KIA and HTO to ensure a representative number of participants and long-term success of the program. The HHS, including Creel Surveys, would be implemented with the collaborative approach.

##### *Hunter Harvest Survey (Condition 54)*

Agnico Eagle stated that after low participation during the first year of the study, methods were strategically adapted, participation increased steadily, and valuable information on harvest patterns in the Baker Lake area was collected for the Hunter Harvest Survey (HHS) from 2007 to 2015; however, declining participant rates in 2014 and 2015, Agnico Eagle predicted due to participant fatigue, led to reconsideration of the HHS approach in 2016. Lower participant rates and reduced data made it increasingly difficult to determine hunting patterns in the Baker Lake area and along the AWAR, and to answer fundamental questions on the effect of the mine on

regional Caribou populations. Therefore, Agnico Eagle suspended the program for 2016 and 2017 and met with stakeholders in 2017 in order to develop a new fully integrated HHS which is anticipated start by the end of 2018.

Thus, moving forward Agnico Eagle intends to continue working with the GN, KIA and HTO to ensure a representative number of participants and long-term success of the program. The HHS would be implemented in 2018 with this collaborative approach and to ensure success in re-starting the HHS, Agnico has contracted a third-party consultant.

### **2.3.2. Effects Monitoring by Regulatory Authorities**

#### **2.3.2.1. Kivalliq Inuit Association**

Within its submission, the Kivalliq Inuit Association (KIA) noted they are generally satisfied with the information and conclusions presented in the 2017 Meadowbank Annual Report. However, there were several issues outstanding from the review of the 2016 Annual report, e.g., reasons for greater than expected water volumes measured in Vault Pit, ability of lab to reach required detection limits, details on seepage monitoring at the waste rock storage facility and at Bay Goose Dike, changes to parameters predicted to require treatment at closure. KIA’s consultant encouraged the KIA to work with Agnico Eagle in order to follow up on shortcomings identified in the reviews as a means to ensure constant improvement in mine performance. The KIA’s consultant also recommended a formal procedure through the NIRB to address comments on the Annual Reports to ensure that comments and recommendations are adequately addressed.

With respect to the 2017 Annual Report, numerous sections were identified by the KIA consultant that require additional background information or detail to help clarify and justify statements made. A summary of the comments and recommendations provided are provided in [Table 5](#). KIA’s consultant indicated that while the Project appeared to be operating in a way that does not result in undue impact to the receiving environment as per the Project Certificate No. 004 and the water licence, the lack of information in these sections made it difficult to fully evaluate whether all potential impacts of the mine are being adequately monitored. These considerations should be addressed in future annual reports for the Meadowbank Project and its expansions.

**Table 5: Kivalliq Inuit Association Comments and Recommendations for Effects Monitoring**

<b>Topic</b>	<b>Comment/Concern</b>	<b>Recommendation</b>
General	Reports are cited in the text which are not part of the accompanying appendices.	Provide linkages to source documents or provide copies of reports to agencies.
Amaruq Exploration Access Road [Amaruq Haul Road]	Information lacking on what steps were taken to minimize the environmental impacts of drilling for the Amaruq project in 2017.	Provide information on steps taken to minimize environmental impacts.
Amaruq Exploration Access Road [Amaruq Haul Road]	Revisions were made to the TEMP following consultation with the GN, however this information was not provided within or summarized within the 2017 Annual Report.	Indicate what changes were made to the TEMP as a result of consultation with GN biologists.

Topic	Comment/Concern	Recommendation
Amaruq Exploration Access Road [ <i>Amaruq Haul Road</i> ]	Agnico Eagle did not provide a summary of Wildlife Monitoring and Mitigation Plan (WMMP) results including the wildlife log, record of observations or any mitigation actions that were undertaken (e.g., number of each type of wildlife encountered, actions taken, and outcome of actions).	Provide a written summary of the log and record of observations and mitigation actions in the text.
Construction or Earthworks: Bay Goose Dike	Mining activity ceased in the Goose Pit in 2015 and some seepage associated with the dike has been observed, however, Agnico Eagle did not indicate its volume or extent. Further, it is not clear from the reports whether or not monitoring of the seepage is occurring as contradictory statements have been provided in the 2017 Annual Report and previous reports.	Clarify whether monitoring of the seepage along the Bay Goose dike is occurring, and if so, with what frequency.
Construction or Earthworks: Stormwater Dike	Agnico Eagle reported that cracks were observed in the foundation of the stormwater dike in the summer of 2016 and that monitoring of the dike's movement has been implemented, and a buttress type structure was constructed at the downstream toe of the dike in 2016. However, new tension cracks and signs of settlements were observed on the crest of the dike again in July 2017 and Agnico Eagle believes that thawing of soft soil below the dike may be responsible for these changes to the structure. From the information provided, it is not clear if Agnico Eagle plans any further action to promote freezing of the thawed foundation at the downstream toe.	Explain what additional mitigation measures, if any, are planned to prevent further cracking and settlement of the dike's foundation due to thawing of the underlying soil.
Construction or Earthworks: Annual Geotechnical Inspection	Recommendations were made by Golder Associates in its Annual Geotechnical Inspection relating to performance of structures throughout the mine site. Agnico Eagle only included recommendations related to the Central Dike in its Annual Report but did not present other recommendations as per Golder's Annual Geotechnical Inspection Report. From this, it is not clear what action Agnico Eagle is taking to address the concerns and recommendations raised by Golder.	Discuss all recommendations made by Golder in Appendix B1 in the main text of the Annual Report, including details on how Agnico Eagle plans to address them.

Topic	Comment/Concern	Recommendation
Water Management Activities: Lake Level Monitoring	Agnico Eagle monitors lake levels during the open water period for Third Portage Lake, Second Portage Lake and Wally Lake. Third Portage Lake has not received discharge from Portage Attenuation Pond since 2014. Second Portage Lake receives water from the East Dike seepage year-round, while water from the Vault Attenuation Pond was discharged into Wally Lake from July 2016 to October 2017. The General Water Movement models for 2017-2029 presented in Appendix C2 did not include Second Portage Lake.	Include Second Portage Lake in the General Water Movement models for the life of the mine.
Water Management Activities: Lake Level Monitoring	Agnico Eagle reported that water levels remained within the range of naturally occurring levels for all three lakes in 2017 and does not see the advantage of comparing the water level to the natural seasonal variation as water levels are only taken in ice free period. KIA emphasized the importance of continuing these comparisons to ensure discharge is not having significant effects on water levels.	Continue to monitor lake levels during the ice-free period in lakes receiving discharge.
Water Balance Water Quality Model Reporting Summary	The updated water quality model indicated that treatment may be required for aluminum, arsenic, cadmium, chromium, copper, fluoride, iron, nickel, and selenium so that the pit water quality will meet the CCME criteria at mine closure. Silver is no longer anticipated to be a problem at closure due to lower loadings in the 2016 mill effluent. This represents a change from the statements made in the 2014 Annual Report (which predicted that only copper and selenium might require treatment), the 2015 Annual Report (which predicted that copper, silver, selenium and total nitrogen might require treatment), and the 2016 Annual Report (which predicted that aluminum, arsenic, chromium, copper, fluoride, iron, silver, and selenium might require treatment). No explanation for the changes to predictions is made in the Annual Report.	1) Explain why there has been an increasing trend in the number of parameters predicted to require treatment at closure. This was also highlighted by KIA in its review of the 2016 Annual Review. 2) Provide more detailed discussion on the reasons for specific parameter exceedances in the Annual Report, by summarizing the information from Section 4.0 of the SNC-Lavalin Meadowbank Water Quality Forecasting Update provided in Appendix C2.

Topic	Comment/Concern	Recommendation
Predicted versus measured water quality and quantity	The volume of water measured in the Portage Pit in 2017 was more than 20% below the volume predicted for 2013 to 2017. The volume of water measured in Goose Pit was more than 20% below the volume predicted for 2012 to 2017, indicating that the contribution of seepage and groundwater sources to the pit is less than originally predicted. The volume of water measured in Vault Pit was more than 20% greater than the volume predicted in 2014 (start of mining) and 2015 (by 120% and 142% respectively). No significant difference was observed in 2016 but in 2017 the volume measured was 363% greater than predicted. Agnico Eagle suggested that this was due to a larger freshet and more rainfall flowing to Vault and Phaser Pits. No weather data were provided to support this conclusion.	Provide possible reasons for the greater than expected water volumes measured in Vault Pit in 2014, 2015 and 2017 and consider these against the reasons for reduced volumes in Portage and Goose Pits. Include a discussion on the implications of these exceedances on water management at Vault Pit.
Predicted versus measured water quality and quantity	Water quality in the three pit sumps (Portage, Goose and Vault) showed similar patterns in 2017 to those in previous years (2012-2016). Most parameters of concern had greater than 20% differences between their measured and predicted concentrations (i.e., in both positive and negative directions) in all pit sumps. Agnico Eagle provided several possible reasons for differences greater than +/- 20% between predicted and measured values and noted that none of the pits are discharged directly to the environment.	1) Provide an explanation on why measured pH in Portage and Goose Pits is higher than expected. 2) Ensure that the accredited laboratory used to analyze pit water quality meets the required detection limits for pertinent comparisons for all future monitoring.
Waste Rock Management Activities: Geochemical Monitoring	Agnico Eagle stated that any PAG or uncertain waste rock material is placed in the middle of the waste rock facility and is surrounded by NPAG material to encapsulate the PAG material. The effectiveness of this abatement measure is then evaluated by monitoring runoff or seepage water. Agnico Eagle reported that no indication of PAG leaching has been observed from runoff water to date; however, the results of the seepage monitoring, nor an explanation of the monitoring frequency were provided. It is not clear what the threshold level of acceptable PAG in runoff or seepage is.	1) Report results of the seepage monitoring to confirm no PAG leaching has occurred at the waste rock storage facility. 2) Provide details on the approach that is used to monitor the waste rock disposal method. In addition, Agnico Eagle should indicate what the threshold level of acceptable PAG runoff or seepage will be and describe available mitigation measures which can be applied if this level is surpassed.

Topic	Comment/Concern	Recommendation
Waste Management Activities: Rock Geochemical Monitoring	Agnico Eagle has recommended in previous annual reports that surface water chemistry sampling at fish-bearing watercourses be discontinued, unless turbidity issues are visually observed. Agnico Eagle indicated that detailed monitoring will be implemented if an erosional issue arises, with, at a minimum, a single water chemistry sample being collected upstream and downstream of the source. KIA is concerned that water quality issues unrelated to turbidity (e.g., PAG leaching) may be missed if regular surface water chemistry sampling does not occur at fish-bearing watercourses.	Recommend that, in addition to monitoring for turbidity yearly, detailed surface water chemistry sampling be conducted every three (3) to five (5) years at fish-bearing watercourses.
Tailings Storage Facility Capacity	The deposition plan model concluded that the total estimated capacity of the TSF North Cell and South Cell is 32.0 million tonnes (Mt). The total capacity of the North Cell is estimated at 18.2 Mt and the total capacity of the South Cell is estimated at 15.0 Mt. The sum of these totals (33.2 Mt) exceeds the combined estimated capacity (32.0 Mt).	1) Clarify the discrepancy between the total estimated capacity and the sum of the individual capacities for the North and South Cells. 2) Report total estimated capacity and remaining estimated capacity of the TSF Cells in the same units.
Tailings Freezeback and Capping Thickness	Information on the number and type of instruments to monitor the various mine structures is reported and monitoring results are presented in figures (and appendices). However, summaries of results in the text are lacking, particularly for Stormwater Dike, Central Dike and Second Portage Lake Arm, East Dike of Portage Pit and Bay-Goose Dike.	Summarize results of instrumentation monitoring (i.e., thermistors and piezometer data) in the text of the Annual Report.
Waste Management Activities	Information provided in the tables for the section regarding waste management activities are missing, are not clear or do not match with the text provided.	Please add information as requested for the tables included in this section in the 2017 Annual Report.
Spill Management	The number of non-reportable spills has shown a steep increase since 2014, including a ~150% increase from 2015 to 2016, and an 18% increase from 2016 to 2017. Agnico Eagle does not discuss possible reasons for why the number of non-reportable spills continue to rise despite implementation of the Spill Reduction Action Plan.	1) Discuss why the number of non-reportable spills continue to increase and what is being done to reverse this trend. 2) Present the number of reportable and non-reportable spills from 2011 to 2017 in table or graph format in the Annual Report.
Spill Management	Agnico Eagle reported that “contaminated soil picked up and disposed of appropriately” for numerous spills but it is not clear what clean-up procedure was followed	Provide more details on the clean-up procedure for spills that resulted in contaminated soil.

Topic	Comment/Concern	Recommendation
Landfarm	Agnico Eagle found a new location for the landfarm (Landfarm 2) to continue treatment of contaminated soil, since the existing landfarm (Landfarm 1) is located on the northwest side of the South Tailings Cell and will eventually be flooded by reclaim water. Landfarm 2 was constructed in 2016, however information on the location of Landfarm 2 is lacking. Further, it is not clear if contaminated soil was added to Landfarm 2 in the remainder of following January 2017.	Provide the location of Landfarm 2 and indicate whether soil was deposited to Landfarm 2 in February-December 2017.
Landfarm	It is not clear when Landfarm 1 will cease operation, and how the remaining soil there will be managed to avoid exposure to flooding and the generation of unnecessary contact water.	Provide an explanation on when Landfarm 1 will cease operation, and how the remaining soil at the landfarm will be managed to avoid exposure to flooding.
Landfarm	Agnico Eagle stated in the Annual Report that chemical and microbiological analyses of soil samples from the landfarm were analyzed in October 2017; however, it is not clear if it was from both landfarms.	Clarify whether soil samples were analysed from both landfarms.
Landfarm	Agnico Eagle reported within the Annual Report that there was a moderate level of PHC F2 and F3 contamination (i.e., exceedances of CCME guidelines), but no values were provided to evaluate this conclusion. Further, Agnico Eagle stated that soil nitrogen and TOC contents were moderate, but no values were provided. KIA noted concern that the exceedance of CCME guidelines is interpreted as moderate contamination.	Report the levels of PHC F2 and F3, soil nitrogen and TOC contents recorded in soil samples.

Topic	Comment/Concern	Recommendation
CREMP: Water Chemistry	As in previous years, there were several statistically significant mine-related changes relative to baseline/reference conditions at Meadowbank study lakes in 2017, relating to alkalinity, conductivity, hardness, major cations (calcium, potassium, magnesium and sodium), total dissolved solids (TDS) and total Kjeldahl nitrogen (TKN). Since no effects-based thresholds exist for these parameters (such as CCME water quality guidelines), Agnico Eagle set triggers at the 95th percentile of baseline data. Agnico Eagle concluded that “while these results represent mine-related changes, the observed concentrations are still relatively low and unlikely to adversely affect aquatic life”.	1) Explain why trigger exceedances are considered “relatively low” and provide support for the statement that they are “unlikely to adversely affect aquatic life” by linking to the findings from the biotic surveys (i.e., phytoplankton and benthic invertebrate community) conducted in 2017. 2) Include Table 3.2-3 from Appendix G1 in the Annual Report, which summarizes water quality parameters with 2017 trigger exceedances, in the Annual Report.
CREMP: Water Chemistry	Agnico Eagle further stated that there were no trigger exceedances for any water quality parameters having CCME guidelines. However, it was noted that in Appendix G1 Table 3.2-1, a number of parameters are listed that have trigger values above CCME threshold guidelines, to reflect site-specific conditions. These parameters should be identified in the text of the Annual Report, and reference should be made to baseline monitoring results to indicate that elevated levels are naturally occurring and not due merely to mine activity.	1) Discuss which water quality parameters were assigned trigger values above their CCME guideline thresholds due to site-specific conditions. 2) Explain (with reference to baseline monitoring data) why these parameters have been assigned site-specific trigger values.

Topic	Comment/Concern	Recommendation
CREMP: Sediment Chemistry	Wally Lake had trigger exceedances in lead, chromium and arsenic in 2017 sediment samples. While lead and chromium were “marginally above their respective trigger values”, arsenic was approximately 2.5 times higher than baseline and had increased since the previous coring sample was collected in 2014. Agnico Eagle suggested that this trend may be due to natural spatial heterogeneity but is not affecting benthic richness or abundance according to the 2017 BACI analysis. Agnico Eagle recommended that coring continue in 2018 to determine whether the increasing trend is real or related to spatial heterogeneity, and that a targeted bioavailability study also be conducted to determine potential effects on biotic communities. From the information provided, it is not clear whether Agnico Eagle has established medium and high-level triggers that require additional action if levels of these parameters continue to increase.	1) Explain how additional coring will be used to distinguish between mine related and background variation in arsenic values at Wally Lake. 2) Clarify the potential influence of spatial heterogeneity on variation in arsenic levels. 3) Explain what medium and high-level triggers are in place for these parameters and the associated management actions required should these triggers be exceeded.
CREMP: Sediment Chemistry	Chromium concentrations were measured in Third Portage Lake East Basin as 178-264 mg/kg dry weight. The trigger value for chromium is 135 mg/kg dry weight.	Explain how Agnico Eagle determined that these measured values were “marginally above” the trigger values.
CREMP: Sediment Chemistry	Appendix G1 Table 3.2-9 indicated that CCME guidelines were not used as threshold values for several sediment parameters because of site-specific conditions. These parameters should be identified in the text.	Discuss which sediment chemistry parameters were assigned trigger values above their CCME guideline thresholds due to site-specific conditions.
CREMP: Sediment Chemistry	Appendix G1 Table 3.2-11 shows numerous (most) hydrocarbon and PAH results from sediment grabs as being below the detection limit. This is problematic, especially for parameters whose CCME guideline levels are below the detection limit, such as acenaphthene, acenaphthylene, and dibenz(a,h)anthracene. Agnico Eagle should ensure that laboratory testing is capable of analysing samples with low concentrations so that threshold exceedances can be detected.	Discuss what steps will be taken to improve laboratory testing to address detection limit issues.
MMER and EEM Sampling: Vault Attenuation Pond Discharge	Raw data was provided for the discharge monitoring results for the Vault Attenuation Pond to characterize effluent, but no summary or interpretation of the results were provided in the Annual Report.	Summarize and interpret discharge monitoring results for the Vault Attenuation Pond discharge.

Topic	Comment/Concern	Recommendation
MMER and EEM Sampling: East Dike Discharge	Two episodes of elevated TSS occurred during the 2017 year during discharge from the South and North seepage points resulting in water being redirected to Portage Pit sumps and discharged to Portage Pit once compliant. In each case there was a delay between sampling and response, due in part to waiting for lab results resulting in TSS being discharged into Second Portage Lake before being redirected.	Investigate potential modifications to the discharge system which would avoid or minimize the delay in switching discharge from Second Portage Lake to the Portage Pit sumps in the event of future exceedance events.
MMER and EEM Sampling: EEM Interpretive Report Cycle 2 and EEM Study Design Cycle 3	Transferred fish from Vault Lake in 2014 and from Phaser Lake in 2016 to Wally Lake were tagged but these tags may have since been shed and thus the origin of Lake Trout captured for the Lake Trout population study will be unknown. Agnico Eagle acknowledged that this issue could confound investigation into the effects of Vault discharge on Wally Lake fish, if individuals from different sources have differential responses to the discharge. Agnico Eagle did not, however, discuss how it will address this confounding factor in the study design.	Discuss how fish transfers may affect monitoring results and how this will be addressed.
Mine Site Water Quality and Flow Monitoring (and Evaluation of NP2)	Agnico Eagle is required to present the results and interpretation of the monitoring program under Water License 2AM-MEA 1525 Schedule B-15. Raw data is provided in tables, but the information was not summarized or interpreted in the text. Instead, Agnico Eagle reports for many mine site data that there are “no applicable license limits”. KIA noted that it understood that limits may not be applied because water is not directly released to the environment from these sites. However, tracking levels of contaminants year over year is important in the event that seepage occurs (e.g., as occurred from Portage Waste Rock Storage Facility in 2013, which had elevated levels of cyanide, nickel and copper, and was found to have originated from reclaim water from North Cell TSF).	Summarize monitoring results and interpret trends for the Mine Site Water Quality and Flow Monitoring in the Annual Report.

Topic	Comment/Concern	Recommendation
Mine Site Water Quality and Flow Monitoring: Mine Site Water Collection System	In June 2017, elevated TSS was detected in NP1 Lake and reported as a spill. Agnico Eagle implemented a daily TSS monitoring program “until results are satisfying...and compliant with regulation for a period judged acceptable for confirmation that runoff water will not impact the receiving body further”. However, no further details were provided, and it is not clear how long elevated TSS conditions persisted, what exceedance level was recorded, nor what period of compliance is deemed “acceptable for confirmation that runoff water will not impact the receiving body further”.	Provide additional details about the elevated TSS event at NP1 Lake, including what the exceedance level was, how long TSS was elevated, how it was addressed, and what period of compliance is deemed acceptable.
Mine Site Water Quality and Flow Monitoring: Mill Seepage	Agnico Eagle presented the results of water quality monitoring of seepage in the interception trench, monitoring wells and Third Portage Lake in the Annual Report but the exceedances were not highlighted in the tables. It was noted by KIA that there were several exceedances relating to free cyanide and iron in trench and wells, and copper in Third Portage Lake but was not discussed.	1) Highlight guideline exceedances of parameters in the tables as appropriate. 2) Discuss the implications of the copper exceedance measured in Third Portage Lake.
Air Quality Monitoring: AWAR Monitoring	Agnico Eagle expanded its dustfall sampling along the AWAR in 2017 by studying the effects of dust suppression at five (5) key locations. It was noted that sites with suppression had significant reductions in the mean fixed dustfall rates up to 150 m from the road compared to sites where no suppression was applied. At 300 m beyond the road, dustfall rates were similar between reference and treatment sites. No information was provided on the type of dust suppressants used or the reason why the five (5) locations were selected along the AWAR.	1) Indicate what type of dust suppressant was used along the AWAR. 2) Explain why the five locations receiving dust suppressant were identified as potential areas of concern for dustfall.

Topic	Comment/Concern	Recommendation
Wildlife Monitoring: Habitat	In 2014, the habitat analysis results indicated that the mine site threshold was being approached, as 775.7 ha actual loss was recorded. Agnico Eagle responded by committing to remove material stored in the NPAG extension area and use it for capping the North Cell TSF during closure and reclamation. Agnico Eagle reasoned that this would free up high suitability habitat in the NPAG extension area, making it available again for ungulates following restoration. Agnico Eagle does not report on how much habitat this would restore, nor when it would be fully restored as high suitability habitat.	1) Provide more details on the restoration of the NPAG extension area, including how much habitat would be restored, how it would be restored, and what the status of restoration is. 2) Provide more details on the habitat analysis planned for 2018, including rationale. The 2018 habitat analysis should also be discussed in the Annual Report.
Wildlife and AWAR	For the 2017 year, low numbers of caribou were observed along the AWAR compared to previous years (2007 – 2016) and KIA asked for the potential reason for the much lower numbers seen in 2017.	Discuss possible reasons for the low numbers of caribou observed along the AWAR in 2017 compared to other monitoring years. Investigate whether the decline also occurred in reference areas or is a mine-related effect.
Inspections, Compliance Reports and Non-compliance Issues	Agnico Eagle mentions that several inspections occurred in 2017 by regulatory authorities and these reports were provided in the appendices but no summaries were provided in the Annual Report regarding what issues were raised and how Agnico Eagle addressed them as is required under the Water Licence.	Summarize concerns or deficiencies raised by agency inspections in 2017 and indicate how they were addressed.
Traditional Knowledge, Consultation with Elders and Public Consultation	Agnico Eagle mentioned that traditional knowledge is collected from community meetings and reported annually but information is not provided on how it is reported.	Explain how traditional knowledge gathered at community meetings is reported and used.
PEAMP: Aquatic Environment	A large discrepancy was observed between the predicated average annual discharge to Wally Lake versus the measured amount.	Explain why discharge volume to Wally Lake was 57% higher than predicted in 2017.
PEAMP: Aquatic Environment	No information was provided on how parameters without CCME guidelines are dealt with in predictions for impacts of mine-related activities on the receiving environment and the predicted and observed impacts to fish and fish habitat.	Indicate how parameters without CCME guidelines are incorporated into predicted and observed impacts on water quality and fish and fish habitat.

Topic	Comment/Concern	Recommendation
PEAMP: Terrestrial and Wildlife Environment	Information on the terrestrial ecosystem monitoring program thresholds were not provided for the 2017 year only the 2016 year.	The text should reflect thresholds exceeded in 2017 and the number of exceedances reported should be consistent with those present in Annual Report.
PEAMP: Terrestrial and Wildlife Environment	Information provided on the predicted and measured habitat loss at the mine site and AWAR should be updated to report individual percent losses. Further, the percent exceedance of threshold/prediction for habitat loss and degradation of high suitability habitat for ungulates, small mammals, waterbirds and other breeding birds should be provided for each not just area.	1) Include individual percent loss of habitat values for the mine site and AWAR. 2) Include the percent exceedance of the threshold/prediction for high suitability habitat under the ‘Measured Impact’ column for ungulates, small mammals, waterbirds and other breeding birds.
PEAMP: Terrestrial and Wildlife Environment	Three large predators (one wolverine and two wolves) were killed at the mine in 2017, which exceeded the one mortality per year threshold for large predatory mammals. Agnico Eagle examined historical trends to evaluate the situation and from this Agnico Eagle concluded that “based on this data, there is no clear trend towards increasing mortalities of large predatory mammals on the Meadowbank site”. However, another way to interpret the data is that there was a steady decline in mortalities on site from 2011 to 2016, followed by an increase again in 2017, which warrants further investigation into what occurred in 2017.	Discuss possible reasons for an increase in large predatory mammal mortality on site in 2017 and describe what steps are being taken to avoid further threshold exceedances.
PEAMP: Terrestrial and Wildlife Environment	Agnico Eagle stated that “to determine appropriate management actions for exceedances of impact predictions related to habitat disturbance areas, further habitat analyses are planned for 2018”. KIA questioned the necessity of further analyses.	Explain the nature of habitat analyses planned for 2018 and provide a rationale for them. These analyses should focus on determining the best options to mitigate the larger than predicted habitat loss that has occurred on the mine site to date, as well as steps that can be taken to avoid further habitat loss.

### 2.3.2.2. Government of Nunavut

Within its submission on Agnico Eagle’s 2017 Annual Report, the GN provided comments and recommendations on the following items as outlined in

**Table 6: Government of Nunavut Comments and Recommendations for Effects Monitoring**

Topic	Comment/Concern	Recommendation
Wildlife Habitat Loss	Habitat loss poses a risk to grazing species such as caribou and muskox in Nunavut. Both of these species are important both economically and culturally to Nunavummiut.	Conduct an inclusive habitat analysis at the earliest possible date and, in coordination with the GN, develop and implement specific adaptive management measures relating to the exceedances of habitat loss at the Project site.
All-Weather Access Road Ground Surveys	It is essential to the validity of survey results that adequate observation be undertaken during the AWAR road survey. If the driver is being utilized as an observer, observational power will be weighted towards the passenger side of the road and there will exist the potential for missed observations along the driver's side of the road.	1) Survey design should be updated to include two dedicated observers to ensure that each side of the road is observed with an adequate and equal amount of attention. 2) The implementation of another monitoring method in addition to the road surveys is recommended. This would allow the Proponent to detect if caribou are being disturbed by the AWAR before they are within sight of the road observer. The Proponent should work in collaboration with the Department of Environmental regional caribou biologist to devise and implement additional monitoring methods.
Caribou Monitoring and Project Interaction	Caribou are a key species in Nunavut ecologically, economically, and culturally. The accurate reporting of caribou movements by project proponents is essential to the continued sustainable management of caribou in Nunavut.	Update the Wildlife Monitoring Summary Report to reflect the movement of collared caribou across and around the Project RSA during the spring migration period.
Dustfall Monitoring	Accurate measures of air quality are required for monitoring Project effects. Dust deposition has the potential to damage vegetation through both mechanical damage and through smothering. Dust deposition also has the capacity to impact caribou forage (Chen <i>et al.</i> , 2017). Caribou are present seasonally within the Project area and footprint. An accurate measure of a loss of forage is therefore necessary to determine potential Project effects on caribou.	1) Update the dustfall monitoring plan to include the measured parameters of TSP, PM <sub>10</sub> , PM <sub>2.5</sub> , and NO <sub>2</sub> at sampling stations DF-3 and DF-4. 2) Add additional air quality station in the vicinity of the project and along the Vault Pit haul road to ensure adequate monitoring of Project related dust generation.

Topic	Comment/Concern	Recommendation
Acoustic Environment	Noise effects on wildlife have to be monitored and assessed to ensure proper implementation of noise mitigation measures. Accurate identification of impacts and presentation of the results determines compliance with Project Certificate terms 62 and 85: “[d]evelop and implement a noise abatement plan to protect wildlife from significant mine activity noise, including blasting, drilling, equipment, vehicles and aircraft)” and (“[d]evelop a detailed blasting program to minimize the effects of blasting on fish and fish habitat, water quality, and wildlife and terrestrial VECs”). This will also support implementation of the Terrestrial Ecosystem Management Plan Version 5 (June 2018).	<ol style="list-style-type: none"> <li>1) Provide a rationale for location selection of the receptors for noise monitoring; and</li> <li>2) Include within the Annual Report a discussion on noise effects on wildlife, including vibration and blasting noise.</li> </ol>
Wildlife Interactions and Mortalities	<p>Predatory mammals - in addition to being important furbearers for the Nunavut economy - represent a threat to the health and safety of project personnel. Every attempt should be made regarding adequate monitoring and deterrence methods to ensure the safety of both wildlife and Project personnel.</p> <p>Rapid alerting of personnel to the presence of wildlife is integral to human and animal safety and all measures to alert site personnel quickly should be taken.</p> <p>Accurate tallying of wildlife mortality with details of demographic parameters including sex is integral to analyzing Project effects. Where the cause of mortalities can only be assumed, a cause of death should be listed as “undetermined”.</p>	<ol style="list-style-type: none"> <li>1) Update the predatory mammal deterrence protocols to include the immediate issuance of a site alert to personnel when carnivores are sighted in and around the project area.</li> <li>2) Amend Appendix C of the Wildlife Monitoring Summary Report, Wildlife Mortality Report to include the sex of deceased animals.</li> <li>3) Revise the wildlife incident report as the cause for the December 1, 2017 incident should be ‘undetermined’</li> </ol>

Topic	Comment/Concern	Recommendation
Monitoring of Wolverine	<p>Predatory mammals are susceptible to loss of denning habitat, and sensory disturbance associated with project construction and operation. Predatory mammals are also prone to attraction to project sites through human waste and strange smells associated with project activities. As required by the Project Certificate Term and Condition No. 54, the Proponent shall provide “statistical validation to support the conclusions drawn from monitoring impacts of the mine and infrastructure on wildlife”.</p>	<ol style="list-style-type: none"> <li>1) Given the high occurrence of wolverines at the mine sites, surveys on wolverine distribution and habitat use should be conducted, in order to properly assess the impact to local population for the required mitigation and monitoring needs;</li> <li>2) Reassess the mitigation measures pertaining to prevention of wildlife attraction on and around the Project site;</li> <li>3) Conduct a survey to identify wolverine habitat in the Project area that may be directly or indirectly (sensory disturbance) affected by mine activities;</li> <li>4) Develop a response plan when a wolverine den site is detected within 1 km of Project activity to ensure no significant effects on this valued ecosystem component; and</li> <li>5) Provide “statistical validation to support the conclusions drawn from monitoring impacts of the mine and infrastructure on wildlife” as it applies to wolverine.</li> </ol>
Impact to Health Services	<p>The Annual Report provided that between 14 and 58 employees were referred to health centres in Baker Lake, Rankin Inlet, and Arviat. The referrals do not indicate if the person’s employment at the mine caused the referral. Complete data are required to determine the true impacts these referrals have on the relevant health centres.</p>	<p>Collect additional data when employees visit the on-site clinics and receive referrals for community health centres. If employees consent, the collection of information could include whether the referral is for a mine-related health issue or otherwise. If employees consented to such collection, additional information could also include: communicable disease reporting and/or testing; mine-related clinic visits; health plan utilization reports; and the number of referrals and consultations with the Department of Health. The information would provide a more complete assessment of positive and negative impacts to health services.</p>

Topic	Comment/Concern	Recommendation
Economic Security and Wellbeing	Turnover rate alone does not appear to fulsomely address questions about economic security. In addition to turnover rates, an analysis prefaced on the length of services of Inuit employees would provide more complete data to address issues related to social assistance and economic security.	Include average lengths of service for Inuit employees in future annual reports as a more accurate reflection of economic security.

### 2.3.2.3. Environment and Climate Change Canada

ECCC had no comments to provide with respect to the effects monitoring.

### 2.3.2.4. Fisheries and Oceans Canada

In review of the 2017 annual report, DFO commented on Agnico Eagle’s conclusions regarding the 2017 Blast Monitoring Report indicating it cannot confirm the validity of Agnico Eagle’s conclusion that additional studies may not be necessary to confirm low peak particle velocity (PPV) at spawning and incubation sites and recommended that Agnico Eagle continue to record PPV and overpressure monitoring data during blasting activities.

With respect to the monitoring program, DFO noted no changes are required at this time.

### 2.3.2.5. Crown-Indigenous Relations and Northern Affairs Canada

In review of the annual report, CIRNAC provided comments and recommendations based on their mandate which is provided in Table as a summary.

**Table 7: Crown-Indigenous Relations and Northern Affairs Canada Comments and Recommendations for Effects Monitoring**

Topic	Comment/Concern	Recommendation
General	CIRNAC noted that in their previous reviews of the Annual Reports (2015 and 2016), it was sometimes difficult to ascertain the status of activities proposed by Agnico Eagle and to track the implementation of recommendations made by regulators within the Annual Report and/or supporting documents. This recommendation was not carried forward to the 2017 Annual Report.	Develop a table to track proposed activities and recommendations presented within the Annual Report and supplementary documentation appended to the Annual Report. Such a table would help to ensure the follow-up of potential issues, such as information regarding whether a recommendation was adopted, how it was implemented and/or the rationale as to why a recommendation was not considered.

Topic	Comment/Concern	Recommendation
General	In some cases where commitments were made to update documents “at least once a year” (e.g., the Emergency Response Plan) have not been fully adhered to.	Ensure that all documents are updated on a timely basis.
Quarries	The annual report does not present historical petroleum hydrocarbon (PHC) degradation data and trends to support Agnico Eagle’s assertion that “[b]ased on the degradation history of PHC’s in the Meadowbank Landfarm and upon results from the 2014 and 2016 Q22 soil sampling, Agnico Eagle is confident that the natural degradation of Petroleum Hydrocarbon related products is an effective remediation method for Q22.”	Present the data and information on historical PHC degradation at the Meadowbank Landfarm that corroborates the conclusions within the Annual Report.
Lake Level Monitoring	Changes in lake levels in Turn Lake, resulting from diversions involved in the Phaser Lake dewatering, do not appear to have been measured/reported in 2017, as well as in previous year (2013-2016). Thus, comparisons to FEIS predictions were not provided in the 2017 Annual Report.	Provide an explanation as to why Turn Lake water levels are not being monitored, reported and compared to FEIS predictions.
Lake Level Monitoring	The annual report describes separate lake level measurements for Ponds B, C and D in the Vault Attenuation Pond; however, there is mention of only one monitoring location for the Vault Attenuation Pond, station VN-IN which is established in Pond B (shown on Figure 3). Thus, it is not clear how measurements were obtained for Ponds C and D.	Clarify the methodology by which lake level measurements were obtained for Ponds B, C, and D of the Vault Attenuation Pond.
Predicted vs. Measured Water Quality	While the results of predicted vs. measured comparisons (average and lower 25th percentile) for both scenarios (Probable and Probable Poor End) are provided in the 2017 Annual Report for each pit (North Portage Pit [ST-17], Third Portage Pit [ST-19], Goose Pit [ST-20], and Vault Pit [ST-23]) in paragraph form for each year for the period 2012-2017, the manner in which these data are presented makes it difficult to decipher any temporal trends. Further, no discussion of temporal trends is included in the text. Presenting these data in a tabular or graphical format would provide a more effective means of deciphering water quality trends over time.	Predicted versus measured water quality parameter comparisons should be presented in a tabular or graphical format as outlined by CIRNAC in its comments.

Topic	Comment/Concern	Recommendation
Predicted vs. Measured Water Quality	Agnico Eagle provided comments on the probable causes of discrepancies and how the results could affect the re-flooding plans as requested by CIRNAC in 2018; however, information appears to be still lacking in the annual report.	1) Discuss the probable causes of the discrepancies and how they could affect reflooding plans or provide a rationale for not doing so. 2) Provide discussions of potential impacts of placing tailings into pits and how this would affect existing reflooding plans.
Waste Rock Volume	Agnico Eagle did not provide a comparison of the waste rock volume generated annually to the FEIS predictions as committed to following CIRNAC's review of the 2016 Annual Report.	Provide a comparison of the volume of waste rock generated annually to FEIS prediction.
Tailings Storage Facility (TSF)	CIRNAC noted discrepancies between the Annual Report and the Mine Waste Rock and Tailings Management Plan with respect to the storage of tailings making it difficult to determine the Proponent's intention regarding tailings management	Clarify the discrepancy in tailings management approach mentioned in the 2017 Annual Report and the Mine Waste Rock and Tailings Management Plan.
Tailings Freezeback and Capping Thickness	As with the review of the 2016 Annual Report, CIRNAC repeated its comments with respect to the tailings freezeback and capping thickness	1) Include a meaningful discussion of the results from the permafrost monitoring in the Annual Report. FEIS predictions should be compared with monitoring results and be clearly presented. 2) Present the updated modeling supporting their conclusions that the conceptual plans for thermal encapsulation of the Tailing Storage Facility and the Waste Rock Storage Facility remain effective to prevent and control deleterious seepage over long term. 3) If results show discrepancies from the predicted values, Agnico Eagle should discuss the management actions that should be implemented to address the risk.”
Tailings Freezeback and Capping Thickness	Information lacking on the nature and extent of research efforts conducted on three experimental cells and how it has been used for the cover design of the TSF North and South Cells.	Provide information on the nature and extent of research efforts, results of the research and a discussion of how the proposed cover design has been influenced by these results.

Topic	Comment/Concern	Recommendation
Tailings Freezeback and Capping Thickness	It is not clear how Agnico Eagle will confirm that the Vault Waste Rock Storage area will be frozen without the placement of instrumentation.	Instrumentation should be added to confirm Vault Waste Rock Storage freezeback predictions and measure performance.
Spill Management	The 2017 Annual Report shows that the number of Reportable Spills (28), while not as high as 2016 (34) still remains high. Non-Reportable Spills (442) continue to be at levels much higher than in prior years [2016 (374), 2015 (148), 2014 (63)].	Increase the Spill Reporting to once a quarter to track the effectiveness of spill reduction efforts and assure that these preventative efforts are effective.
Core Receiving Environment Monitoring Program (CREMP)	Agnico Eagle noted that due to the low likelihood of adverse effects on aquatic life a discussion was not provided on the management actions with respect to trigger exceedances observed in water.	Provide a discussion of management action with respect to trigger exceedances in water, even if the likelihood of adverse effects on aquatic life is low.
Core Receiving Environment Monitoring Program (CREMP)	In response to NIRB's comment on near-field baseline/reference stations (NIRB 2016-2017 Annual Monitoring Report), Agnico Eagle indicated that it is not considering finding other near-field stations that could be used for baseline/reference conditions and provided a rationalization as to why, which does not appear to have been accepted by NIRB.	The issues of impact causes and reference/baseline stations needs to be resolved.
Portage Rock Storage Facility (ST-16)	In review of the information provided, it appears that detectable levels of all cyanide (CN) forms were measured in NP-2 and NPC-1 and CN WAD and CN Free in Dogleg and Portage in 2014 and CN Total and CN WAD in all lakes in 2017 which contradicts Agnico Eagle's statement that "monitoring has indicated no CN levels".	Clarify the statement "To date (previous 4 years) the monitoring has indicated no CN levels in NP-2, NP-1 and downstream lakes, dogleg and Second Portage" and confirm the cyanide results.
All Weather Road (AWAR) and Quarries	Recommendations were provided by Golder Associates with respect to the geotechnical structures of the AWAR including all culverts, bridges and quarries and Agnico Eagle believes that the existing monitoring program addresses these recommendations.	Develop a table to track proposed activities and recommendations presented within the Annual Report and supplementary documentation appended to the Annual Report. Such a table would help to ensure the follow-up of potential issues, such as information regarding whether a recommendation was adopted, how it was implemented and/or the rationale as to why a recommendation was not considered.

Topic	Comment/Concern	Recommendation
Seepage Through Central Dike	In review of the Meadowbank Dike Review Board (MDRB) meeting records, CIRNAC noted that the MDRB still had some concerns regarding the Central Dike seepage and the need for additional investigations of void interpreted features. MDRB suggested that Agnico Eagle consult with Ground Penetrating Radar (GPR) specialists to assess applicability of GPR surveys.	CIRNAC agrees with the MDRB recommendation that additional investigations be carried out, and that Agnico Eagle assess applicability of GPR in this regard.
Groundwater	Unclear from the Groundwater Monitoring Report whether the waste rock seepage signature is PAG or NAG.	Clarify whether the signature is for PAG or NAG waste rock seepage.
Progressive Reclamation – Mine Site	No mention is made of potential implications of updates to Life of Mill plan if ore is milled from additional pits elsewhere, and what if any implications this may have on planned progressive reclamation. In terms of progressive reclamation progress, the only numeric value provided is that of 86% of the Portage PRSF had been covered to end of January 2017.	CIRNAC expects that the 2018 updates to the Interim Closure and Reclamation Plan will include more details on progressive reclamation such as: areas of TMF and WRSF facilities covered in 2017 and total areas to date, along with the volumes associate with these areas, amongst others.
Inspections, Compliance Reports and Non-Compliance Issues	The annual report does not provide a summary statement on findings of all inspections and where necessary, did not provide a list of issues that have been identified and the status of these issues.	Provide a summary statement on findings in future annual reports.
Post-Environmental Assessment Monitoring Program (PEAMP) – Evaluation of Impact Predictions	Agnico Eagle indicated that it will only provide a discussion of year-to-year trends for any monitoring components where an exceedance of impact predictions was observed. Agnico Eagle only provided an assessment of historical trends was conducted for large predatory mammal mortality since such mortality in 2017 occurred beyond FEIS thresholds while concluding that observed impacts to water quantity, water quality, fish and fish habitat measured in 2017 are within the FEIS predictions or are not expected to result in adverse environmental impacts, therefore trend analyses were not presented for any components of the aquatic environment.	While the concentrations of conventional water quality parameters that exceeded trigger values were deemed to be low and with a low likelihood of adverse effects on aquatic life, these parameters may eventually become problematic if their concentrations are increasing over time which is why a trend analysis is needed. Data comparisons and interpretations presented for the PEAMP continue to be limited to those between current conditions (2017) and FEIS predictions. Therefore, it is recommended that Agnico Eagle include a temporal analysis identifying trends over time in the data interpretation.

Topic	Comment/Concern	Recommendation
Accuracy of Impact Prediction	It was noted that the climate change model predictions used in the FEIS are dated and it may be appropriate to update the climate change discussions with more recent research information.	n/a
Other Considerations	The annual report is for the most part silent with respect to the potential impacts of Life of Mill extension if additional mineral resources are processed at the Meadowbank operation. Such activities would be a major variance to the Meadowbank FEIS plans and associated predictions. Given the desire to compare predicted impacts to actual impacts, the failure to at a minimum point out that the life of the operation may change, and if so, that the predictions for some aspects of the operation (tailings storage, closure concepts, extended life of mill and associated infrastructure operations both on site and at off site locations) will also change accordingly is a major shortcoming in understanding the potential long term behaviour and impacts of the operation.	n/a

### ***2.3.3. Areas Requiring Further Study or Changes to the Monitoring Program***

#### **2.3.3.1. Appendix D and the Annual Report**

The NIRB notes that Agnico Eagle’s 2017 Annual Report provided a detailed analysis of results from its 2017 monitoring program and that it compared observed impacts noted in 2017 to predictions made within the FEIS. Agnico Eagle’s evaluation focused on the VECs that were identified in the FEIS, including the aquatic environment, the wildlife and terrestrial environment, noise quality, air quality, permafrost, and socio-economics; however, no trend analyses were provided. Further discussion on the results on noise quality and air quality is provided in Sections [2.3.1.2](#) and [2.3.1.3](#).

However, the NIRB found that the discussion and analysis within the PEAMP could be expanded to include the other VEC, especially for water quality values that were measured within the pits as results showed an increase in a number of parameters that exceeded predictions from year to year since 2012. The overall lack of reference to baseline data or to data from previous years makes it difficult to quantify or measure the relevant effects of the Project. While comparison between monitoring as proposed in the FEIS and monitoring undertaken in 2017 was helpful, rationale for why these were different was not always clearly presented. The NIRB also found that some of the sections within the PEAMP provided more clarity than others; a consistent approach across VECs would be helpful in future annual reporting.

## 2.4. SITE VISIT

The complete site visit report to both the Meadowbank Gold Mine Site and the Whale Tail Pit Site can be found in [Appendix I](#). The following sections provide a summary of the observation from both mine sites.

### *2.4.1. Findings and Summary of Meadowbank Site Visit*

Based on the observations made during this site visit, all Meadowbank facilities in operation and all sites currently under construction continue to appear to be well managed, and generally are maintained with adequate environmental protection measures and procedures in place. Details provided by Agnico Eagle during the site visit provided the Monitoring Officer with additional information regarding the company's continued efforts to address ongoing water and waste management issues observed at the site.

As with years past, Agnico Eagle appears to be in compliance with a majority of the terms and conditions contained within the Meadowbank Project Certificate No. 004; however, there may be certain situations in which the Proponent has not yet fully met the requirements of the Project Certificate and which require further consideration and attention.

The Monitoring Officer noted that the landfarm and hydrocarbon remediation program undertaken in 2013 appeared to have been successful in treating hydrocarbon contaminated soil as noted by Agnico Eagle staff. This technique is used to treat all of Agnico Eagle's hydrocarbon contaminated soils at the Meadowbank site.

Regarding Condition 8, three (3) groundwater wells appeared to be operational during the 2018 site visit following revisions of the groundwater well program.

Condition 25 requires that the Proponent employ legal deterrents to deter carnivores and/or raptors from the Meadowbank site, while Condition 59 requires that the Proponent consult with Elders and the Hunters and Trappers Organization (HTO) to design and implement deterrence measures to impede caribou from access to the tailings ponds. Agnico Eagle stated that wildlife (including muskox, caribou, wolves, and birds) had been observed around the site and along the AWAR, and that migratory birds would use the tailings storage facility during the spring time. Wildlife tracks have been noted by the Monitoring Officer at the tailings storage facility during previous site visits and during the 2018 site visit which provide evidence that wildlife are accessing the tailings storage facility.

Overall, there was no evidence of wind-blown material observed around the Meadowbank site and at the ancillary facilities in Baker Lake during the 2018 site visit and the Monitoring Officer observed that the fuel storage facilities appeared to be well maintained and properly set up for the re-fuelling of vehicles.

Condition 74 requires that the Proponent employ environmentally protective techniques to suppress any surface dust. To date, this condition has not been met. The only dust suppressants that have been applied have been at the mine site and along the access road between the Baker Lake facility and the gatehouse. The Proponent has not fully met the requirements of Condition

74, as dust suppression techniques were not being applied along the AWAR from Baker Lake to the mine site. However, the Proponent has initiated a dust sampling program along the road in 2012 to monitor dust deposition on vegetation along the road. Further, the Proponent implemented additional studies in 2016 which still continues to determine the most effective protective techniques to suppress surface dust from vehicles. Results from the ongoing studies viewed during the site visit have been provided in Agnico Eagle's 2017 annual report.

#### ***2.4.2. Findings and Summary of Whale Tail Site Visit***

The NIRB staff observed a busy site with considerable construction activity with all sites appearing to be well managed, and generally maintained with adequate environmental protection measures and procedures in place. Details provided by Agnico Eagle during the NIRB's monitoring visit provided the NIRB staff with information regarding the company's ongoing efforts to ensure compliance with the Project Certificate No. 008 and minimize impacts to the environment. However, it appeared that dust suppressants were not used along the Amaruq haul road even though it is undergoing expansion. The lack of dust management or frequent application of dust suppressants is a concern. Further, the lack of sufficient spill response equipment/material along the Amaruq haul road is of concern due to the potential of major spills occurring while the road is under construction. Finally, the traffic on the Amaruq haul road is not currently being monitored but any vehicle accessing the road is required to radio-in to the operator.

### 3.0 FINDINGS

As noted in [Section 1.0](#), the objectives of the NIRB's monitoring programs are:

- (a) measure the impact of the project on the ecosystemic and socio-economic environments of the designated area;
- (b) determine whether the project is carried out in accordance with the terms and conditions imposed under subsection 152(6) or set out in the original or amended project certificate;
- (c) provide the information necessary for regulatory authorities to enforce the terms and conditions of licences, permits or other authorizations that they issue in relation to the project; and
- (d) assess the accuracy of the predictions contained in the project impact statement.

Overall, the Meadowbank Gold Mine Project and the Whale Tail Pit Project appear to be in compliance with the majority of the terms and conditions contained within the Meadowbank Project Certificate No. 004 and the Whale Tail Pit Project Certificate No. 008, respectively. Further, Agnico Eagle is generally meeting the objectives of monitoring and mitigation plans and procedures put in place for the projects. However, certain outstanding issues will require the Proponent's attention as discussed throughout this report for both the Meadowbank Gold Mine Project and the Whale Tail Pit Project. These items are addressed in the Board's recommendations provided to the Proponent under separate cover.

Pursuant to Sections 12.7.2 and 12.7.3 of the *Nunavut Agreement* and ss. 135(3) and 135(4) of the *NuPPAA*, the NIRB will continue to work with Agnico Eagle and other regulatory authorities in order to provide the required evaluation of monitoring efforts, results and compliance as outlined within the Board's project-specific monitoring programs and in accordance with the requirements set out in the Meadowbank Gold Mine Project Certificate No. 004 and in the Whale Tail Pit Project Certificate No. 008.

Prepared by: Sophia Granchinho, M.Sc., EP  
Title: Manager, Impact Assessment  
Date: November 7, 2018

Reviewed by: Kelli Gillard, P.Ag.  
Title: Manager, Project Monitoring  
Date: November 7, 2018

Signature:   
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Signature:   
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**Appendix I      2018 Site Visit Report for the Meadowbank Gold Mine Project  
(03MN107) and Whale Tail Pit Project (16MN056)**



# 2018 Site Visit Report

for the NIRB's Monitoring of  
Agnico Eagle Mines Ltd.'s  
Meadowbank Gold Project (03MN107)  
*and*  
Whale Tail Pit Project (16MN056)



**Full Report Title:** 2018 Site Visit Report for the Nunavut Impact Review Board’s Monitoring of Agnico Eagle Mines Ltd.’s *Meadowbank Gold Project* (NIRB File No. 03MN107) and *Whale Tail Pit Project* (NIRB File No. 16MN056)

**Project:** Meadowbank Gold Project and Whale Tail Pit Project  
**Project Location:** Kivalliq Region, Nunavut  
**Land Tenure:** Inuit Owned Lands and Crown lands

**Project Owner:** Agnico Eagle Mines Ltd.  
Meadowbank Division  
P.O. Box 540  
Baker Lake, NU  
X0C 0A0

**Proponent Contact:** Robin Allard, Senior Environment Coordinator &  
Martin Archambault, Environmental Senior Coordinator

**Telephone:** (819) 759-3555, ext. 6744

**Visit conducted by:** Sophia Granchinho, Manager, Impact Assessment  
**Contact:** Phone: (867) 857-4829; email: [sgranchinho@nirb.ca](mailto:sgranchinho@nirb.ca)

Mia Otokiak, Junior Technical Advisor  
Phone: (867) 983-4622; email: [motokiak@nirb.ca](mailto:motokiak@nirb.ca)

**Site visit date:** August 14-16, 2018  
**Last site visit:** August 24-25, 2017

**Report prepared by:** Sophia Granchinho, Manager, Impact Assessment

**Photos by:** Sophia Granchinho and Mia Otokiak

**Cover photos:** 1) Baker Lake Marshalling Facility  
2) Meadowbank Portage Pit Area  
3) Meadowbank Camp Site  
4) Whale Tail Lake with Exploration Camp in Background

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# 1 INTRODUCTION

The Nunavut Impact Review Board (NIRB or Board) was established through Articles 10 and 12 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and is responsible for the assessment of ecosystemic and socio-economic impacts of projects in the Nunavut Settlement Area pursuant to the *Nunavut Agreement*. The NIRB is responsible for post environmental assessment monitoring of projects in accordance with Part 7 of Article 12 of the *Nunavut Agreement* and s. 135 of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*).

In December 2006, pursuant to Section 12.5.12 of the *Nunavut Agreement*, the NIRB issued Project Certificate No. 004 for the Meadowbank Gold Mine Project (Meadowbank Project), allowing the Meadowbank Project to proceed in accordance with the Terms and Conditions issued therein. In November 2009, the NIRB formally amended the Project Certificate No. 004 to include an amendment to Condition 32 pursuant to Section 12.8.2 of the *Nunavut Agreement* and an approval to change the name of the holder of the Project Certificate [No. 004] from Cumberland Resources Ltd. to Agnico Eagle Mines Ltd. (Agnico Eagle) (NIRB 2009). In August 2016, the NIRB formally amended the Project Certificate No. 004 to include the Vault Pit Expansion Project proposal for the Meadowbank Gold Mine Project (NIRB 2016).

In March 2018, pursuant to Section 12.5.12 of the *Nunavut Agreement* and s. 111(1) of the *NuPPAA* the NIRB issued Project Certificate No. 008 for the Whale Tail Pit Project (Whale Tail Project), allowing the Whale Tail Project to proceed in accordance with the Terms and Conditions issued therein.

This report provides the findings that resulted from the NIRB's site visits of the Meadowbank Gold Mine Project and of the Whale Tail Pit Project that took place between August 14 and August 16, 2018.

## 1.1 Objectives & Purpose of Site Visits

The objective of the NIRB's site visits were to determine whether the projects are carried out in accordance with the terms and conditions of the NIRB's Meadowbank Gold Project Certificate [Section 12.7.2(b) of the *Nunavut Agreement*] and the NIRB's Whale Tail Pit Project Certificate [s. 135(3)(b) of the *NuPPAA*].

The observations resulting from these site visits shall, wherever possible, be incorporated into the measurement of the relevant effects of the Meadowbank Gold Mine Project and the Whale Tail Pit Project, provide the information necessary for agencies to enforce terms and conditions of land or resource use approvals, and will further be used to assess the accuracy of the predictions contained in the project impact statements in accordance with Section 12.7.2 of the *Nunavut Agreement* and s. 135(3) of the *NuPPAA*.

## 1.2 Preparations for the Site Visits

The NIRB's Monitoring Officer for the Meadowbank Gold Mine and the Whale Tail Pit projects (the Monitoring Officer) reviewed the following items to prepare for the site visits: the Meadowbank Project Certificate No. 004; the Whale Tail Pit Project Certificate No. 008; previous Site Visit Reports (where relevant); Agnico Eagle's 2017 Meadowbank Gold Mine Annual Report and associated appendices as well as follow-up correspondence from the NIRB's 2017 Meadowbank Gold Mine site visit.

## 1.3 Overview of the Meadowbank and Whale Tail Site Visits

The 2018 site visits to the Meadowbank and the Whale Tail projects were conducted by Ms. Sophia Granchinho, the NIRB's Monitoring Officer for the Meadowbank and Whale Tail projects and Ms. Mia Otokiak, Junior Technical Advisor. In the morning of August 14, 2018 Ms. Granchinho and Ms. Otokiak were met by Mr. Martin Archambault, Environmental Senior Coordinator with Agnico Eagle, and driven first to the ancillary Project infrastructure that included the Baker Lake bulk fuel storage facility and the marshalling area. After viewing the ancillary Project infrastructure, Mr. Archambault drove to the Meadowbank mine site and stopped along several areas along the all-weather access road (AWAR) as outlined in [Table 1](#). Once at the Meadowbank Mine site, the NIRB staff were given a tour and viewed the areas as outlined in [Table 1](#). Ms. Granchinho, Ms. Otokiak, and Mr. Archambault discussed the Meadowbank Project in general and specific items related to the Project Certificate.

**Table 1: Meadowbank Site Visit Tour**

All-weather access road sites	Meadowbank sites
Gatehouse at kilometre 5	Exploration camp staging area
Two quarry sites (5 and 22)	Assay laboratory
One of the two (2) snowmachine crossings (kilometre 10)	Dust and air quality monitoring station near the assay laboratory
Two (2) of the three (3) dust testing sites along the road (kilometre 10, 24, and 48)	Incinerator
The dust sampling canisters at kilometre 25	Waste and hazardous materials storage area
Bridge at kilometre 23	Fuel tank storage area, Bay-Goose Pit
Exploration staging area for Greyhills	Groundwater wells
	Tailings storage facility (south cell and north cell),
	Central and East Dikes

All-weather access road sites	Meadowbank sites
	Active mine areas including: <ul style="list-style-type: none"> <li>▪ Portage Pit B and Portage Pit E (also known as South Portage Pit),</li> <li>▪ Vault Pit,</li> <li>▪ Vault waste rock facility,</li> <li>▪ Wally Lake diffuser,</li> <li>▪ Vault Pit Attenuation Pond,</li> <li>▪ Phaser and BB Phaser Pits,</li> <li>▪ North Diversion ditch,</li> <li>▪ Waste rock facility,</li> <li>▪ Landfill,</li> <li>▪ Landfarm remediation site, and</li> <li>▪ Emulsion plant</li> </ul>

The following morning, on August 15, 2018, Ms. Granchinho and Ms. Otokiak were met by Mr. Archambault and driven along the 65 km haul-road to the Whale Tail site at the Amaruq property. The road was being expanded as part of the activities approved for the Whale Tail project and originally constructed during the bulk sample phase of the project. During the drive, the tour stopped at several areas as outlined in [Table 2](#) along the haul road. Once at the Whale Tail site, the NIRB staff were met by Mr. Tom Thomson and provided a tour of the area as summarized in [Table 2](#). Ms. Granchinho, Ms. Otokiak, and Mr. Archambault also discussed the Whale Tail Project in general and specific items related to the Project Certificate.

**Table 2: Whale Tail Site Visit Tour**

Haul road sites	Whale Tail site
Quarry 10.5	Amaruq exploration camp
Snowmachine crossing (kilometre 12)	Portal to underground exploration
Several bridges	Quarry sites
Dust sampling canisters	Mammoth Lake
	Berm between North and South Basin
	Future Whale Tail Camp.

On the morning of August 16, 2018, the NIRB staff were met by Mr. Archambault to discuss the site visits, and further issues related to environmental compliance. Afterwards, Mr. Archambault drove Ms. Granchinho and Ms. Otokiak to the Hamlet of Baker Lake from the Meadowbank site.

The site visits provided participants the opportunity to observe all major Project components as well as discuss relevant issues and items related to the Meadowbank and Whale Tail projects.

## 2 MEADOWBANK GOLD MINE SITE VISIT

### 2.1 Meadowbank Project Description

The Meadowbank Project involves the construction and operation of an open pit gold mine located in the Kivalliq Region of Nunavut, approximately 70 kilometres (km) north of the hamlet of Baker Lake on Inuit-owned surface lands. In its 2017 Annual Report (as required by Appendix D), Agnico Eagle indicated that Meadowbank totalled 352,256 ounces of gold and also produced 276,853 ounces of silver in the year (Agnico Eagle 2018). Agnico Eagle further noted that production at the site has been extended into 2019 due to an extension of the mine plan at Vault and Phaser pits in 2018, and the Portage Pit in 2018 and 2019 (Agnico Eagle 2018).

The mine site is comprised of a camp, airstrip, associated mining infrastructure and three (3) active open pits: the Portage, Vault and Phaser pits. Dewatering was completed at the Phaser Lake in October 2016 and started mining of Phaser and BB Phaser in Q4 of 2017. Mining activity stopped at Bay-Goose Pit in April 2015 as the ore was depleted and therefore no production occurred after April 2015. In addition to the mining infrastructure and activities, ancillary Project infrastructure is located approximately 2 km east of the hamlet of Baker Lake and consists of barge unloading facilities, a laydown storage and marshalling area, a temporary laydown storage area for cyanide, a 60 million litre (ML) fuel tank farm, associated interconnecting roads and a 110 km all-weather private access road (AWAR) from the hamlet of Baker Lake to the Meadowbank mine site. Supplies are shipped from locations within Canada via sealift to Baker Lake where they are offloaded at Agnico Eagle's marshalling area and transported to the Meadowbank site via truck haul along the AWAR. See Photo 1 for an overview photo of the Meadowbank Mine Site. [Figure 1](#) through [Figure 3](#) provide a layout of the Meadowbank Mine Site, the Vault Pit Area and the marshalling facility near Baker Lake.



**Photo 1: Overview of Meadowbank Mine Site**

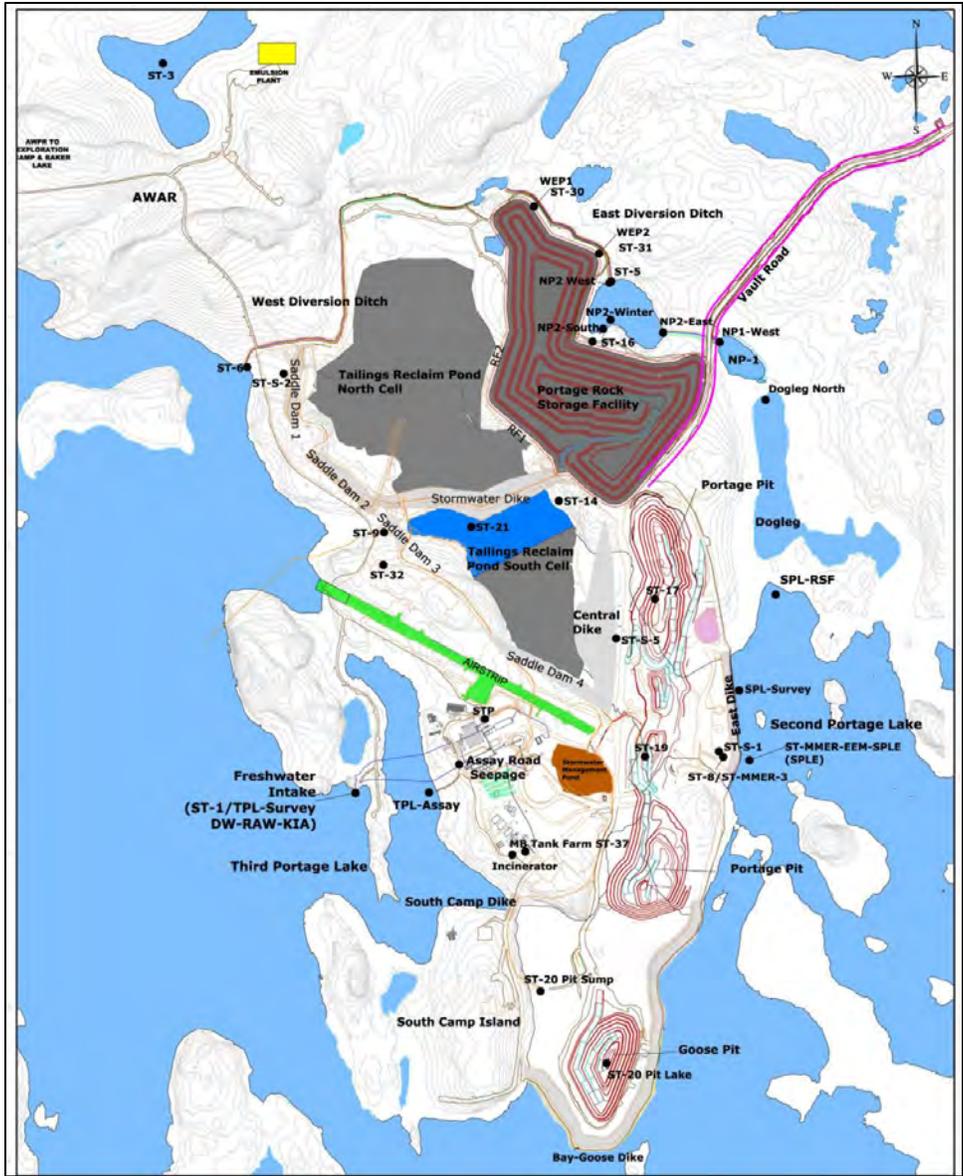


Figure 1: Meadowbank Mine Site (from Agnico Eagle’s 2017 Annual Report; Figure 1)

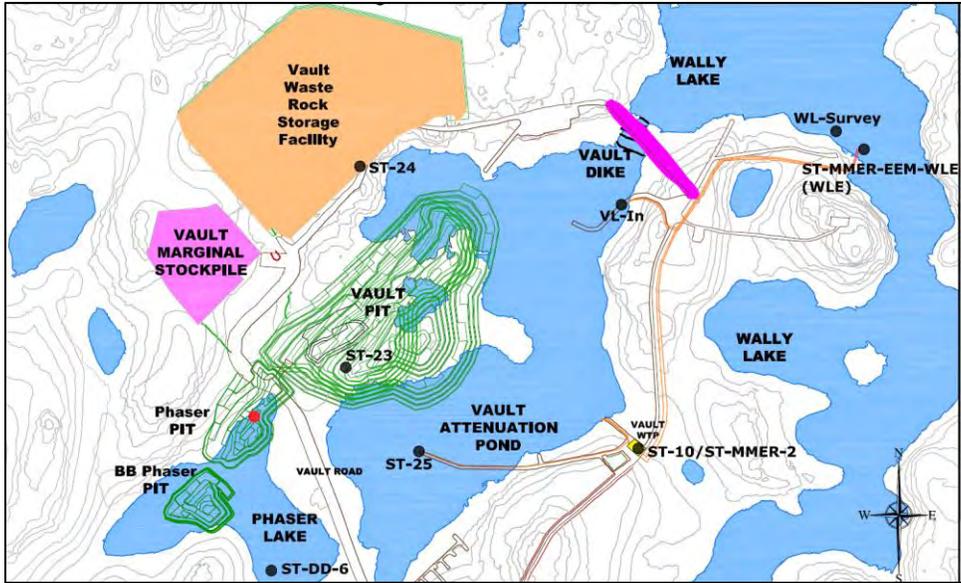


Figure 2: Vault Pit Site (from Agnico Eagle's 2017 Annual Report; Figure 3)

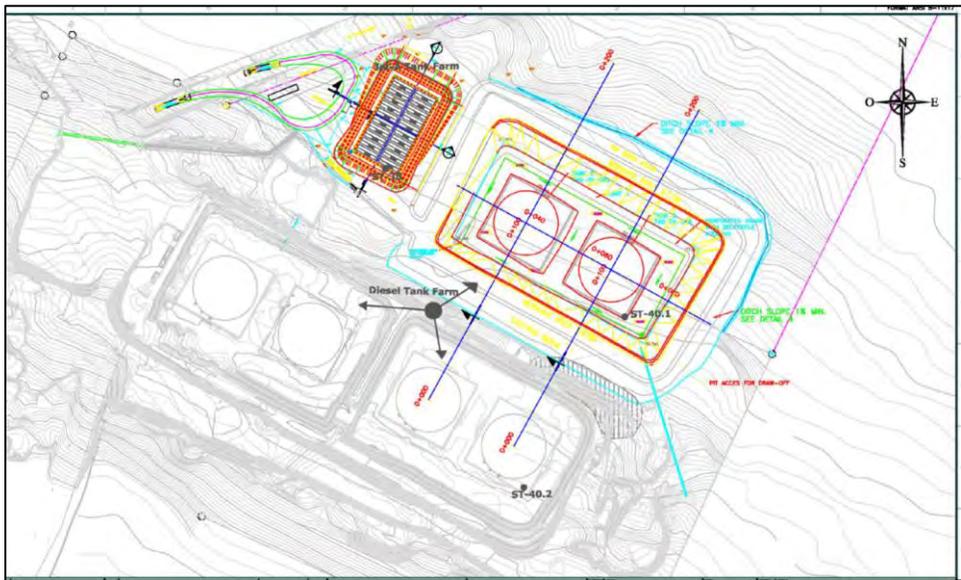


Figure 3: Baker Lake Marshalling Facility (from Agnico Eagle's 2017 Annual Report; Figure 4)

## 2.2 General Observations for Meadowbank Mine Site

The following are general observations made during the site visit and do not pertain specifically to any particular terms or conditions of the Meadowbank Project Certificate:

### 2.2.1 General observations along the all-weather private access road

- a. The Monitoring Officer observed that the environmental emergency seacans containing booms, shovels, absorbent pads, and other miscellaneous spill response equipment were located at the Baker Lake laydown facility (see [Photo 2](#)). At the time of the site visit, a barge was at the Baker Lake dock facility and offloading equipment and the marshalling facility was very busy with the movement of supplies from the barge (see [Photo 3](#) and [Photo 4](#)).



**Photo 2: Environmental Emergency Seacan at the Baker Lake Marshalling Facility**



**Photo 3: Barge at Baker Lake Facility**



**Photo 4: Baker Lake Marshalling Facility**

- b. It was further noted that the lower all-terrain vehicle (ATV) trail that goes through the Baker Lake bulk fuel storage facility/marshalling area was blocked seacans limiting access to the community members ability to travel to their cabins along the shoreline (see [Photo 5](#) and [Photo 6](#)).



**Photo 5: Tires blocking lower ATV trail along the Baker Lake shoreline**



**Photo 6: Little bridge to ensure access to ATV trail (photo from 2017)**

- c. While travelling along the AWAR to and from the Meadowbank site and the Hamlet of Baker Lake, the Monitoring Officer observed several species of wildlife, which included geese, sand-hill cranes, muskox, arctic hare, Peregrine Falcon, siksik (ground squirrel) and arctic fox kits (see [Photo 7](#) and [Photo 8](#)). Agnico Eagle staff stated that caribou, muskox, and wolves were observed occasionally along the AWAR.



**Photo 7: Siksik (Ground Squirrel) along the AWAR**



**Photo 8: Muskox along the AWAR**

- d. While travelling along the AWAR, the Monitoring Officer noted that this time the road was not extensively used by Baker Lake community members but was extremely busy with haul trucks traveling up to the Meadowbank site (see [Photo 9](#), [Photo 10](#) and [Photo 11](#)) with sometimes 10 haul trucks on the road at once.



**Photo 9: Bus leaving the gatehouse with workers from Baker Lake**



**Photo 10: Haul truck on AWAR**



**Photo 11. Several Haul Trucks Travelling to Meadowbank**

- e. Two snowmachine crossings are located along the AWAR, one near km 10 and the second near km 98 (previously near km 82). There were no signs of extreme slopes or rocks along the side of the AWAR (see [Photo 12](#)).



**Photo 12: Snowmachine crossing near km 10**

- f. Environmental emergency seacans were located at all bridge crossings.
- g. Agnico Eagle indicated that remediation is ongoing at Quarry 22 following storage of contaminated hydrocarbon soil in previous years at this quarry site as the soil/gravel still tested positive for hydrocarbons (see [Photo 13](#)). No remediation work was conducted in 2018 due to active Peregrine Falcon nests at this quarry but plans were in place to continue the remediation work in 2019 but none were completed at the time of the site visit.



**Photo 13: Quarry 22**

### **2.2.2 General observations at the Meadowbank mine site**

- h. Active drilling was ongoing at Portage Pit (see [Photo 14](#) and [Photo 15](#)) and at Vault Pit ([Photo 16](#) and [Photo 17](#)), while blasting was being conducted at the Phaser Pit and BB Phaser Pit area during the site visit (see [Photo 18](#) and [Photo 19](#)). During the site visit it was noted that an ice sheet has formed on the walls of the Vault Pit (see [Photo 17](#)) and Agnico Eagle noted that it has been spraying the ice sheet with water to keep it from growing and potentially breaking off and falling into the pit.

- i. The Monitoring Officer was previously notified that mining at the Bay-Goose Pit had ended in early 2015 and the pit has been allowed to slowly fill in naturally with water (see [Photo 20](#) and [Photo 21](#)). During the 2017 site visit, the Monitoring Officer was informed that the pit will be filled with water during the fall but this did not occur as observed during the 2018 site visit and as noted in the photos (see [Photo 21](#)) as Agnico Eagle was proposing to use the Bay-Goose Pit as an in-pit tailings facility at the time of the site visit.



**Photo 14: View of Portage Pit (South Portage)**



**Photo 15: Portage Pit from viewpoint**



**Photo 16: View of Vault Pit – looking west**



**Photo 17: View of Vault Pit – looking east**



**Photo 18: Phaser and BB Phaser – looking north**



**Photo 19: Phaser and BB Phaser – looking west**



**Photo 20: View of Bay-Goose Pit – looking north**



**Photo 21: Bay-Goose Pit looking south**

- j. The Vault Pit waste rock storage facility has increased in size since the 2017 site visit (see [Photo 22](#) through [Photo 25](#)) and the Agnico Eagle staff noted that waste rock from the Vault Pit has been tested to be non-potentially acid forming (NPAG rock). The NPAG rock is stored in the Vault marginal stockpile for re-use on-site.



**Photo 22: Vault Pit waste rock storage facility in 2015**



**Photo 23: Vault Pit waste rock storage facility in 2016**



**Photo 24: Vault Pit waste rock storage facility in 2017**



**Photo 25: Vault Pit waste rock storage facility in 2018**

- k. Agnico Eagle started a new landfarm site in 2017 to treat all contaminated hydrocarbon soil on site, while the old landfarm, which was located next to the South Cell, was flooded as the tailings deposition continues. The remediation program at the Meadowbank site, which commenced in 2013, uses on-site nutrients (sewage sludge) to initiate biodegradation of all contaminated hydrocarbon soil on site and appears to be successful (see [Photo 26](#)).



Photo 26: Landfarm

## 2.3 Observations based on NIRB's Meadowbank Project Certificate No. 004

Sections 2.3.1 through 2.3.6 relate to those sections of the Meadowbank Project Certificate as indicated, with specific terms and conditions providing a basis for the noted observations.

### 2.3.1 Water Quality and Waste Management

#### Condition 8

*“...At the time samples are taken Cumberland shall also assess the condition of existing groundwater monitoring wells and replace any defective wells. Cumberland shall continue to undertake semi-annual groundwater samples and re-evaluate the groundwater quality after each sample collection...”*

During the 2017 site visit, Agnico Eagle staff noted that Agnico Eagle was attempting a different technique to ensure the groundwater wells stay open and do not freeze or are damaged. This technique involves the installment of a seacan on top of the groundwater wells and ensuring a heat trace could be installed down the well. A consultant from SNC Lavalin has audited the revised groundwater monitoring protocols and it appears to be working well. At the time of the 2018 site visit, five (5) groundwater monitoring wells was operational: MW-08-02 (see [Photo 27](#)), MW-16-01 (see [Photo 28](#)), MW-IPD-01, MW-IPD-07 (see [Photo 29](#)), and MW-IPD-09.



**Photo 27: Groundwater monitoring well MW-08-02  
(photo from 2017)**



**Photo 28: Groundwater monitoring well MW-16-01**



**Photo 29: Groundwater monitoring well MW-IPD-07**

In 2013, Agnico Eagle noted seepage from the Portage waste rock storage facility with potentially acid generating rock (which has a high sulphur content, heavy metals, and other contaminants) at a location near the south shore of a fish bearing lake (referred to as North Pole 2 or NP-2 lake) (see [Photo 30](#)). Agnico Eagle staff stated monitoring of the seepage is ongoing during the open water season and that accumulated water is pumped directly back to the North Cell tailings storage facility. It was previously indicated that no seepage have been observed since the North Cell was raised during the summer of 2016 as the assumption is that the tailings storage facility was built on an old riverbed system and may have seeped through this system.



**Photo 30: Ongoing monitoring of seepage from the Portage waste rock storage facility**

In 2013, Agnico Eagle discovered water seeping through the road in front of the Assay laboratory towards Third Portage Lake where cyanide destruction in tailings occurred (see [Photo 31](#)). Following investigation, Agnico Eagle determined that the seepage was coming from the process plant, specifically leakage from containment structures through test results of the seepage water that indicated levels of cyanide, iron, and copper.

In April 2014, a trench was constructed to intercept any potential water seepage during freshet and pumped back to the mill (see [Photo 32](#)) and following repairs and sealing of the containment structures within the mill no levels of cyanide, iron, and copper were detected within the tested water. Water from the trench continues to be pumped back for use at the mill and continues to be tested.



**Photo 31: Assay Laboratory**

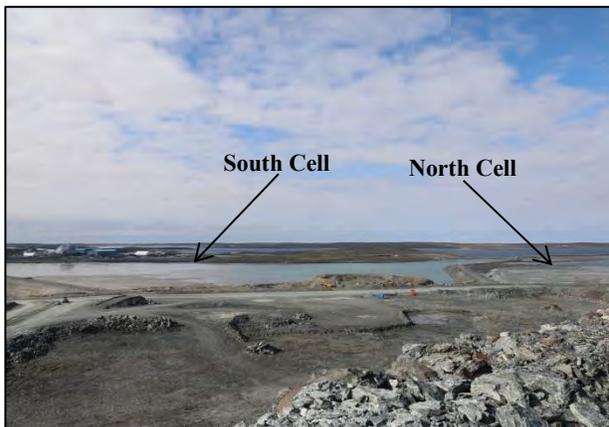


**Photo 32: Trench below Assay Laboratory to prevent water from entering lake**

### **Condition 18**

*“Cumberland shall commit to a pro-active tailings management strategy through active monitoring, inspection, and mitigation. The tailings management strategy will include the review and evaluation of any future changes to the rate of global warming, compliance with regulatory changes, and the ongoing review and evaluation of relevant technology developments, and will respond to studies conducted during mine operation.”*

The tailings facility at Meadowbank consist of the North and South cells (see [Photo 33](#)). Progressive reclamation commenced at the North Cell of the tailings storage facility in the winter of 2015 by capping the tailings following the completion of tailings deposition in this cell. When viewing the North Cell of the tailings storage facility, the Monitoring Officer observed the thermistors, installed in 2012 to measure freezeback, and did not observe any apparent rips in the exposed lining of Saddle Dams 1 and 2 or at the Stormwater Dike (see [Photo 34](#)). Tailings have been deposited into the South Cell of the tailings facility (see [Photo 35](#)) since 2016. The construction of the different phases of the Central Dike and Saddle Dams were ongoing during the site visit.



**Photo 33: Tailings Storage Facility**



**Photo 34: Tailings Storage Facility (North Cell)**



**Photo 35: Tailings Storage Facility (South Cell)**

### **Condition 25**

*“Cumberland shall manage and control waste in a manner that reduces or eliminates the attraction to carnivores and/or raptors. Cumberland shall employ legal deterrents to carnivores and/or raptors at all landfill and waste storage areas...incorporated into the final Waste Management Plan.”*

As per previous NIRB site visits, the Monitoring Officer noted during the 2018 site visit that Agnico Eagle continues to segregate and store all domestic, hazardous, and combustible wastes in marked seacans prior to these materials being incinerated or shipped to the appropriate and approved off-site disposal facilities (see [Photo 36](#)).



**Photo 36: Seacans used for waste segregation and storage area**

In 2014, Agnico Eagle started a pallet recycling program where pallets not needed at site are transported in seacans to the high school in Baker Lake for use as building materials in the woodshop. In 2018, Agnico Eagle noted that it has discontinued to supply the high school with pallets for their woodshop program but still continues to donate pallets to community members for personal use (see [Photo 37](#) of the Meadowbank landfill).

Agnico Eagle further stated that the landfill is frequently inspected by employees to ward off any wildlife that may be present, and to ensure wastes are segregated appropriately and that wastes designated to the incinerator or metal do not end up in the landfill.



**Photo 37: Landfill at Meadowbank mine site**

Mr. Archambault noted during the trip to the site that not as many active Peregrine Falcon nests were observed during the 2018 nesting season compared to the previous two years at the quarry sites. During the trip to and from the site on the AWAR, Peregrine Falcons were observed at only one (1) of the quarry sites.

#### **Condition 26**

*“Cumberland shall ensure that spills, if any, are cleaned up immediately and that the site is kept clean of debris, including wind-blown debris.”*

During the 2018 visit to the Meadowbank site, the Monitoring Officer observed that all areas were kept in a clean state, with no obvious spills. There was no evidence of wind-blown material viewed around the Meadowbank site and at the ancillary facilities in Baker Lake (see [Photo 38](#)).



**Photo 38: Meadowbank Mine Site**

**Condition 27**

*“Cumberland shall ensure that the areas used to store fuel or hazardous materials are contained using safe, environmentally protective methods based on practical, best engineering practices.”*

During the 2018 site visit, the Monitoring Officer noted that fuel and hazardous materials associated with Agnico Eagle’s Meadowbank project appeared to be stored in a safe and environmentally protective manner (see [Photo 39](#) to [Photo 41](#)). Any observed water in the containment berms had no visible sheen on the water or discernable hydrocarbon odours at either the Baker Lake or the Meadowbank site fuel facilities (see [Photo 40](#)).



**Photo 39: Baker Lake Fuel Tank Farm Facility**



**Photo 40: Baker Lake Aviation Fuel Tank Farm**



**Photo 41: Meadowbank Fuel Tank Farm Facility**

### **2.3.2 All-Weather Private Access Road (AWAR)**

#### **Amended Condition 32**

*“AEM shall operate the all-weather road as a private access road, and implement all such measures necessary to limit non-mine use of the road to authorized, safe and controlled use by all-terrain vehicles for the purpose of carrying out traditional Inuit activities. The measures AEM shall undertake include, but are not limited to:*

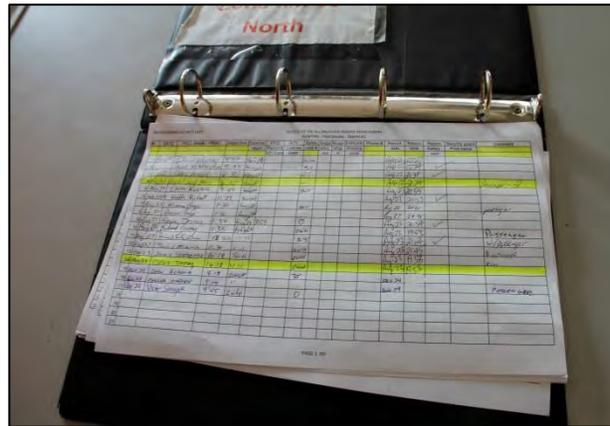
- a. Maintaining a gate and manned gatehouse at kilometre 5 of the Private Access Road;*
- b. In consultation with the Hamlet of Baker Lake, the local HTO, and the KivIA, update the All-Weather Private Access Road Management Plan to set out the criteria and processes to authorize and ensure safe and controlled non-mine use of the road by all-terrain vehicles for the purpose of carrying out traditional Inuit activities, and measure to limit all other non-mine use of the road. The updated Plan is to be submitted to the GN, INAC, and KivIA for approval no later than one (1) month after the approval of revised Condition 32;*
- c. The posting of signs in English and Inuktitut at the gate, each major bridge crossing, and each 10 kilometres of road, stating that unauthorized public use of the road is prohibited;*
- d. The posting of signs in English and Inuktitut along the road route to identify when entering or leaving crown land;*
- e. Prior to opening of the road, and annually thereafter, advertise and hold at least one community meeting in the Hamlet of Baker Lake to explain to the community that the road is a private road with non-mine use of the road limited to approved, safe and controlled use by all-terrain vehicle for the purpose of carrying out traditional Inuit activities;*
- f. Place notices at least quarterly on the radio and television to explain to the community that the road is a private road with non-mine use of the road limited to authorized, safe and controlled use by all-terrain vehicles for the purpose of carrying out traditional Inuit activities;*
- g. Record all authorized non-mine use of the road, and require all mine personnel using the road to monitor and report unauthorized non-mine use of the road, and collect*

- and report this data to NIRB one (1) year after the road is opened and annually thereafter; and*
- h. Report all accidents or other safety incidents on the road, to the GN, KivIA, and the Hamlet immediately and to NIRB annually.”*

Agnico Eagle maintains one (1) gatehouse at kilometre 5 of the access road, and second gatehouse at the entrance to the mine site and camp at Meadowbank. Only the gatehouse at kilometre 5 is manned by Agnico Eagle staff who monitors the safety and security of all personnel using the road. All traffic (including public traffic) is required to check-in (via radio or in person) with the employee at the gatehouse prior to proceeding along the road (see [Photo 42](#)) from either the mine site or from Baker Lake. The Agnico Eagle employee manning the kilometre 5 gatehouse maintains a daily logbook of all persons travelling the access road for non-mine use, and members of the public travelling along the road are required to sign an indication of having read Agnico Eagle’s *All Weather Private Access Road Safety Rules & Procedures for Road Access* policy prior to being granted access to the road (see [Photo 43](#)).



**Photo 42: Gatehouse at kilometre 5, near Baker Lake**



**Photo 43: Gatehouse sign-in sheet**

It was observed that road signs required as per Condition 32(c) were posted in both English and Inuktitut at the gatehouse at each major bridge crossing on the side of the environmental emergency sea-cans, and at 10 kilometre intervals along the AWAR.

### 2.3.3 Wildlife and Terrestrial

#### Condition 56

*“Cumberland shall plan, construct, and operate the mine in such a way that caribou migration paths through the Project, including the narrows west of Helicopter Island are protected. Maps of caribou migration corridors shall be developed in consultation with Elders and local HTOs, including Chesterfield Inlet and placed in site offices and upgraded as new information on corridors becomes available. Information on caribou migration corridors shall be reported to the GN, KivIA and NIRB’s Monitoring Officer annually.”*

### Condition 59

*“Cumberland shall, in consultation with Elders and the HTOs, design and implement means of deterring caribou from the tailing ponds, such as temporary ribbon placement or Inukshuks, with such designs not to include the use of fencing.”*

The Monitoring Officer observed a map dated 2017 outlining caribou migration corridors posted on a bulletin board at the main camp (near the door to the gym). There were two (2) additional maps with no date from the Government of Nunavut on the bulletin board showing caribou migration routes.

During the site visit, the Monitoring Officer noted wildlife tracks on the North Cell of the tailings facility (see [Photo 44](#)).



**Photo 44: Wildlife tracks on the North Cell of the Tailings Facility**

### 2.3.4 Noise

#### Condition 62

*“Cumberland shall develop and implement a noise abatement plan...will be developed in consultation with Elders, GN, HC, and EC and include:*

- a. The use of sound meters to monitor sound levels in and around the mine site, including workers’ on-site living/sleeping quarters and any summer camps adjacent to the site, and in the local study area, with the locations and design of the sound meters selected in consultation with HC and EC. Sound meters are to be set up immediately upon issuance of the Project Certificate for the purpose of obtaining baseline data, and monitoring during and after operations;*
- b. ...*
- c. Restrictions on blasting and drilling when migrating caribou, or sensitive local carnivores or birds may be affected;*
- d. ...*
- e. ...”*

During the 2018 2018 there was no discussion on the noise monitoring program for the 2017/2018 year during the site visit. In previous years, Agnico Eagle stated that there are five (5) locations that are monitored for noise each summer; the dominant mine noise sources being activities such

as helicopter and other air traffic, the use of heavy equipment, and blasting during construction and operation.

### 2.3.5 Air Quality

#### Condition 71

*“Cumberland shall, in consultation with EC, install and fund an atmospheric monitoring station to focus on particulates of concern generated at the mine site. The results of air-quality monitoring are to be reported annually to NIRB.”*

The NIRB staff viewed the air and partisol monitoring stations at the northern corner of South Camp Island (see [Photo 45](#)). Agnico Eagle staff stated that both dustfall and partisol monitoring occurs year-round.



**Photo 45: Air and partisol monitoring station near the emulsion station**

#### Condition 72

*“On-site incinerators shall comply with Canadian Council of Ministers of Environment and Canada-Wide Standards for dioxins and furan emissions, and Canada-wide Standards for mercury emissions, and Cumberland shall conduct annual stack testing to demonstrate that the on-site incinerators are operating in compliance with these standards. The results of stack testing shall be contained in an annual monitoring report submitted to GN, EC, and NIRB’s Monitoring Officer.”*

The Meadowbank site dual chamber forced air incinerator remains in service for the combustion of all non-hazardous, combustible materials at the site (see [Photo 46](#)). During the site visit, Agnico Eagle noted ongoing education is required to ensure that wastes such as metal cans are not incinerated and to ensure wastes are segregated appropriately.



**Photo 46: Incinerator at Meadowbank mine**

The Monitoring Officer noted during the site visit that Agnico Eagle’s updates to their protocol procedures appear to be working ensuring the incinerator temperatures in the secondary chamber reach 1000 °C for complete combustion and to minimize the formation and release of contaminants. Protocol updates included ensuring the first chamber reaches 700 °C and new instruments were installed to monitor the temperature in both chambers to ensure the chambers do not drop below the required temperatures.

**Condition 74**

*“Cumberland shall employ environmentally protective techniques to suppress any surface dust.”*

As in previous years, Agnico Eagle staff noted that dust sampling stations were placed along the AWAR at various distances from both the east and west sides the road in two (2) duplicate transects (see [Photo 47](#)) to monitor dust deposition distance from the road. Dust canisters are placed 25, 50, 100, 150, 300, and 1000 metres away from the AWAR.

Mr. Archambault also noted that Agnico Eagle continues to apply TETRA flakes (calcium chloride) along three (3) critical areas on a two (2) km section of the AWAR as agreed upon with the local Hunters and Trappers Organization (see [Photo 48](#)). Along each of the three (3) sites, Agnico Eagle continues to conduct additional dust sampling.



**Photo 47: Dust Sampling Station**



**Photo 48: Dust canister located on the tundra**

Agnico Eagle staff also indicated that calcium chloride flakes are applied to the areas around the Meadowbank camp site and from the Baker Lake dock facility to the gatehouse. In addition, water is used as the dust suppressant on the mine access roads around the Meadowbank site and within the pits. However, during the site visit, NIRB staff noted that the use of water as a dust suppressant did not appear to be effective (see [Photo 49](#)). Further, no dust suppressants were applied along the AWAR except for the three (3) critical areas as discussed above.



**Photo 49: Dust created by vehicles along the AWAR**

### **2.3.6 Other**

#### **Condition 81**

*“Beginning with mobilization, and for the life of the Project, Cumberland shall provide full 24 hour security, including surveillance cameras and a security office at the Baker Lake storage facility/marshalling area, and take all necessary steps to ensure the safe and secure storage of any hazardous or explosive components within the Hamlet of Baker Lake boundaries.”*

During the site visit to the Baker Lake bulk fuel storage facility/marshalling areas, the Monitoring Officer noted that a security office was located at the shore with Agnico Eagle employees on site. The Monitoring Officer observed that these areas were kept clean with seacans well organized

during the 2018 site visit (see [Photo 50](#)). In addition, the 24 hour, 360° security camera was also focused on the cyanide storage facility, which is monitored by security at the site when cyanide is stored at the Baker Lake marshalling facility prior to shipment to the Meadowbank Mine site. The cyanide chemicals are transported within 72 hours of receipt in Baker Lake to the mine site as part of the requirements to be a signatory of and meet compliance with the International Cyanide Management Code.



**Photo 50: Baker Lake Marshalling Facility**

## **2.4 Findings and Summary of Meadowbank Site Visit**

Based on the observations made during this site visit, all Meadowbank facilities in operation and all sites currently under construction continue to appear to be well managed, and generally are maintained with adequate environmental protection measures and procedures in place. Details provided by Agnico Eagle during the site visit provided the Monitoring Officer with additional information regarding the company's continued efforts to address ongoing water and waste management issues observed at the site.

As with years past, Agnico Eagle appears to be in compliance with a majority of the terms and conditions contained within the Meadowbank Project Certificate No. 004; however, there may be certain situations in which the Proponent has not yet fully met the requirements of the Project Certificate and which require further consideration and attention.

The Monitoring Officer noted that the landfarm and hydrocarbon remediation program undertaken in 2013 appeared to have been successful in treating hydrocarbon contaminated soil as noted by Agnico Eagle staff. This technique is used to treat all of Agnico Eagle's hydrocarbon contaminated soils at the Meadowbank site.

Regarding Condition 8, three (3) groundwater wells appeared to be operational during the 2018 site visit following revisions of the groundwater well program.

Condition 25 requires that the Proponent employ legal deterrents to deter carnivores and/or raptors from the Meadowbank site, while Condition 59 requires that the Proponent consult with Elders and the Hunters and Trappers Organization (HTO) to design and implement deterrence measures to impede caribou from access to the tailings ponds. Agnico Eagle stated that wildlife (including

muskox, caribou, wolves, and birds) had been observed around the site and along the AWAR, and that migratory birds would use the tailings storage facility during the spring time. Wildlife tracks have been noted by the Monitoring Officer at the tailings storage facility during previous site visits and during the 2018 site visit which provide evidence that wildlife are accessing the tailings storage facility.

Overall, there was no evidence of wind-blown material observed around the Meadowbank site and at the ancillary facilities in Baker Lake during the 2018 site visit and the Monitoring Officer observed that the fuel storage facilities appeared to be well maintained and properly set up for the re-fuelling of vehicles.

Condition 74 requires that the Proponent employ environmentally protective techniques to suppress any surface dust. To date, this condition has not been met. The only dust suppressants that have been applied have been at the mine site and along the access road between the Baker Lake facility and the gatehouse. The Proponent has not fully met the requirements of Condition 74, as dust suppression techniques were not being applied along the AWAR from Baker Lake to the mine site. However, the Proponent has initiated a dust sampling program along the road in 2012 to monitor dust deposition on vegetation along the road. Further, the Proponent implemented additional studies in 2016 which still continues to determine the most effective protective techniques to suppress surface dust from vehicles. Results from the ongoing studies viewed during the site visit have been provided in Agnico Eagle's 2017 annual report.

### 3 WHALE TAIL PIT PROJECT SITE VISIT

#### 3.1 Whale Tail Pit Project Description

The Whale Tail Pit Project involves the mobilization, construction, operation, closure, reclamation, and post-closure monitoring of an open pit gold mine located at the Amaruq property, described by Agnico Eagle as located approximately 150 kilometres (km) north of the Hamlet of Baker Lake and approximately 50 km northwest of the Meadowbank Gold Mine project within the Kivalliq region.

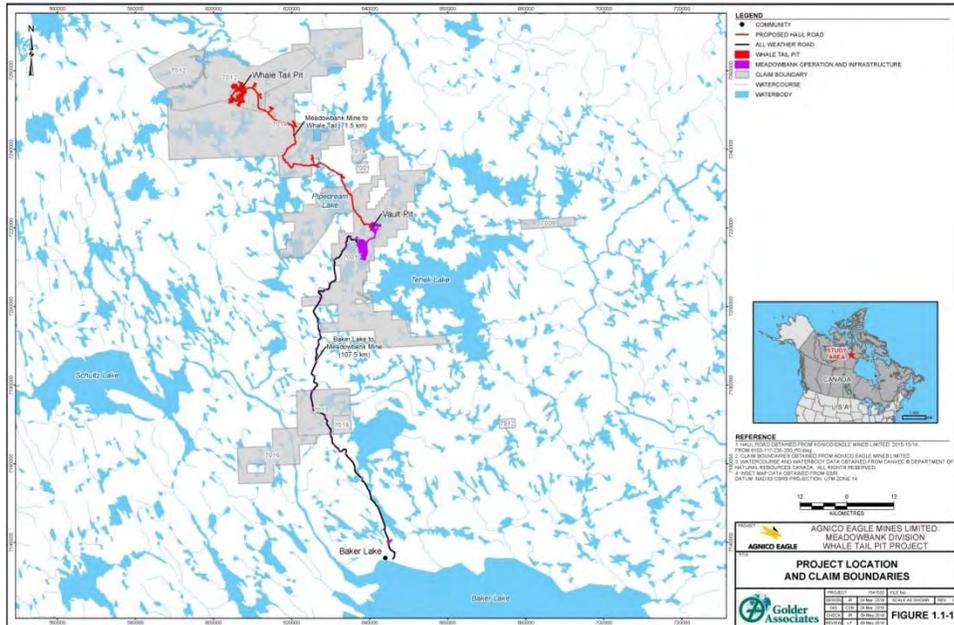
The Whale Tail site would be comprised of a camp, associated mining infrastructure and one (1) open pit. The berm across the Whale Tail Lake to separate the lake into the North Basin and South Basin was constructed in the summer of 2018 with completion proposed for the fall of 2018. The fish out program of the North Basin commenced in August 2018 with dewatering proposed to be completed in January 2019.

Ore would be trucked from the Whale Tail site via an approximately 65 km private haul road at a rate of 9,000 to 12,000 tonnes per day to the existing Meadowbank Gold Mine<sup>1</sup> for milling. Approximately 8.3 million tonnes (Mt) of tailings produced from the milling process would be stored within the existing Meadowbank Gold Mine's Tailings Storage Facility (TSF), with approximately 5.3 Mt stored within the current footprint of the south cell TSF and approximately 3 Mt within the north cell TSF by constructing internal dike structures within the north cell.

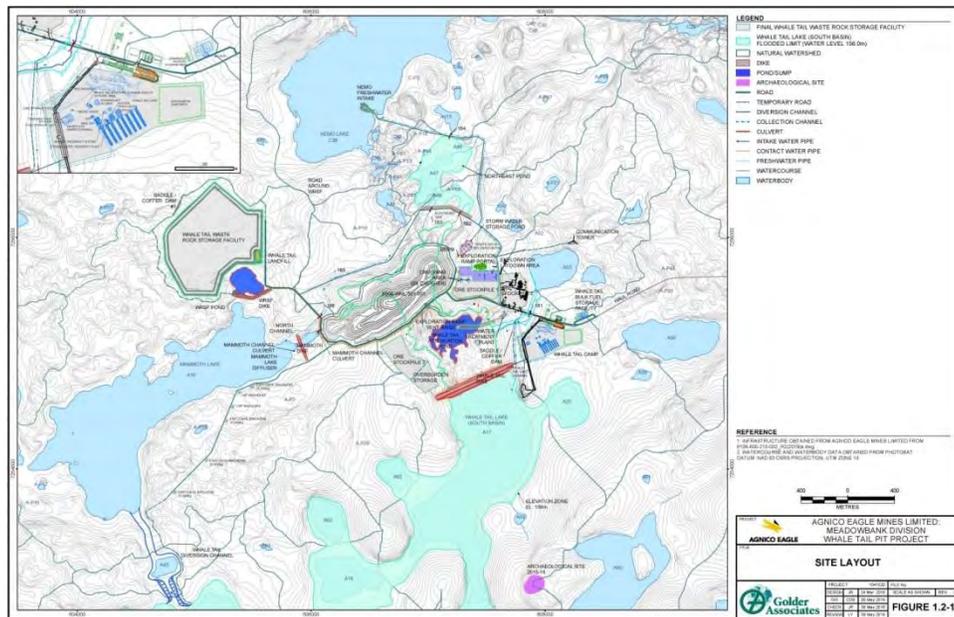
Existing ancillary infrastructure used for the Whale Tail Pit Project would include Agnico Eagle's existing marine infrastructure located at Baker Lake and the all-weather access road between Baker Lake and the Meadowbank site, which would support open-water shipping during the construction phase and annual resupply during operations, with the mine product, doré gold bars, to be flown to market directly from site. [Figure 4](#) and [Figure 5](#) provide the proposed location of the Whale Tail Pit Project and the proposed site layout, respectively.

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<sup>1</sup> The NIRB previously reviewed the related but distinct Meadowbank Gold Mine project (NIRB File No. 03MN107) in accordance with Article 12, Part 5 of the *Nunavut Agreement*. The Meadowbank Gold Mine project was allowed to proceed pursuant to the NIRB Project Certificate No. 004 which was issued December 30, 2006 following the approval of then Minister of Indian and Northern Affairs of the Meadowbank Gold Mine Project.



**Figure 4: Proposed Location and Claim Boundaries (from the Whale Tail Pit Project Proposal Description, Volume 1)**



**Figure 5: Whale Tail Site Layout (from the Whale Tail Pit Project Proposal Description, Volume 1)**

## 3.2 General Observations for Whale Tail Site

The following are general observations made during the Whale Tail site visit and do not pertain specifically to any particular terms or conditions of the Project Certificate:

### 3.2.1 General observations along the haul road to the Amaruq site

- a. The NIRB staff were driven along the Amaruq haul road to the exploration site and future Whale Tail Pit Project. Heavy construction was ongoing during the trip for the expansion of the haul road from 6 metres to 9 metres in width as recently approved under Project Certificate No. 008 (see [Photo 51](#) and [Photo 52](#)).
- b. The Monitoring Officer observed that environmental emergency spill kits were not available at all the bridges along the haul road to Amaruq. In questioning Mr. Archambault on this, it was noted that seacans containing booms, shovels, absorbent pads, and other miscellaneous spill response equipment will be located at all the bridges once the road construction has been completed. A few bridges contained spill kits as can be observed in [Photo 53](#).



**Photo 51: View of the Amaruq Haul Road from Quarry #10.5**



**Photo 52: 605 Haul/Dump Truck**



**Photo 53: Bridge Along Amaruq Haul Road**

- c. While travelling along the haul road to and from the Amaruq site and the Meadowbank site, the Monitoring Officer observed several species of wildlife, which included a large number of flocking geese, sand-hill cranes, muskox, arctic hare, Peregrine Falcon, and one caribou (see [Photo 54](#)).



**Photo 54: Caribou along the Amaruq Haul Road**

- d. One (1) snowmachine crossing is located along the haul road near km 12. There were no signs of extreme slopes or rocks along the side of the Awar (see [Photo 55](#) and [Photo 56](#)).



**Photo 55: Snowmachine crossing near km 12**



**Photo 56: Slope on the other side of the snowmachine crossing near km 12**

### **3.2.2 General observations at the mine site**

- e. The Whale Tail site was extremely active with development of the site in full construction mode. The berm separating the North Basin with the South Basin was being completed, the fish-out program started a week earlier and the pilings were being put in place for the new mine camp (see [Photo 57](#) through [Photo 61](#)) while NIRB staff were at site. Exploration activities were also ongoing with haul trucks moving rock and ore from the underground via the portal (see [Photo 62](#) through [Photo 64](#)).



**Photo 57: View of the Berm separating the North Basin and South Basin of Whale Tail Lake**



**Photo 58: Final Construction of the Berm**



**Photo 59: Fish-Out Program of the North Basin**



**Photo 60: Construction at Mammoth Lake**



**Photo 61: Construction of Whale Tail Camp**



**Photo 62: Movement of Ore from Exploration**



**Photo 63: Entrance to the underground portal**



**Photo 64: Gravel Pit at Amaruq Site**

### 3.3 Observations based on NIRB's Project Certificate No. 008

Sections 3.3.1 through 3.3.5 relate to those sections of the Whale Tail Project Certificate as indicated, with specific terms and conditions providing a basis for the noted observations.

#### 3.3.1 Water Quality and Waste Management

##### Condition 15

*“...the Proponent shall prepare and implement a Groundwater Monitoring Plan that, at a minimum includes:*

- *The collection of additional site-specific hydraulic data (e.g., from new monitoring wells) in key areas during the pre-development, construction and operation phases;*
- *Definition of vertical and horizontal groundwater flows in the project development areas;*
- *Delineates monitoring plans for both vertical and horizontal ground water; and*
- *Thresholds that will trigger the implementation of adaptive management strategies that reflect site-specific conditions encountered at the project site.”*

At the time of the site visit, no information was available on whether any additional site-specific hydraulic data were collected and Mr. Thomson noted that the monitoring wells have not been developed for the Whale Tail Pit Project.

#### 3.3.2 Wildlife and Terrestrial

##### Condition 31

*“The Proponent shall develop and implement a Road Access Management Plan and maintain traffic monitoring logs along the haul road between the Whale Tail Pit project and the Meadowbank mine. Where traffic exceeds levels predicted within the Environmental Impact Statement, the Proponent shall develop and implement appropriate modifications to its wildlife protection measures.”*

During the site visit it was noted that no traffic monitoring logs were being kept along the haul road between the Whale Tail pit and the Meadowbank mine site. Any vehicle entering and leaving the haul road is required to radio in to the operator of the pits. In follow-up correspondence, Agnico Eagle stated that traffic along the road is monitored but not logged and that it is planned for Q4 2018.

As noted earlier in [Section 0](#), caribou and muskox were observed along the Amaruq haul road.

##### Condition 32

*“The Proponent shall engage with the Baker Lake Hunters and Trappers Organization and other relevant parties to ensure that safety barriers, berms, and designed crossings associated with project infrastructure, including the haul road, are constructed and operated as necessary to allow for the safe passage of caribou and other terrestrial wildlife.”*

As noted in [Section 3.2.1](#), heavy construction was ongoing along the haul road for the expansion to nine (9) metres and it was observed that the berms along the road were still being developed and that no caribou designated crossings were in place or identified.

#### **Condition 36**

*“Prior to removal or deterrence of raptors, the Proponent will contact the Government of Nunavut – Department of Environment to discuss proposed mitigation options and, if required, will obtain the necessary permits.”*

During the site visit, Agnico Eagle staff note that studies are ongoing to identify raptor nests and the results of the studies would be reported in the next annual report.

### **3.3.3 Noise**

#### **Condition 4**

*“The Proponent shall demonstrate consideration for noise reduction when siting and constructing the camp and other project infrastructure.”*

During the site visit it was noted that the Proponent appeared to be in compliance with this term and condition.

#### **Condition 5**

*“The Proponent shall:*

- a) Conduct noise monitoring at least once during each phase of the Project at four (4) locations in the vicinity of the Whale Tail Pit Project and at two (2) locations along the haul road to demonstrate that noise levels remain within predicted levels for all Project areas; and...”*

During the site visit, the Monitoring Officer was informed by Mr. Thomson that the noise monitoring stations were installed as prescribed by Condition 5.

### **3.3.4 Air Quality**

#### **Condition 1**

*“...b) the Proponent shall demonstrate through active and passive monitoring of dustfall, for criteria air contaminant concentrations, incinerator stack testing, and vegetation, soil and snow chemistry sampling that dustfall and emissions of carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), sulphur dioxide (SO<sub>2</sub>), suspended particulate matter, mercury, dioxins and furans, and other chemicals remain within predicted levels and,....”*

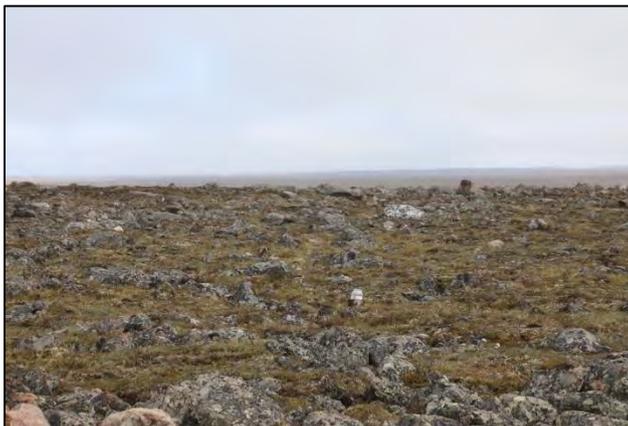
#### **Condition 2**

*“Prior to commencing construction activities the Proponent shall update the existing Dust Management and Monitoring Plan for the Meadowbank Mine site to address and/or include the following additional items:*

- Align plan requirements with commitments made in the Final Environmental Impact Statement and during the Final Hearing to monitor dust along the existing all-weather access road, the Amaruq haul road and any other roads and trails associated with the Project.*

- *Verify commitments to the utilization of dust suppressants along the all-weather access road, the Amaruq haul road and any other roads and trails associated with the Project, including a description of the type of suppressant to be utilized and the frequency and timing of applications to be made throughout the various seasons of road use.*
- *Outline...*”

It was noted during the site visit that dust monitoring stations were in place along the existing all-weather access road (see [Section 2.3.5](#) for further discussion) and that dust monitoring has also commenced along the Amaruq haul road with the placement of dust monitoring stations at km 18, 36 and 54 (see [Photo 65](#)). The monitoring program is similar to the one conducted on the AWAR with the exception that the canisters are placed at four (4) transects instead of five (5); 25, 100, 300, and 1000 meters on the east and west sides of the roads. Transects are not necessarily fully duplicated but duplicates are randomly placed along the stations.



**Photo 65: Dust Sampling Station along the Amaruq Haul Road**

During the site visit, it was noted that dust suppressants were not being applied to the AWAR nor along the haul road. Agnico Eagle noted that water was the only dust suppressant being used along the haul road.

In follow-up correspondence, Agnico Eagle indicated that the air and partisol monitoring stations have not been installed yet as Agnico Eagle is awaiting delivery of the equipment.

### **3.3.5 Other**

#### **Condition 63**

*“The Proponent shall conduct additional studies as part of its freshwater aquatic effects analyses to ensure that methylmercury concentrations anticipated to increase during operations in the aquatic environment (including in fish tissue) do not exceed regulatory requirements. In addition, the Proponent shall consider assessing potential risks from consumption of fish containing methylmercury by using Health Canada’s hazard quotients as a descriptive tool.”*

The Monitoring Officer was informed following the site visit that methylmercury studies have been conducted on site and are still ongoing.

### 3.4 Findings and Summary of Whale Tail Site Visit

The NIRB staff observed a busy site with considerable construction activity underway with all sites appearing to be well managed, and generally maintained with adequate environmental protection measures and procedures in place. Details provided by Agnico Eagle during the NIRB's monitoring visit provided the NIRB staff with information regarding the company's ongoing efforts to ensure compliance with the Project Certificate No. 008 and minimize impacts to the environment. However, it appeared that dust suppressants were not used along the haul road even though it is undergoing expansion. The lack of dust management or frequent application of dust suppressants is a concern. Further, the lack of sufficient spill response equipment/material along the haul road is of concern due to the potential of major spills occurring while the road is under construction. Finally, the traffic on the haul road is not currently being monitored but any vehicle accessing the road is required to radio-in to the operator.

## 4 SUMMARY

Overall, Agnico Eagle appears to be in compliance with the majority of the terms and conditions contained within the Meadowbank Gold Mine Project Certificate No. 004 and within the Whale Tail Pit Project Certificate No. 008. As noted in previous years, dust suppressants have not been applied the all-weather access road to Meadowbank and it also appears that dust suppressants have not been applied to the haul road or not frequently enough.

Prepared by: Sophia Granchinho, M.Sc., EP  
Title: Manager, Impact Assessment  
Date: October 5, 2018



Signature: \_\_\_\_\_

Reviewed by: Kelli Gillard, P.Ag.  
Title: Manager, Project Monitoring  
Date: October 5, 2018



Signature: \_\_\_\_\_

NIRB File Nos. 03MN107 & 16MN056

## REFERENCES

- Agnico Eagle (Agnico Eagle Mines Ltd). 2018. *Meadowbank Gold Project 2017 Annual Report*. Prepared by Agnico Eagle Mines Limited – Meadowbank Division. April 2018.
- NIRB (Nunavut Impact Review Board). 2009. *In the matter of an Application by Agnico-Eagle Mines Limited for the Mine development of the Meadowbank Gold Mine Project Proposal in the Kivalliq Region of Nunavut, Project Certificate NIRB [No. 004]*. Prepared by the Nunavut Impact Review Board for the Meadowbank Gold Mine Project. Original issued December 2006. Amendment issued November 2009.
- NIRB (Nunavut Impact Review Board). 2016. *In the matter of an application by Agnico Eagle Mines Limited for the Mine Development of the Meadowbank Gold Mine Project Proposal in the Kivalliq Region of Nunavut, Project Certificate NIRB [No. 004]*. Prepared by the Nunavut Impact Review Board for the Meadowbank Gold Mine Project. Original issued December 2006. Second amendment issued August 2016.

## **Appendix II    Public Information Meeting Summary Report, August 13, 2018**



# Public Information Meeting Summary Report,

for the NIRB's Monitoring of  
Agnico Eagle Mines Ltd.'s Meadowbank Gold Mine Project [03MN107]  
& Whale Tail Pit Project [16MN056]



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Nunavut Impact Review Board  
File Nos. 03MN107 & 16MN056  
October 2018

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**Full Report Title:** Public Information Meeting Summary Report. Created for the NIRB's Monitoring of Agnico Eagle Mines Ltd.'s Meadowbank Gold Mine Site Project (NIRB File No. 03MN107) and the Whale Tail Pit Project (NIRB File No. 16MN056)

**Report prepared by:** Sophia Granchinho, Manager, Impact Assessment  
**Contact:** Phone: (867) 857-4829; email [sgranchinho@nirb.ca](mailto:sgranchinho@nirb.ca)

**Photos by:** NIRB Staff

**Cover photos:** 1) View of Meadowbank Mine Site (2018)

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# 1 NIRB PUBLIC INFORMATION SESSION

## 1.1 Overview of Public Information Meeting

To ensure ongoing awareness of the Nunavut Impact Review Board (NIRB) process and to encourage effective participation throughout the monitoring process, the NIRB staff held an information session in Baker Lake on August 13, 2018. Through this information session, the NIRB provided an overview of the following:

- The NIRB's monitoring programs pursuant to Section 12.7.2 of the *Agreement between the Inuit of the Nunavut Settlement Area and Her Majesty the Queen in right of Canada (Nunavut Agreement)* and s. 135(3) of the *Nunavut Planning and Project Assessment Act*, S.C. 2013, c. 14, s. 2 (*NuPPAA*);
- An update on the NIRB's Meadowbank Gold Mine Project (Meadowbank Project) monitoring program;
- An update on the NIRB's Whale Tail Pit Project (Whale Tail Project) monitoring program; and
- The ways in which the public can participate within the NIRB's monitoring process.

A summary of the comments and concerns related to the Meadowbank Project and the Whale Tail Project that were received from community members are categorized by the NIRB in [Section 2](#) of this report. In addition to the NIRB staff, industry representatives, including representatives from Agnico Eagle Mines Ltd. (Agnico Eagle), were also in attendance.

## 1.2 Setup of NIRB Public Information Meeting

The public information session was open to all members of the public with snacks and refreshments provided, and door prizes raffled at the end of the meeting. At the meeting, all in attendance were asked to sign in and identify the community or organization they represented (see [Appendix A](#)). To facilitate a better understanding of the monitoring of the Meadowbank Project and Whale Tail Project, the NIRB gave a PowerPoint presentation at the meeting (see [Appendix B](#)) that included a discussion of the NIRB process, with a focus on the NIRB's monitoring programs, an update on the Projects, including an overview of the Meadowbank and Whale Tail Project activities and key components, and events and/or issues identified through the project specific monitoring programs.

The presentation concluded with a discussion as to how interested parties and community members could participate in the NIRB's processes. The presentation was shown in both English and Inuktitut, discussed in English, with simultaneous interpretation provided in Inuktitut. The public was encouraged to comment and ask questions relating to the NIRB's process, activities undertaken, project effects, and any concerns related to Meadowbank Project and the Whale Tail Project and current proposals. Both written and verbal comments were accepted at the public information meeting, and verbal comments were recorded by the NIRB staff. The interpreter provided consecutive translations for the comments presented in Inuktitut.

### 1.3 Meeting Materials

At the public meeting, the following materials were provided by the NIRB:

- The NIRB's PowerPoint presentation (in English and Inuktitut)
- The *Nunavut Agreement* (in English)
- NIRB Environment Assessment Brochures (in English and Inuktitut)
- The NIRB's 2016-2017 Annual Monitoring Report for Agnico Eagle's Meadowbank Gold Project (in English)
- Meadowbank Gold Mine Project Certificate No 004 (in English)
- Whale Tail Pit Project Certificate No. 008 (in English)
- Agnico Eagle's Meadowbank Gold Project 2017 Annual Report (electronic)
- Comment Forms (in English and Inuktitut)

Copies of consultation materials, including the presentation, advertisements and sign-in sheet, can be obtained from the NIRB's online public registry at [www.nirb.ca/project/124588](http://www.nirb.ca/project/124588) or [www.nirb.ca/project/124683](http://www.nirb.ca/project/124683).

### 1.4 Agenda and Venues of Public Information Meeting

The NIRB staff scheduled the public meeting based on consultation with community organizations and travel requirements. The public meeting in Baker Lake was held on August 13, 2018.

### 1.5 Advertisements

Public notification is an essential tool used to engage the public in effective consultation. The NIRB utilized a number of notification methods to advertise the public information meeting held in Baker Lake. For a sample of all advertisements distributed by the NIRB, please see [Appendix C](#).

#### *Radio*

Public service announcement in English and Inuktitut were distributed to the radio station in Baker Lake one (1) week prior to the meeting.

#### *Flyers*

Prior to the NIRB visiting the community, local community members were requested to assist with placement of flyers around town, announcing the NIRB meeting in English and Inuktitut. Additionally, flyer placements were verified once staff arrived in each community. Additional posters were placed in key business and community locations if they were not present (e.g., Northern and Co-Op stores, Hamlet offices, Hotels, etc.).

## 2 MEETING NOTES FROM THE NIRB'S PUBLIC INFORMATION MEETING

The following is a list of the comments and concerns that were raised verbally at the public information session for the monitoring of the Meadowbank Project and the Whale Tail Project (no written comments were received). These comments will help to identify items that need to be addressed or considered throughout the monitoring process.

Please note that all comments have been grouped by topic.

### Compliance with Terms and Conditions

- A community member requested information on what terms and conditions Agnico Eagle was not in-compliance.

### Aquatic Environment and Wildlife

- A community member noted concern with respect to the road that goes to Meadowbank as the road travels through the caribou migration route. Noted experience with being part of the wildlife biology program.
- A community member asked information on the ice shelf that is observed at one of the pits at the mine site and what the cause is. The member noted that currently water is being added to the ice to keep it from growing and potentially falling on workers in the pit.
- A question was asked by a community member on why wildlife deterrents are being used at the site noting concern that wildlife should not be impacted.
- Another member asked what type of deterrents are used at site.

### Monitoring

- A question was asked by a community member on why regulatory authorities do not conduct community meetings to update people on their monitoring programs. The member asked if the NIRB could make a recommendation about this. The community member also asked if regulatory authorities actually go to site to monitor things and what do these other agencies look at.



**Photo 1: Community Meeting in Baker Lake**

### **3 SUMMARY AND CONCLUSION**

Community members from Baker Lake who attended the evening presentations related to the monitoring of the Meadowbank Project and the Whale Tail Project raised questions, concerns and comments on the monitoring being conducted by the NIRB. The comments and concerns raised were related to wildlife, monitoring and compliance.

There was a general appreciation of the NIRB's process and community members noted that they appreciated the NIRB's presence within the community and to discuss the current projects. However, community members noted that members from the hamlet were not present and that many of the regulators were not present including the Kivalliq Inuit Association, Fisheries and Oceans Canada, Crown-Indigenous Relations and Northern Affairs Canada.

The comments and concerns raised during the public information meeting will aid in the identification of items that need to be addressed or considered throughout the Meadowbank Project and the Whale Tail Project monitoring program.

Prepared by: Sophia Granchinho, EP  
Title: Manager, Impact Assessment  
Date: October 11, 2018

Reviewed by: Kelli Gillard, P.Ag.  
Title: Manager, Project Assessment  
Date: October 11, 2018

Signature:  \_\_\_\_\_

Signature:  \_\_\_\_\_

## Appendix A      NIRB's Public Information Meeting Sign-in Sheets

**Nunavut Impact Review Board  
Agnico Eagle Mines Ltd.'s "Meadowbank Gold Project" &  
"Whale Tail Pit Project" Monitoring Program  
Community Information Session**

**SIGN-IN SHEETS**

Location: Baker Lake

Date: August 13, 2018

Time: 7pm

Page No: 1

Name (Please Print)	Organization or Community	Signature
Winnie Hagpi	Baker Lake	Winnie Hagpi
VIOLA Hagpi	Baker Lake	Viola Hagpi
SARAH SILOU	Baker Lake	<del>Signature</del>
Randy Mercer	Rankin Inlet	<del>Signature</del>
SIMEON MIKKUNENAK	MLA BAKER LAKE	Simeon Mikkun
SAMSON OKKACA		
Mike HUGHSON	BAKER LAKE	<del>Signature</del>
Joc Igaa	Baker Lake	Joc Igaa
RAYMOND Owinyuuk	<del>Baker Lake</del> Baker Lake	Raymond Owinyuuk
EDWIN EVO	Baker Lake	Edwin Evo
Richard AKSANNIT	BL HTO	Richard Evo
Rob ARSENAULT	D.O.E.	R. Arsenault
Paula Hughson	Baker Lake	P. Hughson
231 6724		
Dianne Scottie	Baker Lake	Dianne Scottie
Martha Jorah	BL NU	Martha Jorah
Samson Jorah	BL NU	Samson Jorah
JAMES KAKUK		
MORGANANDY	BL NU	

**Nunavut Impact Review Board**  
**Agnico Eagle Mines Ltd.'s "Meadowbank Gold Project" &**  
**"Whale Tail Pit Project" Monitoring Program**  
**Community Information Session**

**SIGN-IN SHEETS**

Location: Baker Lake  
 Time: 7pm

Date: August 13, 2013  
 Page No: 2

Name (Please Print)	Organization or Community	Signature
Eva ELYTOOK	Baker Lak	<i>Eva Elytook</i>
Hugh Nuteela	HTO	<i>Hugh Nuteela</i>
Hugh Ikoie	GN	<i>Hugh Ikoie</i>
Benu Tarrug		
THOMAS ELYTOOK	K:A REP.	<i>Thomas Elytook</i>
emma leith	AEM	<i>Emma Leith</i>
Karen Yip	Agnico Eagle	<i>Karen Yip</i>
Rev. Sean Smailak Peter K. Kaulaak	Baker Lake	<i>Sean Smailak</i>
Rhoda Higiniq	Rhoda Higiniq	
Eli Higiniq	E.H.	<i>Eli Higiniq</i>
Silas Kemalogak	SK	
CRAIG SMAILAK	BLLS	<i>Craig Smailak</i>
Rebecca Walker	Teacher TASS	<i>Rebecca Walker</i>
n.c. mercy		
Mark Kingilik		<i>Mark Kingilik</i>
Dora Kingilik	AEM worker	<i>Dora Kingilik</i>
Dora Kingilik	INUK	<i>Dora Kingilik</i>

## Appendix B      NIRB's PowerPoint Presentation













### Agnico Eagle's Project Activities at Meadowbank 2017-2018 ᐱᓕᓂᐱᓕᓐᓂᓐ ᐱᓕᓂᐱᓕᓐ ᐱᓕᓂᐱᓕᓐ 2017-2018-ᓂᓐ

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- Ongoing operation and mining at Portage and Vault Pits
- Operations at Goose Pit ended in 2015
- Construction of the Phase 6 of the Central Dike
- Ongoing construction of Phase 2 and Phase 3 of Saddle Dam 3, 4 and 5



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### Agnico Eagle's Project Activities at Meadowbank 2017-2018 ᐱᓕᓂᐱᓕᓐ ᐱᓕᓂᐱᓕᓐ ᐱᓕᓂᐱᓕᓐ 2017-2018-ᓂᓐ

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- Ongoing environmental monitoring to ensure compliance with permits and licences
- Ongoing remediation activities
- Ongoing exploration



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Nunavut Impact Review Board









## 2017 Site Visit Observations 2017 ለርቢል ልዩ ልዩ ርዕሰ ጉዞ ለገቢ ለገቢ ለገቢ

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- Successful treatment of hydrocarbons
- Wildlife deterrents needs to be replaced
- Well maintenance of fuel storage facilities
- Requirements of dust suppression (Condition 74)

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## ግብርና ለገቢ ለገቢ ለገቢ ! Your Input is Valuable!

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How can you get involved?

- ❖ Review Agnico Eagle's annual reports
- ❖ Submit written comments and questions
- ❖ Phone the NIRB's office toll-free to talk about the project with our staff





## Appendix C Radio Announcement

July 30, 2018

**Re: Public Service Radio Announcement**

Hello Baker Lake Radio Station,

The Nunavut Impact Review Board (NIRB) will be holding a community information session in Baker Lake on August 13, 2018 to discuss the **Meadowbank Gold Mine Monitoring Program and the Whale Tail Project Monitoring Program** and we would greatly appreciate your assistance in helping us make this event a success.

We kindly ask to please air this announcement once or twice a day in English and Inuktitut if possible, starting August 7, 2018 and continuing the announcements through August 13, 2018.

If you have any questions, please call Sophia Granchinho at 1-867-857-4829. We look forward to seeing you soon.

Matna,

Sophia Granchinho  
Nunavut Impact Review Board

### **Public Service Announcement**

**The Nunavut Impact Review Board (or “NIRB”) is holding a Community Information Session in Baker Lake to give community members an update on the monitoring of the Meadowbank Gold Mine Project and the Whale Tail Pit Project**

**The Nunavut Impact Review Board will be at the Baker Lake Community Hall on Monday, August 13, 2018 and the public meeting will start at 7:00 p.m. with a presentation and a chance for community members to ask questions and share comments about the NIRB’s ongoing Monitoring Program for the Meadowbank Gold Mine and the Whale Tail Pit Project**

**Stop by for coffee or tea, and share your thoughts. Door prizes will be given away and the Nunavut Impact Review Board staff will be listening to your questions and comments.**

**All members of the public are welcome to attend these meetings and Inuktitut-English interpretation will be provided.**

### Appendix III Compliance with the Meadowbank Gold Mine Project Certificate No. 004

<u>Term &amp; Condition</u> (NIRB Project Certificate No. 004)	<u>Reporting Requirements</u>	<u>Compliance Achievement</u>
<b>Regulatory Requirements (General)</b>		
3. Cumberland must obtain all required federal and territorial permits and other approvals, and shall comply with the requirements of such regulatory instruments.	n/a	Complete and in compliance
4. Cumberland shall take prompt and appropriate action to remedy any noncompliance with environmental laws and regulations and/or regulatory instruments, and shall report any non compliance as required by law immediately and report the same to NIRB annually	Annually	Summary of non-compliance provided in the 2017 Annual Report.
5. Cumberland shall meet with respective licensing authorities prior to the commencement of construction to discuss the posting of adequate performance bonding. Licensing authorities are encouraged to take every measure to require that sufficient security is posted before construction begins. This bonding should not duplicate other amounts of security required (eg. the NWB).	n/a	Complete and in compliance
<b>Monitoring Records</b>		
6. All monitoring information collected pursuant to regulatory requirements for the Meadowbank Project shall contain the following information: a. The person(s) who performed the sampling or took the measurements including any accreditations; b. The date, time and place of sampling or measurement, and weather conditions; c. Date of analysis; d. Name of the person(s) who performed the analysis including accreditations; e. Analytical methods or techniques used; and f. Results of any analysis.	Annually	Ongoing and in compliance
7. Cumberland shall keep and maintain the records, including results, of any monitoring, data, or analysis, for a minimum of the life of the Project, including closure and post-closure monitoring. This time period shall be extended if requested by NIRB, GN, CIRNAC, DFO, EC or the NWB.	Annually	Ongoing and in compliance
<b>Water Quality and Waste Management</b>		
8. Cumberland shall, within 30 days of re-opening of the camp, re-sample existing groundwater monitoring wells and combining the sampling data with existing rounds of groundwater sampling data, re-evaluate the salinity, major ion concentrations, and dissolved metal load of groundwater flowing to the mine pits and incorporate the results into the water quality monitoring and treatment program. At the time samples are taken Cumberland shall also assess the condition of existing groundwater monitoring wells and replace any defective wells. Cumberland shall continue to undertake semi-annual groundwater samples and re-evaluate the groundwater quality after each sample collection. Cumberland shall report the results of each re-evaluation to NIRB's Monitoring Officer, CIRNAC and EC, and incorporate the results of the additional data into the water license application to the NWB.	Annually	Agnico Eagle provided a summary of the 2017 groundwater monitoring program in Appendix G8 of the 2017 Annual Report
9. Cumberland shall provide detailed plans for water treatment for the tailings (reclaim pond) discharge, and on a contingency basis for the attenuation pond discharge(s) and for the pits, including estimates of treatment efficiency for each parameter of concern and the description of pH adjustments in the water license application to the NWB.	n/a	Complete and part of NWB Type "A" water licence
10. Cumberland shall provide details of the camp sewage treatment, including the type of treatment to be used and the expected treatment capabilities, in the water license application to the NWB.	n/a	Complete and part of NWB Type A water licence
11. Cumberland shall provide details regarding the effluent outfall configuration, including discharge characteristics, the likely behavior of the plume(s), and bathymetric information for Wally Lake in the water license application to the NWB.	n/a	Complete and part of NWB Type A water licence

<b>Term &amp; Condition (NIRB Project Certificate No. 004)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
12. Cumberland shall provide details of a comprehensive water use and water management plan for the Baker Lake marshalling area, including monitoring of the discharge from the marshalling area sump, in the water license application to the NWB.	n/a	Complete and part of NWB Type "A" water licence
13. Cumberland shall not permit the water discharged into Wally Lake and Third Portage Lake to exceed receiving environment discharge criteria established by the NWB or as otherwise required by law.	n/a	Ongoing and in compliance
14. Cumberland shall not remove dewatering dikes until the quality of water contained within them is of sufficient quality to meet receiving environment discharge criteria established by the NWB or as otherwise required by law.	n/a	<i>At end of mine life</i>
15. Cumberland shall within two (2) years of commencing operations re-evaluate the characterization of mine waste materials, including the Vault area, for acid generating potential, metal leaching and non metal constituents to confirm FEIS predictions, and re-evaluate rock disposal practices by conducting systematic sampling of the waste rock and tailings in order to incorporate preventive and control measures into the Waste Management Plan to enhance tailing management during operations and closure. The results of the re-evaluations shall be provided to the NWB and NIRB's Monitoring Officer.	n/a	In its 2016 annual report, Agnico Eagle provided a summary of the results of the NPAG versus PAG materials
16. N/A-Missed Number	n/a	n/a
17. Cumberland shall undertake a detailed technical review of all dike and pitwall designs at the final design stage, and submit the final dike designs for water depths of greater than 10 metres for an expert analysis and Cumberland shall include the detailed technical review and the expert analysis in the application to the NWB for a water license.	n/a	Complete and part of NWB Type "A" water licence
18. Cumberland shall commit to a pro-active tailings management strategy through active monitoring, inspection, and mitigation. The tailings management strategy will include the review and evaluation of any future changes to the rate of global warming, compliance with regulatory changes, and the ongoing review and evaluation of relevant technology developments, and will respond to studies conducted during the mine operation.	n/a	Ongoing and in compliance
19. Cumberland shall provide for a minimum of two (2) metres cover of tailings at closure, and shall install thermistor cables, temperature loggers, and core sampling technology as required to monitor tailing freezeback efficiency. Cumberland shall report to NIRB's Monitoring Officer for the annual reporting of freezeback effectiveness.	Annually	In its 2017 annual report, Agnico Eagle provided a summary of the instrumentation installed including a description of the results from the 2017 reporting period.
20. Prior to construction, Cumberland shall identify mitigation measures that can be taken if groundwater monitoring around the tailings facility demonstrates that contamination from tailings has occurred through the fault. Upon drawdown of the North arm of Second Portage Lake, Cumberland shall conduct further tests to assess the permeability of any faults and provide the results to regulators. If doubt remains Cumberland shall seal the fault and conduct further permeability testing and monitoring	n/a	Complete and part of NWB Type "A" water licence
21. Cumberland shall fund and install a weather station at the mine site to collect atmospheric data, including air temperature and precipitation.	Results to be submitted annually	Ongoing and in compliance
22. Prior to the commencement of the Project, Cumberland shall fund and install an on site lab that has the capability to monitor parameters at a type and at a frequency acceptable to the NWB and EC at all site discharge points. The results of these analyses, as well as any other water quality monitoring required by regulatory authorities shall be used in the submission of a receiving water assimilative capacity water quality assessment study of concern to regulators. The lab shall be certified for environmental water quality analysis purposes with standards to include the calibration of water quality monitoring instruments. Cumberland shall file proof of application to become accredited upon the request of the NWB.	n/a	A small laboratory is on site
23. For the purposes of monitoring quality assurance and quality control ("QA/QC"), Cumberland shall ensure that water quality monitoring performed at locations within receiving waters that allow for an assimilative	Results to be submitted annually	Agnico Eagle provided a summary of the quality assurance and

<b>Term &amp; Condition (NIRB Project Certificate No. 004)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
capacity assessment of concern to regulators, be carried out by an independent contractor and submitted to an independent accredited lab for analysis, on a type and frequency basis as determined by the NWB. Results of analysis shall be provided to the NWB and NIRB's Monitoring Officer.		quality control conducted for all water quality monitoring in the 2017 annual report.
24. Cumberland shall identify an area and design for a landfill for disposal of operational and closure non-salvageable materials, including a list of any non salvageable materials, and a procedural manual for preparation of location and placements of these materials, and incorporate the design into the final Waste Management Plan as instructed by the NWB	n/a	1) Hazardous Materials Management Plan, version 3, October 2013 provided 2) Landfill Design and Management Plan, version 3, April 2017 provided
25. Cumberland shall manage and control waste in a manner that reduces or eliminates the attraction to carnivores and/or raptors. Cumberland shall employ legal deterrents to carnivores and/or raptors at all landfill and waste storage areas. The deterrents are to be developed taking into consideration Traditional Knowledge and in consultation with the HTO, EC and CIRNAC and incorporated into the final Waste Management Plan prior to filing the Plan with the NWB.	n/a	1) Waste Management Plan provided 2) Landfill Design and Management Plan, version 3, April 2017 provided
26. Cumberland shall ensure that spills, if any, are cleaned up immediately and that the site is kept clean of debris, including wind-blown debris.	n/a	Spill Contingency Plan, version 6, March 2016 provided
27. Cumberland shall ensure that the areas used to store fuel or hazardous materials are contained using safe, environmentally protective methods based on practical, best engineering practices.	n/a	Spill Contingency Plan, version 6, March 2016 provided
28. Cumberland shall become a signatory to the International Cyanide Management Code, communicate this to shippers, and do so prior to Cumberland storing or handling cyanide for the Project.	n/a	Agnico Eagle received full ICMC certification in March 2016
<b>Project Alternatives and Planned Changes</b>		
29. Cumberland shall report to NIRB if and when Cumberland develops plans for an expansion of the Meadowbank Gold Mine, and in particular if those plans affect the selection of Second Portage Lake as the preferred alternative for tailings management.	n/a	Agnico Eagle provided a summary of the Vault Pit Expansion into Phaser Lake within the 2016 Annual Report which was repeated in the 2017 Annual Report.
30. Cumberland shall meet with EC and the DFO to ensure that the information required for the application to add the northwest arm of Second Portage Lake as a tailings impoundment area under Schedule 2 of the Metal Mining Effluent Regulations, including the No Net Loss Plan to offset losses expected as a result of all other Project infrastructure, is complete and the application can be processed according to law.	n/a	Updated No Net Loss Plan, October 2012 provided and Habitat Compensation Monitoring, 2011 provided
<b>All-Weather Private Access Road</b>		
31. Cumberland shall provide detailed stream crossing design criteria, including consideration of the DFO Operational Statement for Clear-span bridges for all water crossings identified to have fish presence, final crossing designs, site specific mitigation procedures, an effects monitoring program, and a maintenance and closure plan for all water course crossings, to the DFO and the NWB for review and approval.	In addition to DFO and NWB, Include CIRNAC and GN on submissions	Complete and part of DFO permits and NWB water licence
32. ( <i>amended</i> ) Agnico Eagle shall operate the all-weather road as a private access road, and implement all such measures necessary to limit non-mine use of the road to authorized, safe and controlled use by all-terrain-vehicles for the purpose of carrying out traditional Inuit activities. The measures Agnico Eagle shall undertake include, but are not limited to: a. Maintaining a gate and manned gatehouse at kilometre 5 of the Private Access Road; b. In consultation with the Hamlet of Baker Lake, the local HTO, and the KivIA, update the All-weather Private Access Road Management Plan to set out the criteria and processes to authorize and ensure safe and controlled non-mine use of the road by all-terrain-vehicles for the purpose of carrying out traditional Inuit activities, and measure to limit all other non-mine use of the road. The updated Plan is to be	Annually for 32e, 32f, 32g and 32h	<u>32a to 32d</u> : Complete and in compliance  <u>32g</u> : A summary of the non-mine authorized road use was provided in the 2017 Annual Report.  <u>32f, 32f and 32h</u> : Agnico Eagle provided a summary of the consultation conducted with

<b>Term &amp; Condition (NIRB Project Certificate No. 004)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
<p>submitted to the GN, CIRNAC, and KivIA for approval no later than one (1) month after the approval of revised Condition 32.</p> <p>c. The posting of signs in English and Inuktitut at the gate, each major bridge crossing, and each 10 kilometres of road, stating that unauthorized public use of the road is prohibited;</p> <p>d. The posting of signs in English and Inuktitut along the road route to identify when entering or leaving crown land;</p> <p>e. Prior to opening of the road, and annually thereafter, advertise and hold at least one community meeting in the Hamlet of Baker Lake to explain to the community that the road is a private road with non-mine use of the road limited to approved, safe and controlled use by all-terrain-vehicles for the purpose of carrying out traditional Inuit activities.</p> <p>f. Place notices at least quarterly on the radio and television to explain to the community that the road is a private road with non-mine use of road limited to authorized, safe and controlled use by all-terrain-vehicles for the purpose of carrying out traditional Inuit activities.</p> <p>g. Record all authorized non-mine use of the road, and require all mine personnel using the road to monitor and report unauthorized non-mine use of the road, and collect and report this data to NIRB one (1) year after the road is opened and annually thereafter; and</p> <p>h. Report all accidents or other safety incidents on the road, to the GN, KivIA, and the Hamlet immediately, and to NIRB annually.</p>		<p>respect to the AWAR for the 2017 monitoring period and noted that no incident involving non-mine authorized use occurred in 2017.</p>
<p>33. Cumberland shall update the Access and Air Traffic Management Plan to:</p> <p>a. include an All-weather Private Access Road Management Plan, including a right-of-way policy developed in consultation with the KivIA, GN, CIRNAC and the Hamlet of Baker Lake, for the safe operation of the all-weather private access road; and</p> <p>b. to facilitate monitoring of the environmental and socio-economic impacts of the private road and undertake adaptive management practices as required, including responding to any concerns regarding the locked gates.</p>	n/a	<p>Agnico Eagle provided an updated AWAR Transportation Management Plan dated March 2017 that replaces the Access and Air Traffic Management Plan as part of the 2016 Annual Report.</p>
<p>34. Cumberland shall, in consultation with the Hamlet of Baker Lake, KivIA, and the Royal Canadian Mounted Police, facilitate the hiring of a full-time road safety, search and rescue position to respond to safety matters arising from mine and unauthorized non-mine use of the all-weather private access road, including consulting with Baker Lake and Chesterfield Inlet Elders to incorporate Traditional Knowledge into search and rescue operations.</p>	n/a	<p>Complete and in compliance</p>
<p>35. Cumberland shall reclaim the all-weather private access road at the end of the mine life to prevent any future use of the road, including scarification of the road and restoration of the natural hydrology, topography, and vegetation, subject only to Cumberland and/or its successor seeking NIRB Article 12 approval for the road to be maintained and operated beyond the life of the mine.</p>	n/a	<p><i>At end of mine life</i></p>
<p>36. Cumberland shall ensure the placement of local area marine mammal monitors onboard all vessels transporting fuel or materials for the Project through Chesterfield Inlet.</p>	n/a	<p>Only one marine mammal monitor was hired for the period of July 24 to July 28. The 2017 Annual Report notes that approximately 36 barges arrived in Baker Lake for the 2017 year.</p>
<p>37. Cumberland will contract only Transport Canada certified shippers to carry cargo for the Project, and will require shippers transporting cargo through Chesterfield Inlet to carry the most up-to-date emergency response/spill handling equipment as recommended and accepted by the Government of Canada with the crew trained to deploy the equipment, including practice drills deploying spill equipment in remote locations within the Inlet.</p>	n/a	<p>Ongoing and in compliance</p>

<b>Term &amp; Condition (NIRB Project Certificate No. 004)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
38. Cumberland shall make every reasonable effort to minimize the number of ships and barges transporting cargo for the Project, and require shippers transporting cargo for the Project through Chesterfield Inlet to be operated in accordance with safe shipping management policies, including using Canadian Hydrographic Service published detailed marine charts and nautical instructions, and be fitted with modern state-of-the-art navigation equipment.	n/a	Ongoing and in compliance
39. Within three (3) months of contracting with a shipping company to transport cargo to the Project through Chesterfield Inlet and prior to the commencement of shipping, Cumberland shall advertise and hold a community information meeting in Chesterfield Inlet to fully discuss the shipping program for the Project. Thereafter, Cumberland shall annually advertise and hold a community information meeting in Chesterfield Inlet to report on the Project and to hear from Chesterfield Inlet residents and respond to concerns. A consultation report shall be submitted to NIRB's Monitoring Officer within one month of the meeting.	Annually with consultation report submitted within one month of meeting	Meetings were held in Chesterfield Inlet and Baker Lake in 2017 with summaries provided in the 2017 Annual Report
40. Cumberland shall gather Traditional Knowledge from the local HTOs and conduct a minimum of a one-day workshop with residents of Chesterfield Inlet to more fully gather Traditional Knowledge about the marine mammals, cabins, hunting, and other local activities in the Inlet. Cumberland shall report to KivIA and NIRB's Monitoring Officer annually on the Traditional Knowledge gathered including any operational changes that resulted from concerns shared at the workshop.	Copy DFO on result; Report annually	Meetings were held in Chesterfield Inlet and Baker Lake in 2017 with summaries provided in the 2017 Annual Report
41. Subject to vessel and human safety considerations, Cumberland shall require shippers carrying cargo to the Project through Chesterfield Inlet to follow the following mitigation procedures in the event that marine mammals are in the vicinity of the shipping activities: <ul style="list-style-type: none"> <li>a. Wildlife will be given right of way;</li> <li>b. Ships will maintain a straight course, constant speed, and will avoid erratic behaviour; and</li> <li>c. When marine mammals appear to be trapped or disturbed by vessel movements, the vessel will stop until the mammals have moved away from the area.</li> </ul>	n/a	Ongoing and in compliance
42. Cumberland shall ensure all fuel transfer operations take place in accordance with the Arctic Waters Pollution Prevention Act and relevant oil transfer guidelines	n/a	Ongoing and in compliance
43. Lightering activities at Helicopter Island are not approved, except in case of emergency only, and in such case Cumberland shall explain why all other methods were not practical, meaning technically, logistically, and financially not feasible	n/a	Ongoing and in compliance
44. Within one (1) month of contracting with a shipper, Cumberland shall submit a comprehensive Spill Contingency and Emergency Response Plan to regulatory authorities.	Copies of plan should be submitted to EC, TC, GN, DFO, and NWB Transport Canada - Marine Safety will require an Oil Pollution Emergency Plan for any Oil Handling Facility operated by Cumberland	Spill Contingency Plan, version 6, March 2016 provided  Emergency Response Plan, version 12 submitted as part of the 2017 Annual Report  Oil Handling Facility: Oil Pollution Emergency Plan, version 8, April 2018
45. Cumberland shall carry, and require contracted shippers to carry adequate insurance to fully compensate losses arising from a spill or accident, including but not limited to the loss of resources arising from the spill or accident. Any claims are to be reported to proper officials with a copy to NIRB's Monitoring Officer.	n/a	No claim was reported for the 2017 year.
<b>Fish and fish-habitat</b>		
46. Cumberland shall apply for Fisheries Act approval for the freshwater intake pipe for the Project, and submit for DFO approval a detailed plan of the proposed intake, including siting, design of intake screens in	n/a	Complete and part of DFO permits and NWB water licence

<b>Term &amp; Condition (NIRB Project Certificate No. 004)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
accordance with the DFO Freshwater End-of-Pipe Fish Screen Guidelines, construction and operation considerations, fish and fish habitat impacts, and mitigation and monitoring plans		
47. Cumberland shall develop an adaptive approach to managing the water flow from Third Portage Lake, including the consideration of alternatives to deepening the easternmost channel; submission of detailed design of the easternmost channel modifications; a monitoring program for channel erosion, verification of the maintenance of water levels in Third Portage Lake, and the success of fish habitat enhancements; and contingencies in the event of channel failure, for approval by the DFO.	n/a	Complete and part of DFO permits and NWB water licence
48. Term and condition deleted ( <i>see Project Certificate amendment 2</i> )	n/a	n/a
49. Agnico Eagle Mines Ltd. shall develop, implement and report on the fish-out programs for the dewatering of Second Portage Lake, Third Portage Lake, Vault Lake and Phaser Lake. This must be done in consultation with the DFO, Elders and the HTOs, and in a manner that optimizes the acquisition of northern fisheries science and augments baseline fisheries data to support monitoring programs and the final design of fish habitat compensation for the Project.	Results of the fish-out programs should be provided in the annual report to the NIRB.	A summary of the fish-out program for Phaser Lake was provided in the 2016 Annual Report
50. Cumberland shall, in consultation with the DFO, undertake to prevent the barge landing facility from infilling of fish habitat, including considering using geotextile material in a manner that is capable of maintaining bottom substrate for benthic invertebrates and fish	n/a	Complete and part of DFO permits and NWB water licence
51. Cumberland shall engage the HTOs in the development, implementation and reporting of creel surveys within waterbodies affected by the Project to the GN, DFO and local HTO.	n/a	<b>NOT IN COMPLIANCE.</b> Agnico Eagle suspended the creel surveys in 2016.
52. Cumberland shall enforce a no-fishing policy for employees while working on the job site	n/a	Ongoing and in compliance
53. Agnico Eagle Mines Ltd. shall, in consultation with the HTOs and DFO, develop a Fish Habitat Monitoring Plan, including augmenting baseline fisheries data in the period prior to operation, with the clear objective of demonstrating the success of the No Net Loss Plan approved by the DFO. The Fish Habitat Monitoring Plan should include Phaser Lake.	The updated plan should be provided to the NIRB for review at least 30 days prior to commencement of construction activities. Results from the fisheries baseline data to be provided in the annual report to the NIRB.	Fish Habitat Offsetting Plan: Phaser Lake Addendum, version 1 submitted as part of the 2016 Annual Report
<b>Wildlife and Terrestrial</b>		
54. Cumberland shall provide an updated Terrestrial Ecosystem Management Plan, to the GN, EC and CIRNAC, within three (3) months of the issuance of the Project Certificate including: <ul style="list-style-type: none"> <li>a. Updated terrestrial ecosystem baseline data;</li> <li>b. Details of the method and rationale for conducting monitoring surveys prior to the commencement of construction;</li> <li>c. Statistical validation to support the conclusions drawn from monitoring impacts of the mine and infrastructure on wildlife;</li> <li>d. A detailed analysis of the method of distinguishing between cow/calf groups from other caribou group observations;</li> <li>e. Details of a comprehensive hunter harvest survey to determine the effect on ungulate populations resulting from increased human access caused by the all-weather private access road, including establishing preconstruction baseline harvesting data, to be developed in consultation with local HTOs, the GN-DOE and the Nunavut Wildlife Management Board;</li> <li>f. Details of annual aerial surveys to be conducted to assess waterfowl densities in the regional study area during the construction phase and for at least the first three (3) years of operation, with the data analyzed and compared to baseline data to determine if significant effects are occurring and require mitigation.</li> <li>g. Details of an annual breeding bird plot surveys and transects along the all-weather road to be conducted during the construction phase and for at least the first three (3) years of operation.</li> </ul>	TEMP should be a stand-alone document which provides direction and methods in regard to how the wildlife monitoring should be conducted. Baseline data collected should be submitted in the annual Wildlife Summary Monitoring Report.	<p>54: Terrestrial Ecosystem Management Plan, version 5 submitted June 2018.</p> <p><b>54e: NOT IN COMPLIANCE.</b> Agnico Eagle suspended the Hunter Harvest Survey in 2016.</p> <p>54f: In compliance. Agnico Eagle suspended the waterbird nest survey program in 2013 along the mine site and along the AWAR due to low densities of waterbird nests identified.</p> <p>54g: The most recent PRISM plot survey was conducted in 2015</p>

<b>Term &amp; Condition (NIRB Project Certificate No. 004)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
h. Details of a monitoring program, including recording the locations and frequency of observing caribou and carnivores and any actions taken to avoid contact with or disturbance, and a specific mitigation plan for Shorteared owls and any other species of special concern pursuant to Schedule 3 of the Species at Risk Act located in the local study area or along the all-weather private access road.		with the next survey planned for 2019.  54h: 2017 Wildlife Monitoring Summary Report submitted as part of the 2017 Annual Report.
55. Cumberland shall provide the following analysis in the March 2007 Wildlife Summary Monitoring Report: a. Further review and analysis of the size of the regional study area; b. A summary of the involvement of Inuit in the monitoring program; c. A detailed report of the natural variability of VECs in the region; d. A detailed analysis on distribution and abundance of cows, bulls, and calves; e. Results of the 2006 monitoring program, including field methodologies and statistical approaches used to support conclusions drawn; f. Any proposed changes to the TEMP survey methodologies, statistical approaches or proposed adaptive management stemming from the results of the monitoring program.	Annual Wildlife Monitoring results submitted must include baseline monitoring; effects monitoring; and compliance monitoring.	2017 Wildlife Monitoring Summary Report submitted as part of the 2017 Annual Report.
56. Cumberland shall plan, construct, and operate the mine in such a way that caribou migration paths through the Project, including in the narrows west of Helicopter Island, are protected. Maps of caribou migration corridors shall be developed in consultation with Elders and local HTOs, including Chesterfield Inlet and placed in site offices and upgraded as new information on corridors becomes available. Information on caribou migration corridors shall be reported to the GN, KivIA and NIRB's Monitoring Officer annually.	Annually	Caribou telemetry data provided within the 2017 Wildlife Monitoring Summary Report
57. Cumberland shall participate in a caribou collaring program as directed by the GN-DOE	n/a	Agnico Eagle is participating in the GN DoE satellite-collaring program.
58. Cumberland shall, in consultation with Elders and the HTOs and subject to safety requirements, design the lighting and use of lights at the mine site to minimize the disturbance of lights on sensitive wildlife and birds	n/a	Complete and in compliance
59. Cumberland shall, in consultation with Elders and the HTOs, design and implement means of deterring caribou from the tailing ponds, such as temporary ribbon placement or Inukshuks, with such designs not to include the use of fencing	n/a	Complete and in compliance
60. Whenever practical, Cumberland shall implement a stop work policy when wildlife in the area may be endangered by the work being carried out	n/a	Ongoing and in compliance
61. In consultation with EC, Cumberland shall incorporate into the Terrestrial Ecosystem Management Plan and the Air Traffic Management Plan a commitment for aircraft to maintain (whenever possible) a cruising altitude of at least 610 metres during point to point travel when in areas likely to have migratory birds, and 1000 metres vertical and 1500 metres horizontal distance from observed concentrations of migratory birds, and use flight corridors to avoid areas of significant wildlife importance	n/a	Part of TEMP

<b>Term &amp; Condition (NIRB Project Certificate No. 004)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
62. Cumberland shall develop and implement a noise abatement plan to protect people and wildlife from significant mine activity noise, including blasting, drilling, equipment, vehicles and aircraft. The noise abatement plan will be developed in consultation with Elders, GN, HC, and EC and include: <ul style="list-style-type: none"> <li>a. The use of sound meters to monitor sound levels in and around the mine site, including workers' on-site living /sleeping quarters and any summer camps adjacent to the site, and in the local study area, with the locations and design of the sound meters selected in consultation with HC and EC. Sound meters are to be set up immediately upon issuance of the Project Certificate for the purpose of obtaining baseline data, and monitoring during and after operations;</li> <li>b. The establishment of strict standards for noise levels, such as the World Health Organization's Community Noise Guidelines threshold level for sleep disturbance;</li> <li>c. Restrictions on blasting and drilling when migrating caribou, or sensitive local carnivores or birds may be affected;</li> <li>d. The use of noise attenuation devices for equipment and vehicles;</li> <li>e. The use of temporary solid fences or berms around noisy machines or sites when practical; and</li> <li>f. Require (with the exception of take off and approach for landing), a minimum flight altitude of 610 metres above ground when flights to and from the mine site are passing sensitive wildlife and bird areas.</li> </ul>	Annually	Noise Monitoring and Abatement Plan, version 3 submitted June 11, 2018  The noise monitoring program results were provided in the 2017 annual report.
<b>Socio-economic</b>		
63. Within six (6) months of the issuance of a Project Certificate, the GN and CIRNAC shall form a Meadowbank Gold Mine Socio-Economic Monitoring Committee ("Meadowbank SEMC") to monitor the socio-economic impacts of the Project and the effectiveness of the Project's mitigation strategies. The monitoring shall supplement, not duplicate, the monitoring required pursuant to the IIBA negotiated for the Project, and on the request of Government or NPC, could assist in the coordination of data collection and tracking data trends in a comparable form to facilitate the analysis of cumulative effects. The terms of reference shall focus on the Project, include a plan for ongoing consultation with KivIA and affected local governments and a funding formula jointly submitted by GN, CIRNAC and Cumberland. The terms of reference shall be submitted to NIRB for review and subsequent direction within six (6) months of the issuance of a Project Certificate. Cumberland is entitled to be included in the Meadowbank SEMC.	Within six (6) months of issuance of a Project Certificate	Draft terms of reference provided April 29, 2008.
64. Cumberland shall work with the GN and CIRNAC to develop the terms of reference for a socio-economic monitoring program for the Meadowbank Project, including the carrying out of monitoring and research activities in a manner which will provide project specific data which will be useful in cumulative effects monitoring (upon request of Government or NPC) and consulting and cooperating with agencies undertaking such programs. Cumberland shall submit draft terms of reference for the socio-economic monitoring program to the Meadowbank SEMC for review and comment within six (6) months of the issuance of a Project Certificate, with a copy to NIRB's Monitoring Officer.	Annually	Agnico Eagle has retained Stratos Inc. to develop a socio-economic monitoring report with the draft presented to the committee in June 2017.
65. Cumberland shall include in its socio-economic monitoring program for the Meadowbank Project the collection and reporting of data of community of origin of hired Nunavummiut	Annually	Summary of workforce at Meadowbank provided within the 2017 Annual Report.
<b>Human Health</b>		
66. Cumberland shall establish a nursing station and hire a registered on-site nurse.	n/a	Temporary nursing station established 2008 and a permanent station was established in 2011
67. Cumberland shall develop and implement a program to monitor contaminant levels in country foods in consultation with HC. A copy of the plan shall be submitted to NIRB's Monitoring Officer	n/a	Studies were completed in 2014 and then 2017. Results of the Wildlife Screening Level Risk Assessment and Human Health

<b>Term &amp; Condition (NIRB Project Certificate No. 004)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
		Risk Assessment for the Consumption of Country Foods were provided in appendices attached to the 2017 Annual Report.
68. Cumberland shall, in consultation with Elders, local HTOs and the Meadowbank Gold Mine SEMC, demonstrate that they are working toward incorporating Inuit societal values into mine operation policies.	n/a	Ongoing
69. Cumberland shall carry out the Project to minimize the impacts on archeological sites, including conducting proper archeological surveys of the Project area (including the all-weather road and all quarry sites). Cumberland shall provide to the GN an updated baseline report for archeological sites in the Project area, including: a. referencing of sites as directed by the GN, b. the process used for age determinations of archeological sites, and c. the specific measures being taken to avoid listed sites, and d. the monitoring that will take place, to the GN prior to the commencement of construction.	n/a	No additional impact assessments were conducted at Meadowbank in 2017.  Agnico Eagle conducted archaeological impacts assessment and mitigation within the Amaruq exploration project at the Whale Tail zone and along the proposed exploration road in 2016.
70. Cumberland shall report any archeological site discovered during the course of construction, including a burial site, immediately and concurrently to the GN and KivIA. Upon discovering an archeological site, Cumberland shall take all reasonable precautions necessary to protect the site until further direction is received from the GN. In the event that it becomes necessary to disturb an archaeological site, Cumberland shall consult with Elders, GN and KivIA to establish a site specific mitigation plan, and obtain all necessary authorizations and comply with all applicable laws	n/a	Complete unless new archaeological sites are discovered at Meadowbank.  A 2010 archaeological study report was submitted as part of the 2011 Annual Report.
<b>Air Quality</b>		
71. Cumberland shall, in consultation with EC, install and fund an atmospheric monitoring station to focus on particulates of concern generated at the mine site. The results of air-quality monitoring are to be reported annually to NIRB	Annually	The results of the 2017 air quality and dust monitoring program conducted by Agnico was provided in the 2017 annual report.  Air Quality and Dusfall Monitoring Plan, version 3 submitted June 2018
72. On-site incinerators shall comply with Canadian Council of Ministers of Environment and Canada-Wide Standards for dioxins and furan emissions, and Canada-wide Standards for mercury emissions, and Cumberland shall conduct annual stack testing to demonstrate that the on-site incinerators are operating in compliance with these standards. The results of stack testing shall be contained in an annual monitoring report submitted to GN, EC and NIRB's Monitoring Officer	Stack testing changed to every other year following discussions with ECCC (2012).	Results of the 2017 stack testing were provided in the 2017 annual report.
73. Cumberland shall undertake to conserve the Project's use of energy, monitor the Project's green house gas emissions, and continuously review and, if possible, consider for adoption new technologies to ensure greenhouse gases meet the latest Canadian standards or criteria.	n/a	Ongoing and in compliance
74. Cumberland shall employ environmentally protective techniques to suppress any surface road dust	n/a	<b>NOT IN COMPLIANCE</b> No dust suppressants applied to the AWAR.

<b>Term &amp; Condition (NIRB Project Certificate No. 004)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
<b>Accidents and malfunctions</b>		
75. Cumberland shall provide a complete list of possible accidents and malfunctions for the Project. It must consider the all-weather road, shipping spills, cyanide and other hazardous material spills, and pitwall/dikes /dam failure, and include an assessment of the accident risk and mitigation developed in consultation with Elders and potentially affected communities	n/a	A list of possible accidents and malfunctions were included in the following management plans: i) <i>Hazardous Materials Management Plan, v3, October 2013;</i> ii) <i>Spill Contingency Plan, v6, March 2016;</i> ii) <i>Emergency Response Plan, v12, January 2018;</i> v) <i>Oil Pollution Emergency Plan v8, May 2018;</i> v) <i>OMS Manual for TSF v7, March 2017;</i> i) <i>OMS Manual for the dewatering dikes v7; March 2018.</i>
76. Cumberland shall develop an “Early Warning Monitoring Program” along the east boundary of the Project’s local study area (mine and road) including the location where Third Portage Lake flows into Tehek Lake. The “Early Warning Monitoring Program” shall discuss how the communities of Baker Lake and Chesterfield Inlet will be actively involved and shall be submitted to NIRB’s Monitoring Officer for review prior to Project construction. If adverse effects from the project to any VEC are detected along this boundary, then Cumberland shall notify the NIRB’s Monitoring Officer for determination as to whether and to what extent additional monitoring is required.	Results to be provided annually	Related to the AEMP and CREMP programs
77. Cumberland shall as soon as possible, review and coordinate its Emergency Response Plan with the emergency response plans of the Hamlets of Baker Lake and Chesterfield Inlet	n/a	Ongoing and in compliance
<b>Abandonment and Reclamation</b>		
78. Cumberland shall file a complete Closure and Reclamation Plan developed to comply with INAC’s policy of full cost of restoration and any related NWB requirements such that the Inuit and taxpayers are not liable for any cost associated with the cleanup, modification, decommission, or abandonment	n/a	Updated Closure and Reclamation Plan, December 2012 provided  Interim Closure and Reclamation Plan, January 2014 provided
79. In addition to the NWB’s requirements, the final Closure and Reclamation Plan shall require Cumberland to: a. Ensure that mine facilities and infrastructure are abandoned in such a manner that: i. The Project site is physically stable and any requirements for long term maintenance and monitoring are minimized; ii. Threats to public safety and wildlife are eliminated; and iii. Affected areas are returned to the original undisturbed conditions to the fullest extent possible. b. Prevent continuing impacts from contaminants and wastes on the environment including those associated with acid rock drainage; c. Remove all hazardous materials and waste and as much salvageable waste as practicable from the Project area; and d. Enter into written arrangements with its abandonment and reclamation contractors to ensure all site debris is cleaned up off the lands, including wind-blown debris	n/a	Updated Closure and Reclamation Plan, December 2012 provided  Interim Closure and Reclamation Plan, January 2014 provided

<b>Term &amp; Condition (NIRB Project Certificate No. 004)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
80. Cumberland shall file annually with NIRB's Monitoring Officer an updated report on progressive reclamation and the amount of security posted, as required by KivIA, INAC, and/or the NWB.	Annually	A summary of the progressive reclamation completed in 2016 and previous years were provided in the 2017 Annual Report.
<b>Other</b>		
81. Beginning with mobilization, and for the life of the Project, Cumberland shall provide full 24 hour security, including surveillance cameras and a security office at the Baker Lake storage facility/marshalling area, and take all necessary steps to ensure the safe and secure storage of any hazardous or explosive components within the Hamlet of Baker Lake boundaries	n/a	Ongoing and in compliance
82. Cumberland shall monitor the ingress/egress of ship cargo at Baker Lake and report any accidents or spills immediately to the regulatory agencies as required by law and to NIRB's Monitoring Officer annually	Annually	A summary of the 2016 ingress/egress was provided in the 2017 annual report. No spills occurred during the 2017 monitoring period.
83. Cumberland shall ensure that the explosive mix-truck is only used to mix diesel and ammonia nitrate to form an explosive only at the blast site, and that when the explosive mix-truck is not in use it is stored with the strictest setback requirements as required or recommended by NRCan	n/a	Ongoing and in compliance
84. To the extent permitted by the IIBA, and when the assets are no longer required by Cumberland, Cumberland shall offer the Hamlet of Baker Lake the first right of refusal to purchase salvageable mine assets located within the Hamlet of Baker Lake boundaries	n/a	<i>At the end of mine life</i>
85. Cumberland shall develop a detailed blasting program to minimize the effects of blasting on fish and fish habitat, water quality, and wildlife and terrestrial VECs. The Blasting Program shall be developed in consultation with the DFO and GN, and shall: <ul style="list-style-type: none"> <li>a. comply with the <i>Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters</i> (Wright and Hopky, 1998) as modified by the DFO for use in the north;</li> <li>b. including a monitoring and mitigation plan to be developed in consultation with the DFO, and obtain DFO approval of the blasting program prior to the commencement of blasting;</li> <li>c. restrict blasting when migrating caribou, or sensitive local carnivores or birds may be negatively affected; and</li> <li>d. minimize the use of ammonium nitrate to reduce the effects of blasting on receiving water quality.</li> </ul>	n/a	The results of the 2017 blast monitoring program were provided in the 2017 annual report.
<b>Duty to Comply</b>		
86. Cumberland shall comply with all Terms and Conditions of this approval, and any non-compliance constitutes a violation of the approval and is grounds for NIRB's reconsideration and recommendation to the Minister under Article 12, Part 8 of the NLCA	n/a	n/a

## Appendix IV Compliance with the Whale Tail Pit Project Certificate No. 008

### Appendix D-1: Board Guidance on General Regulatory and Administrative Responsibilities

<u>Term &amp; Condition</u> (NIRB Project Certificate No. 008)	<u>Reporting Requirements</u>	<u>Compliance Achievement</u>
<b>General Regulatory Requirements</b>		
5. The Proponent must obtain all required federal and territorial permits and other approvals, and shall comply with the requirements of such regulatory instruments.	n/a	Complete and in compliance
6. The Proponent shall take prompt and appropriate action to remedy any occasion of non-compliance with environmental laws and regulations and/or regulatory instruments, and shall report any non-compliance as required by law immediately. A description of all instances of non-compliance and associated follow up is to be reported annually to the NIRB.	Annually	To be reported in the next monitoring period.
7. The Proponent shall meet with respective licensing authorities prior to the commencement of construction to discuss the posting of adequate performance bonding. Licensing authorities are encouraged to take every measure to require that sufficient security is posted before construction begins.	n/a	Complete and in compliance
<b>Monitoring Records</b>		
8. All monitoring information collected pursuant to the Project Certificate and various regulatory requirements for the Project shall, if appropriate, given the type of monitoring conducted, contain the following information: a) The name of the person(s) who performed the sampling or took the measurements including any relevant accreditations; b) The date, time and place of sampling or measurement, and weather conditions; c) The date of analysis; d) The name of the person(s) who performed the analysis including any relevant accreditations; e) A description of the analytical methods or techniques used; and f) A discussion of the results of any analysis.	Annually	Ongoing and in compliance
9. The Proponent shall make significant monitoring results and/or summaries of significant results available in English, Inuinnaqtun, and Inuktitut, to the extent feasible.	Annually	To be reported in the next monitoring period.
10. The Proponent shall keep and maintain the records, including results, of all Project-related monitoring data and analysis for the life of the Project, including closure and post-closure monitoring.	Annually	To be reported in the next monitoring period.
11. The Proponent shall maintain the Environmental Impact Statement and the environmental monitoring programs developed for the Project, with predictions updated as new baseline data is collected. If the results of monitoring programs necessitate updates to effects predictions, the Proponent shall update the associated management programs and plans as required to address or reflect the updated assessment of effects.	As information is updated	Ongoing and in compliance
12. The Proponent shall establish a publicly-accessible Project-specific web portal or web page to make available in a central location all significant non-confidential monitoring and reporting information submitted to regulatory authorities pursuant to the Project Certificate and other territorial or federal permits issued for the Project. For clarity, posting on the Project-specific site does not replace any reporting obligation of the Proponent pursuant to the Project Certificate or any territorial or federal permit.	n/a	Information on the compliance with this condition to be reported in the next monitoring period.
<b>On-going Engagement in Project Monitoring, Modelling, Management and Reporting</b>		
13. The Proponent is encouraged to provide on-going opportunities for consultation and comment on any substantive revisions to the Project-specific monitoring program, modelling, studies, management plans, management measures, and reporting under the Project Certificate.	Annually	To be reported in the next monitoring period.

<u>Term &amp; Condition</u> <u>(NIRB Project Certificate No. 008)</u>	<u>Reporting Requirements</u>	<u>Compliance Achievement</u>
14. To the extent feasible, the NIRB will provide an opportunity for comment on any substantive revisions to the Project-specific monitoring, modelling, studies, management plans, management measures, and reporting provided by the Proponent under the Project Certificate.	Annually	To be reported in the next monitoring period.

### Appendix D-2: Whale Tail Project Specific Terms and Conditions

<u>Term &amp; Condition</u> <u>(NIRB Project Certificate No. 008)</u>	<u>Reporting Requirements</u>	<u>Compliance Achievement</u>
<b>Air Quality</b>		
1. The Proponent shall: <ul style="list-style-type: none"> <li>a) Develop and implement an Air Quality Monitoring and Management Plan that includes clear objectives and that specifies air quality monitoring thresholds that will trigger adaptive management responses and actions;</li> <li>b) In the implementation of the Plan, the Proponent shall demonstrate through active and passive monitoring of dustfall, for criteria air contaminant concentrations, incinerator stack testing, and vegetation, soil and snow chemistry sampling that dustfall and emissions of carbon monoxide (CO), nitrogen dioxide (NO<sub>2</sub>), ozone (O<sub>3</sub>), sulphur dioxide (SO<sub>2</sub>), suspended particulate matter, mercury, dioxins and furans, and other chemicals remain within predicted levels and, where applicable, within levels or limits established by all applicable guidelines and regulations;</li> <li>c) If exceedances occur, the Proponent shall provide an explanation for the exceedance, a description of planned mitigation, and shall conduct additional monitoring to evaluate the effectiveness of mitigative measures; and</li> <li>d) The Proponent shall also develop, implement, and report on the quality assurance and quality control protocols used to ensure data reliability and proper functioning of equipment.</li> </ul>	The Plan should be submitted to the Nunavut Impact Review Board (NIRB) 30 days prior to commencement of construction, and the Proponent shall report on its development and implementation of this Plan and associated monitoring results annually to the NIRB.	Air Quality and Dustfall Monitoring Plan, version 3 submitted June 1, 2018.  Monitoring results to be provided in the next monitoring period.
2. Prior to commencing construction activities the Proponent shall update the existing Dust Management and Monitoring Plan for the Meadowbank Mine site to address and/or include the following additional items: <ul style="list-style-type: none"> <li>▪ Align plan requirements with commitments made in the Final Environmental Impact Statement and during the Final Hearing to monitor dust along the existing all-weather access road, the Amaruq haul road and any other roads and trails associated with the Project.</li> <li>▪ Verify commitments to the utilization of dust suppressants along the all-weather access road, the Amaruq haul road and any other roads and trails associated with the Project, including a description of the type of suppressant to be utilized and the frequency and timing of applications to be made throughout the various seasons of road use.</li> <li>▪ Outline the specific triggers, thresholds, and adaptive management measures that will apply if monitoring indicates that dust deposition is higher than predicted.</li> </ul>	The Proponent shall report annually to the NIRB with a summary of its dust management activities	<b>NOT IN COMPLIANCE</b> Updated Dust Management and Monitoring Plan with the required additional items have not been submitted.  Monitoring results to be provided in the next monitoring period.
<b>Climate and Meteorology</b>		
3. The Proponent shall maintain a Greenhouse Gas Emissions (GHG) Reduction Plan which includes: <ul style="list-style-type: none"> <li>▪ An estimate of the Project's GHG baseline emissions;</li> <li>▪ A description of monitoring measures to be undertaken, including the methods, frequency, parameters, and a description the analysis that will be carried out on the monitoring data generated; and</li> <li>▪ A description of mitigative and adaptive strategies planned, and taken, to reduce project-related greenhouse gas emissions over the Project lifecycle.</li> </ul>	The Plan should be submitted to the NIRB within 60 days of the issuance of the Project Certificate, with results submitted annually thereafter or as may otherwise be required by the NIRB.	Greenhouse Gas Reduction Plan, version 1 submitted May 16, 2018.  Results to be provided in the next monitoring period.
<b>Noise and Vibration</b>		
4. The Proponent shall demonstrate consideration for noise reduction when siting and constructing the camp and other project infrastructure.	Site design plans with reference to noise dispersion modelling shall be submitted to	Noise Monitoring and Abatement Plan, version 3 submitted June 11, 2018.

<b>Term &amp; Condition (NIRB Project Certificate No. 008)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
	the NIRB 30 days prior to the commencement of construction activities.	
<p>5. The Proponent shall:</p> <p>a) Conduct noise monitoring at least once during each phase of the Project at four (4) locations in the vicinity of the Whale Tail Pit Project and at two (2) locations along the haul road to demonstrate that noise levels remain within predicted levels for all Project areas; and</p> <p>b) If monitoring identifies an exceedance, the Proponent shall provide an explanation for the exceedance, a description of planned mitigation, and shall conduct additional monitoring to evaluate the effectiveness of mitigative measures.</p>	Results of all noise monitoring undertaken by the Proponent for the Project shall be provided to the NIRB on an annual basis.	<p>Noise Monitoring and Abatement Plan, version 3 submitted June 11, 2018.</p> <p>Monitoring results to be provided in the next monitoring period.</p>
<b>Terrestrial Environment (Geology and Geochemistry)</b>		
<p>6. The Proponent shall:</p> <p>a) Conduct detailed hydrodynamic modelling during operations and closure to evaluate the mixing of the Waste Rock Storage Facility seepage into Mammoth Lake post-closure; and</p> <p>b) Based on the results of the modelling implement monitoring programs and adaptive management strategies that minimize the need for active intervention, including long-term treatment of mine contact water.</p>	The Proponent shall provide a summary of activities undertaken to address the requirements of this term and condition in annual report(s) to the NIRB.	<p>Water Management Plan, version 3 submitted September 7, 2018.</p> <p>To be reported in the next monitoring period.</p>
<p>7. Prior to commencement of mining of the Whale Tail deposit, and in consultation with applicable regulatory agencies, including Natural Resources Canada, the Proponent shall as part of a Mine Waste Rock and Tailings Management Plan that reflects site-specific geological and geochemical conditions:</p> <p>a) Develop and implement monitoring programs for the Tailings Storage Facility and the Waste Rock Storage Facility at the Whale Tail Pit;</p> <p>b) Establish thresholds that will trigger the requirement for the Proponent to implement adaptive management strategies to minimize the potential for impacts from these Facilities; and</p> <p>c) Identify the adaptive management strategies that will be used by the Proponent to minimize the potential for impacts from these Facilities.</p>	The Plan should be submitted to the NIRB at least 60 days prior to the start of construction of the Waste Rock Storage Facility, with subsequent updates or revisions to the Plan submitted annually thereafter or as may otherwise be required by the NIRB for the life of the Project.	Mine Waste Rock Management Plan, version 2 submitted May 18, 2018 and version 3 submitted September 7, 2018.
<p>8. The Proponent shall submit a detailed Acid Rock Drainage and Metal Leaching Management Plan that includes the following items:</p> <ul style="list-style-type: none"> <li>▪ Waste rock segregation and testing;</li> <li>▪ Thermal monitoring of waste rock;</li> <li>▪ Seepage management and monitoring;</li> <li>▪ A schedule for reporting of results and periodic updating of predictions for the WRSF pond quality;</li> <li>▪ Planning for optimal cover conditions;</li> <li>▪ Contingency measures that may be implemented if required;</li> <li>▪ Plans for comparing monitoring results from receiving waters to model predictions; and</li> <li>▪ The identification of thresholds that will trigger management actions if trends analysis indicates water quality objectives may be exceeded.</li> </ul>	The Plan should be submitted to the NIRB at least 30 days prior to the start of construction, with subsequent updates or revisions to the Plan submitted annually thereafter or as may otherwise be required by the NIRB for the life of the Project.	Operational ARD-ML Sampling and Testing Plan, version 2 submitted June 4, 2018.
<b>Geological Features, Soils and Permafrost</b>		
<p>9. The Proponent shall undertake the additional site-specific geotechnical investigations required to identify sensitive land features and to inform final engineering design prior to the construction of project components such as the waste rock storage facility and quarries.</p>	Results from these studies should be submitted to the NIRB at least 30 days prior to the start of construction of these facilities, with results or updates submitted annually thereafter as applicable.	Site Specific Geotechnical Studies submitted June 4, 2018.
<p>10. In consultation with applicable regulatory agencies such as Indigenous and Northern Affairs Canada and Natural Resources Canada, the Proponent shall undertake additional site-specific permafrost monitoring, mapping and thermal analysis to:</p>	Results of these studies should be submitted to the NIRB at least 30 days prior to the start of construction of these	<b>NOT IN COMPLIANCE</b> Permafrost conditions on the Project site were estimated based

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<ul style="list-style-type: none"> <li>▪ Document permafrost conditions, including seasonal thaw and amount of ground ice;</li> <li>▪ Inform the detailed design of project infrastructure such as the Whale Tail pit, water management structures, mine site and haul roads, waste rock storage facility, tailings storage facility; and</li> <li>▪ Ensure the integrity of such infrastructure is maintained after construction.</li> </ul>	facilities, with subsequent updates submitted annually thereafter.	on thermistor data up to October 2017 and previous works. No results from studies following the release of the Project Certificate has been provided.
11. The Proponent shall develop and implement an Erosion Management Plan to prevent or minimize erosion and its resulting effects from project-related land disturbance.	The Plan should be submitted to the NIRB at least 30 days prior to the start of construction, with updates submitted annually thereafter or as may otherwise be required by the NIRB.	Erosion Management Plan, version 1 submitted June 4, 2018.
12. As part of the Closure and Reclamation Plan, the Proponent shall develop and implement a program to: <ul style="list-style-type: none"> <li>a) Progressively reclaim disturbed areas within the project footprint, with an emphasis on restoring the natural aesthetics of the area through re-contouring to the extent practicable; and</li> <li>b) In a manner that demonstrates that the Proponent has considered the aesthetic values of local communities (e.g. information regarding the acceptability of the topography and landscape of the project areas following progressive reclamation efforts).</li> </ul>	The Proponent shall provide a summary of its progressive reclamation efforts and associated feedback received from communities with respect to aesthetic values solicited by the Proponent as part of its public engagement processes in its annual reporting to the NIRB.	To be reported in the next monitoring period.
13. The Proponent shall explore the feasibility of topsoil/organic matter salvage as part of project development and provide updates to the Closure and Reclamation Plan based on this investigation.	The Proponent shall provide a summary of its management of topsoil in annual reports to the NIRB.	
<b>Hydrogeology and Groundwater Quantity and Quality</b>		
14. The Proponent shall develop and implement a Thermal Monitoring Plan to identify potential changes in talik distribution and flow paths that may result from the development of project infrastructure, including the Whale Tail pit, dikes, and water impoundments.	The Plan should be submitted to the NIRB at least 60 days prior to the start of construction of these facilities, with subsequent updates submitted annually thereafter or as may otherwise be required by the NIRB.	Thermal Monitoring Plan, version 1 submitted May 18, 2018.
15. Subject to the additional direction and requirements of the Nunavut Water Board, the Proponent shall prepare and implement a Groundwater Monitoring Plan that, at a minimum includes: <ul style="list-style-type: none"> <li>▪ The collection of additional site-specific hydraulic data (e.g., from new monitoring wells) in key areas during the pre-development, construction and operation phases;</li> <li>▪ Definition of vertical and horizontal groundwater flows in the project development areas;</li> <li>▪ Delineates monitoring plans for both vertical and horizontal ground water; and</li> <li>▪ Thresholds that will trigger the implementation of adaptive management strategies that reflect site-specific conditions encountered at the project site.</li> </ul>	The required Groundwater Monitoring Plan should be submitted to the NIRB at least 30 days prior to the start of construction, with subsequent plan revisions or updates submitted annually thereafter.	Groundwater Monitoring Plan, version 1 submitted June 4, 2018.
16. Within two years of commencing operations, the Proponent shall: <ul style="list-style-type: none"> <li>a) Conduct additional analyses to determine the approximate fill time for the Whale Tail Pit at closure;</li> <li>b) Undertake a hydrogeological characterization study to assess the potential for arsenic and phosphorous diffusion from submerged Whale Tail pit walls;</li> <li>c) If the results of the characterization study indicate a moderate to high potential for arsenic and/or phosphorous diffusion, perform detailed hydrodynamic modelling of the flooded pit lake prior to closure to evaluate meromictic conditions and flooded pit water quality; and</li> <li>d) Add these required activities to the site Groundwater Monitoring Plan.</li> </ul>	An updated Groundwater Monitoring Plan that outlines the Proponent's plans to fulfill this term and condition should be submitted to the NIRB at least 30 days prior to the start of construction, with subsequent plan revisions or updates submitted annually thereafter.	Groundwater Monitoring Plan, version 1 submitted June 4, 2018.

<b>Term &amp; Condition (NIRB Project Certificate No. 008)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
<b>Surface Water Hydrology, Surface Water Quality and Sediment Quality</b>		
<p>17. The Proponent shall:</p> <ul style="list-style-type: none"> <li>a) Monitor the effects of project activities and infrastructure on surface water quality conditions;</li> <li>b) Ensure the monitoring data is sufficient to compare the impact predictions in the Environmental Impact Statement (EIS) for the Project with actual monitoring results;</li> <li>c) Ensure that the sampling locations and frequency of monitoring is consistent with and reflects the requirements of the Water Quality and Flow Plan and the Core Receiving Environmental Monitoring Program; and</li> <li>d) On an annual basis, the Proponent will compare monitoring results with the impact assessment predictions in the EIS and will identify any significant discrepancies between impact predictions and monitoring results.</li> </ul>	<p>The plan should be submitted to the NIRB at least 30 days prior to the start of construction, with results submitted annually thereafter.</p>	<p>Water Quality and Flow Plan, version 3 submitted May 18, 2018</p> <p>Results to be reported in the next monitoring period.</p>
<p>18. The Proponent shall, reflecting any direction from the Nunavut Water Board, maintain a Site Water Monitoring and Management Plan designed to:</p> <ul style="list-style-type: none"> <li>▪ Minimize the amount of water that contacts mine ore and wastes;</li> <li>▪ Appropriately manage all contact water and discharges to protect local aquatic resources; and</li> <li>▪ Implement water conservation and recycling to maximize water reuse and minimize the use of natural waters.</li> </ul> <p>The Plan should include monitoring that demonstrates contact water (runoff and shallow groundwater) from the ore storage and waste rock storage areas is captured and managed, as per the Waste Rock Facility Management Plan.</p>	<p>The plan should be submitted to the NIRB at least 60 days prior to the start of construction, with results submitted annually thereafter.</p>	<p>Agnico Eagle noted that the Water Quality and Flow Plan, version 3 submitted May 18, 2018 applies to this T&amp;C.</p> <p>Results to be reported in the next monitoring period.</p>
<p>19. The Proponent shall, reflecting any direction from responsible authorities such as the Nunavut Water Board, Fisheries and Oceans Canada and Environment and Climate Change Canada, maintain a Core Receiving Environment Monitoring Program (CREMP) designed to:</p> <ul style="list-style-type: none"> <li>▪ Determine the short and long-term effects in the aquatic environment resulting from the Project;</li> <li>▪ Evaluate the accuracy of Project effect predictions;</li> <li>▪ Assess the effectiveness of mitigation and management measures on Project effects;</li> <li>▪ Identify additional mitigation measures to avert or reduce environmental effects due to Project activities;</li> <li>▪ Comply with Metal Mining Effluent Regulations requirements, should an Environmental Effects Monitoring program be triggered;</li> <li>▪ Reflect site-specific water quality conditions;</li> <li>▪ Include details comparing the watershed features in the Whale Tail watershed to those watersheds used as reference lakes; and</li> <li>▪ Evaluate the mixing and non-mixing portion of the pit.</li> </ul> <p>The CREMP should include sufficient sampling and monitoring programs to appropriately characterize the receiving environment to ensure that adequate data is available to assess impact predictions made within the Environmental Impact Statement for the Whale Tail Pit Project.</p>	<p>The updated plan should be submitted to the NIRB at least 60 days prior to the start of construction, with results submitted annually thereafter.</p>	<p>Whale Tail Pit Addendum to CREMP submitted May 18, 2018.</p> <p>Results to be reported in the next monitoring period.</p>
<b>Freshwater Aquatic Environment</b>		
<p>20. Unless otherwise authorized, the Proponent shall maintain an appropriate setback distance between project quarries and borrow pits from fish-bearing or permanent waterbodies as required to prevent acid rock drainage or metal leaching into such waterbodies.</p>	<p>Throughout quarry development and operation, the Proponent shall, on an annual basis, provide information regarding quarry setback distances maintained and/or mitigation measures implemented by the Proponent in fulfillment of this term and condition in</p>	<p>Fulfillment of this term and condition to be reported in the next monitoring period.</p>

<b>Term &amp; Condition (NIRB Project Certificate No. 008)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
	the Proponent's annual report to the NIRB.	
21. The Proponent shall ensure that all project infrastructures in watercourses are designed and constructed in such a manner that they do not unduly prevent or limit the movement of water or fish species in fish bearing streams and rivers, unless otherwise authorized by Fisheries and Oceans Canada.	Throughout the life of the Project, the Proponent shall report on how the Proponent has maintained and/or implemented mitigation measures in fulfillment of this term and condition in the Proponent's annual report to the NIRB.	Fulfillment of this term and condition to be reported in the next monitoring period.
22. The Proponent shall engage with Fisheries and Oceans Canada to develop project specific thresholds, mitigation and monitoring for any blasting activities that would exceed the requirements of Fisheries and Oceans Canada's <i>Guidelines for the Use of Explosives In or Near Canadian Fisheries Waters</i> .	If project-specific thresholds, mitigation and monitoring requirements are developed, the Proponent shall identify these requirements in the annual report provided to the NIRB.	Fulfillment of this term and condition to be reported in the next monitoring period.
23. The Proponent shall, reflecting any direction from Environment and Climate Change Canada and Fisheries and Oceans Canada: a) Conduct additional analysis to support the conclusions that a change in trophic status in Mammoth Lake would not impact fish productivity; b) Undertake additional site-specific studies to assess the predicted trophic change on lake ecosystem productivity to monitor potential changes to downstream environments; and c) Monitor actual loadings/concentrations in the receiving environment, identify trends in downstream chemistry and productivity, and track trophic status of Mammoth Lake	The Plan for undertaking these additional studies and associated monitoring should be submitted to the NIRB at least 30 days prior to operations, with updates submitted annually thereafter or as may otherwise be required by the NIRB. A report on the results of these studies and associated monitoring should be provided at least 30 days prior to closure.	Whale Tail Pit Addendum to CREMP submitted May 18, 2018 provided. Compliance achievement is unclear and the NIRB requested that DFO confirm if Agnico Eagle is in-compliance with the submission of the Plan.
24. The Proponent shall engage Fisheries and Oceans Canada, and other interested parties to further assess: ▪ Whether the increased surface area of Whale Tail Lake is a viable offset to habitat losses resulting from development of the Project; and ▪ Whether Whale Tail end pit would support fish in the post closure scenario. Results of this assessment should be incorporated into the Habitat Compensation Plan and/or the Conceptual Fisheries Offsetting Plan as appropriate.	The updated information should be submitted to the NIRB at within 60 days of the issuance of the Project Certificate.	Whale Tail Fisheries Habitat Offsetting Plan, version 1 submitted May 18, 2018. Compliance achievement is unclear and the NIRB requested that DFO confirm if Agnico Eagle is in-compliance with the submission of the Plan.
<b>Vegetation</b>		
25. The Proponent shall: a) Ensure that equipment and supplies brought to the project sites are clean and free of soils that could contain plant seeds or organic matter not naturally occurring in the area b) Ensure that vehicle tires and treads are inspected prior to initial use in project areas; c) Incorporate protocols for monitoring for the potential introduction of invasive vegetation species (e.g. surveys of plant populations in previously disturbed areas) into relevant monitoring and management plans for the terrestrial environment; and d) Ensure any introductions of non-indigenous plant species must be promptly reported to the Government of Nunavut Department of Environment.	At least <u>30</u> days prior to first shipment of equipment and supplies to the site, the Proponent's mitigation plans, protocols, monitoring and inspection program required in fulfillment of this term and condition shall be provided to the NIRB for review. Subsequently, information regarding inspections, monitoring results, and any reports as referenced above shall be included in the Proponent's annual report to the NIRB.	<b>NOT IN COMPLIANCE.</b> Information not provided as outlined in the term and condition.
26. The Proponent shall include revegetation strategies within its Mine Closure and Reclamation Plan that support progressive reclamation, and promote natural revegetation and recovery of disturbed areas	Within three (3) years from the commencement of construction,	

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compatible with the surrounding natural environment. These strategies should include exploration of the feasibility and practicality of topsoil/organic matter salvage through Project development. Consideration for the results of similar reclamation efforts at other northern projects, including the Meadowbank Gold Mine Project, must be demonstrated.	information regarding the revegetation strategies developed and implemented by the Proponent in fulfillment of this Term and Condition shall be included in the Proponent's annual report to the NIRB. Subsequently, information regarding the Proponent's progress in fulfillment of this Term and Condition shall be provided annually in the Proponent's annual report to the NIRB.	
<b>Terrestrial Wildlife and Wildlife Habitat</b>		
27. The Proponent shall participate in a Terrestrial Advisory Group with the Government of Nunavut, the Baker Lake Hunters and Trappers Organization, the Kivalliq Inuit Association, and other parties as appropriate to continually review and refine mitigation and monitoring details within the Terrestrial Ecosystem Management Plan. Additional caribou collar data, results from associated studies, and other monitoring data as available should be considered for incorporation as appropriate.	Finalized Terms of Reference for the Terrestrial Advisory Group shall be provided to the NIRB within six (6) months of issuance of the Project Certificate. A summary of outcomes from Terrestrial Advisory Group meetings shall be provided to the NIRB on an annual basis in the Proponent's Annual Report.	<b>NOT IN COMPLIANCE</b> Finalized Terms of Reference not provided.
28. The Proponent shall maintain a Terrestrial Ecosystem Management Plan (TEMP) throughout all phases of the Project. The Plan shall include detailed monitoring, mitigation, and adaptive management measures for wildlife, with consideration for each Project activity predicted to affect wildlife, and with inclusion of specific triggers for mitigation and adaptive management intervention. The TEMP shall demonstrate consideration for all relevant commitments made by the Proponent throughout the Nunavut Impact Review Board's review of the Project.  Updates to the TEMP may be required when there are significant changes in project development plans, monitoring results indicating biologically-meaningful changes, significant updates to the scientific understanding of management methods relevant to wildlife at the project site, Inuit Qaujimatuaqangit, Traditional Knowledge, changes in climatic conditions that might subject wildlife to unexpected impacts, or as otherwise necessary.	The Proponent shall submit a revised TEMP to the NIRB within one (1) year of issuance of the Project Certificate, with subsequent versions provided as appropriate. Results of the TEMP shall be reported to the NIRB annually.	TEMP, version 5 submitted June 1, 2018.  Results of the TEMP to be provided in the next monitoring period.
29. The Proponent shall, in collaboration with the Government of Nunavut, collect additional caribou collar data and conduct analyses of this data to quantify the zone of influence and associated effects of project components on caribou movement for a study area that includes the Whale Tail mine site, the haul road, the Meadowbank Gold Mine and its All-Weather Access Road.	A summary of the analyses and associated effects shall be provided annually in the Proponent's annual report to the NIRB.	Results to be provided in the next monitoring period.
30. The Proponent shall collect additional data on caribou group sizes in proximity to the Project, and shall work with the Terrestrial Advisory Group to refine appropriate caribou group size thresholds that trigger additional mitigation. Initially, the group size thresholds should be set at 110 (fall), 25 (winter and summer), and 12 (spring).	The Proponent shall ensure modifications to the group size thresholds are incorporated into the Terrestrial Ecosystem Management Plan and that this Plan along with a summary of consultation with the Terrestrial Advisory Group are submitted on an annual basis or as thresholds are otherwise modified in the Proponent's annual report to the to the NIRB.	Information to be provided in the next monitoring period.

<b>Term &amp; Condition (NIRB Project Certificate No. 008)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
31. The Proponent shall develop and implement a Road Access Management Plan and maintain traffic monitoring logs along the haul road between the Whale Tail Pit project and the Meadowbank mine. Where traffic exceeds levels predicted within the Environmental Impact Statement, the Proponent shall develop and implement appropriate modifications to its wildlife protection measures.	The Road Access Management Plan shall be provided to the NIRB 90 days prior to operations commencing. An annual summary of the monthly maximum, minimum and average traffic levels shall be provided to the NIRB in the Proponent's annual report.	Awaiting plan.
32. The Proponent shall engage with the Baker Lake Hunters and Trappers Organization and other relevant parties to ensure that safety barriers, berms, and designed crossings associated with project infrastructure, including the haul road, are constructed and operated as necessary to allow for the safe passage of caribou and other terrestrial wildlife.	Summaries of engagement with the Baker Lake Hunters and Trappers Organization regarding implementation of this condition shall be provided to the NIRB along with details of the selected crossings in the Proponent's annual report to the NIRB.	Summaries to be provided in the next monitoring period.
33. The Proponent shall provide wildlife incident reports to the appropriate authorities in a timely fashion. Wildlife incident reports should include the following information: a) Locations (i.e., latitude and longitude), species, number of animals, a description of the animal activity, and a description of the gender and age of animals if possible; b) Prior to conducting project activities, the Proponent should map the location of any sensitive wildlife sites such as denning sites, calving areas, caribou crossing sites, and raptor nests in the project area, and identify the timing of critical life history events (i.e., calving, mating, denning and nesting); and c) Additionally, the Proponent should indicate potential impacts from the project, and ensure that operational activities are managed and modified to avoid impacts on wildlife and sensitive sites	A summary regarding all wildlife incidents reported, including a reference to whether compensation was or will be provided by the Proponent for direct mortalities, as well as a description of any other steps taken in fulfillment of this term and condition shall be included in the Proponent's annual report to the NIRB.	Summaries to be provided in the next monitoring period.
<b>Birds and Bird Habitat</b>		
34. The Proponent will maintain a Migratory Birds Protection Plan for the Project in consultation with Environment and Climate Change Canada and other interested parties. The plan should include and/or demonstrate that the Proponent give consideration to the following: ▪ Information obtained from baseline characterization of migratory bird and vegetation communities within the predicted flood area; ▪ Results of field tests and/or the thorough literature review of the effectiveness of preferred deterrence prior to actual flooding; and ▪ Details regarding monitoring the effectiveness of mitigation measures during flooding.	Results of implementation of the Migratory Birds Protection Plan shall be reported to the NIRB on an annual basis in the Proponent's annual report.	Results to be provided in the next monitoring period.
35. The Proponent shall ensure that the mitigation and monitoring strategies developed for Species at Risk are updated as necessary to maintain consistency with any applicable status reports, recovery strategies, action plans, and management plans that may become available through the duration of the Project.	Information regarding development, implementation and monitoring of the measures developed by the Proponent in fulfillment of this term and condition shall be included in the Proponent's annual report to the NIRB.	Monitoring results to be provided in the next monitoring period.
36. Prior to removal or deterrence of raptors, the Proponent will contact the Government of Nunavut – Department of Environment to discuss proposed mitigation options and, if required, will obtain the necessary permits.	The Proponent shall include summaries of any mitigation measures implemented and permits obtained in fulfillment of this term and condition in the Proponent's annual report to the NIRB.	Summaries to be provided in the next monitoring period.

<b><u>Term &amp; Condition</u></b> <b><u>(NIRB Project Certificate No. 008)</u></b>	<b><u>Reporting Requirements</u></b>	<b><u>Compliance Achievement</u></b>
<b>Marine Environment including Marine Wildlife and Habitat</b>		
37. The Proponent shall maintain a Shipping Management Plan in coordination and consultation with applicable regulatory authorities and the Kivalliq Inuit Association, and the Hunters and Trappers Organizations of the Kivalliq communities.	The updated plan should be submitted to the NIRB at least 90 days prior to the start to commencement of shipping activities, with subsequent updates submitted annually thereafter in the Proponent's annual report or as may otherwise be required by the NIRB.	Shipping Management Plan, version 2 submitted April 18, 2018
38. The Proponent shall ensure that marine shipping activities avoid sensitive wildlife habitat and species along the shipping route and use a routing south of Coats Island as the primary shipping route, subject to vessel and human safety considerations.	Confirmation that the requirements of this term and condition are being effectively implemented by shipping companies contracted by the Proponent should be submitted as part of annual reporting to the NIRB.	Summaries to be provided in the next monitoring period.
39. The Proponent shall ensure that, subject to vessel safety requirements, a setback distance of at least 500 metres is maintained from colonies and aggregations of seabirds and marine mammals during Project shipping transiting through Hudson Strait, Hudson Bay, and Chesterfield Inlet.	Confirmation that the requirements of this term and condition are being effectively implemented by shipping companies contracted by the Proponent should be submitted as part of annual reporting to the NIRB.	Summaries to be provided in the next monitoring period.
40. The Proponent shall develop and implement a ship-based marine mammal monitoring program, as part of a Marine Mammal Management and Monitoring Plan, in consultation with Fisheries and Oceans Canada, communities, and other interested parties. The Proponent shall report any accidental contact by project vessels with marine mammals or seabird colonies to applicable responsible authorities including Fisheries and Oceans Canada and Environment and Climate Change Canada.	The Plan should be submitted to the NIRB at least 90 days prior to commencement of shipping activities, with subsequent updates submitted annually thereafter. Confirmation that the requirements of the Plan are being effectively implemented by shipping companies contracted by the Proponent should be provided with annual reporting.	Appendix B of the Shipping Management Plan.  Summaries to be provided in the next monitoring period.
41. The Proponent shall provide notification to communities regarding scheduled ship transits throughout the regional study area, including Hudson Bay and Chesterfield Inlet.	The Proponent shall provide a summary of public consultation undertaken to address this term and condition in its annual report to the NIRB.	Summaries to be provided in the next monitoring period.
42. The Proponent shall design monitoring programs to ensure that local users of the marine area along the shipping route have the opportunity to provide feedback and input in relation to monitoring and evaluating potential project-induced impacts and changes in marine mammal distributions. The Proponent shall demonstrate how feedback received from community consultations has been incorporated into the most appropriate mitigation or management plans.	The Proponent shall provide a summary of public consultation undertaken to address this term and condition in its annual report to the NIRB.	Summaries to be provided in the next monitoring period.
43. The Proponent shall contract only certified vessels to carry cargo for the Project, and will ensure shippers are aware of the requirements of the Shipping Management Plan, the Risk Management and Emergency Response Plan, and the Oil Pollution Emergency Plan.	Evidence of meeting the requirements of this term and condition should be submitted as part of annual reporting to the NIRB.	Summaries to be provided in the next monitoring period.
<b>Economic Development and Business Opportunities</b>		
44. The Proponent is strongly encouraged to continue to participate in the work of the Kivalliq Socio-Economic Monitoring Committee along with other agencies and the communities of the Kivalliq region,	Information regarding the Proponent's efforts in fulfillment of this term and	Summaries to be provided in the next monitoring period.

<b>Term &amp; Condition (NIRB Project Certificate No. 008)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
and to identify areas of mutual interest and priority for inclusion into a collaborative monitoring framework that includes socio-economic priorities related to the Project, communities, and the Kivalliq region as a whole.	condition shall be included in the Proponent's annual report to the NIRB.	
<p>45. The Proponent shall work in collaboration with other socio-economic stakeholders including, the Government of Nunavut, Indigenous and Northern Affairs Canada, the Kivalliq Inuit Association, and communities of the Kivalliq region, to establish a socio-economic working group for the Project to develop and oversee a Kivalliq Projects Agnico Eagle Socio-Economic Monitoring Program. The working group will develop a Terms of Reference, which outlines each member's roles and responsibilities with regards to, where applicable, project specific socio-economic monitoring throughout the life of the projects.</p> <p>The Proponent shall work with the other parties to use the updated Kivalliq Projects Socio-Economic Monitoring Program to monitor the predicted impacts outlined in the projects' respective environmental impact statements as well as regional concerns identified by the Kivalliq Socio-Economic Monitoring Committee. The Proponent shall work in collaboration with all other socio-economic stakeholders such as the Government of Nunavut, Indigenous and Northern Affairs Canada, Kivalliq Inuit Association, and the communities of the Kivalliq region in developing this program, which should include a process for adaptive management and mitigation in the event unanticipated impacts are identified.</p>	<p>The Terms of Reference for this multi-party, multi-project Working Group are to be provided to the NIRB upon completion, and within one (1) year of issuance of the Project Certificate.</p> <p>The Proponent shall produce annual joint "Agnico Eagle Kivalliq Projects" Socio-Economic Monitoring reports throughout the life of the Projects that are submitted to the NIRB and discussed with the wider Kivalliq Socio-Economic Monitoring Committee. Details of the Kivalliq Projects Socio-Economic Monitoring Program are to be provided to the NIRB upon finalization, and within one (1) year of issuance of the Project Certificate.</p>	TOR and Kivalliq Projects Socio-Economic Monitoring Program due March 2019
<p>46. The Proponent should develop a Project-specific Whale Tail Pit Socio-Economic Monitoring Program designed to:</p> <ul style="list-style-type: none"> <li>▪ Monitor for project-induced effects, including the impacts predicted in the Environmental Impact Statement through indicators presented in the Whale Tail Pit Socio-Economic Monitoring Plan;</li> <li>▪ Reflect regional socio-economic concerns identified by the Kivalliq Socio-Economic Monitoring Committee (KivSEMC);</li> <li>▪ Work in collaboration with all other socio-economic stakeholders such as the Kivalliq Inuit Association, the Government of Nunavut, and Indigenous and Northern Affairs Canada, and the communities of the Kivalliq region to develop the program; and</li> <li>▪ Include a process for adaptive management and mitigation to respond if unanticipated impacts are identified.</li> </ul>	Details of the Whale Tail Pit Socio-Economic Monitoring Program should be submitted to the NIRB within one (1) year of issuance of the Project Certificate. The Proponent should produce annual Whale Tail Pit socio-economic monitoring reports throughout the life of the Project that are submitted to the NIRB and shared with the wider KivSEMC.	Kivalliq Projects Socio-Economic Monitoring Program due March 2019.
<p>47. The Proponent should undertake an analysis of the risk of temporary mine closure, giving particular consideration to how communities in the Kivalliq region may be affected by temporary closure of the mine, including consideration of the measures that can be taken to mitigate the potential for adverse effects (e.g. development of programs that provide transferable skills, identification of employment options that can include transfers amongst Agnico Eagle operations, etc.) This analysis is required to be updated as necessary to reflect significant changes to the Project or the socio-economic conditions in the region that may increase the risks and potential effects of temporary mine closures.</p>	This initial results of the Proponent's analysis should be provided to the NIRB within six (6) months of the issuance of the Project Certificate. Any updates to the analyses should be provided to the NIRB within three (3) months following completion of updated analyses by the Proponent.	Analysis of the Risk of Temporary Mine Closure submitted September 11, 2018.
<b>Employment, Education and Training</b>		
<p>48. The Proponent is strongly encouraged to submit staff schedule forecasts that should, at a minimum, include the following:</p> <ul style="list-style-type: none"> <li>▪ Title of positions required by department and division;</li> <li>▪ Quantity of positions available by project phase and year;</li> </ul>	The Staff Schedule should be submitted to the NIRB six (6) months prior to each phase of the Project (construction, operations, closure).	Staff Schedule submitted June 2018.

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<ul style="list-style-type: none"> <li>▪ Transferable skills, both certified and uncertified which may be required for, or gained during, employment within each position;</li> <li>▪ The National Occupational Classification code for each individual position.</li> </ul> <p>The Proponent should also identify and register all trades occupations, journeypersons, and apprentices working with the Project and make this information available to the Government of Nunavut to assist in delivery of training initiatives and programs.</p>		
<p>49. The Proponent shall make best efforts to collaborate with the Government of Nunavut’s Career Development Officer, Regional Manager of Career Development, and Director of Career Development. Semi-annual calls, at a minimum, should be initiated by the Proponent to address:</p> <ul style="list-style-type: none"> <li>▪ Hiring procedures and policies</li> <li>▪ Issues regarding employee recruitment and retention</li> <li>▪ Agnico Eagle policies regarding career pathways and opportunities for advancement</li> <li>▪ Internal and/or partnered training and development of employees</li> <li>▪ Long-term labour market plans to facilitate training in communities</li> </ul>	<p>Summary information addressing the Proponent’s fulfillment of this term and condition shall be included in the Proponent’s annual report to the NIRB.</p>	<p>Summaries to be provided in the next monitoring period.</p>
<p>50. The Proponent will report the results of its Labour Market Analysis (LMA) and Inuit Work Barrier Study (WBS) to the Kivalliq Socio-Economic Monitoring Committee upon completion in 2018, which should integrate the findings into its ongoing work identifying gaps between the Kivalliq labour market and mining market needs, and how to activate latent labour pool in the Kivalliq region to maximize labour “capture” from mining for the region. The Proponent shall report the results and implications of the LMA and WBS within its first year’s Annual Report to the Nunavut Impact Review Board (NIRB), and show how the results have been integrated into an updated Socio-Economic Monitoring Plan for the Whale Tail Pit Project.</p> <p>The Proponent will participate in the work of the Kivalliq Socio-Economic Monitoring Committee along with other agencies and the communities of the Kivalliq region and to identify areas of mutual interest and priority for incorporation into a collaborative monitoring framework that includes socio-economic priorities related to the Project, communities, and the Kivalliq region as a whole.</p> <p>The Proponent will work in collaboration with other socio-economic stakeholders including, the Government of Nunavut, Indigenous and Northern Affairs Canada, the Kivalliq Inuit Association, and communities of the Kivalliq region to establish a socio-economic working group for the Project to develop and oversee a Kivalliq Projects Agnico Eagle Socio-Economic Monitoring Program. The working group should develop a Terms of Reference which outlines each member’s roles and responsibilities with regards to, where applicable, project-specific socio-economic monitoring throughout the life of the Projects. The Terms of Reference for this multi-party, multi-project Working Group are to be provided to the NIRB upon completion, and within one year of issuance of the Project Certificate.</p> <p>The Proponent will work with the other parties to use the updated Kivalliq Projects Socio-Economic Monitoring Program to monitor the predicted impacts in the Projects’ respective environmental impact statements as well as regional concerns identified by the Kivalliq Socio-Economic Monitoring Committee. The Proponent is encouraged to work in collaboration with all other socio-economic stakeholders such as the Government of Nunavut, Indigenous and Northern Affairs Canada, Kivalliq Inuit Association, and the communities of the Kivalliq region in developing this program, which should include a process for adaptive management and mitigation in the even unanticipated impacts are identified. The Proponent shall produce annual joint “Agnico Eagle Kivalliq Projects” Socio-Economic Monitoring reports throughout the life of the Projects that are submitted to the NIRB and discussed with the wider Kivalliq Socio-Economic Monitoring Committee. Details of the Kivalliq Projects Socio-Economic Monitoring Program are to be provided to the NIRB upon finalization, and within one year of issuance of the Project Certificate.</p>	<p>The Terms of Reference for this multi-party, multi-project Working Group are to be provided to the NIRB upon completion, and within one (1) year of issuance of the Project Certificate.</p> <p>Details of the Kivalliq Projects Socio-Economic Monitoring Program are to be provided to the NIRB upon finalization, and within one (1) year of issuance of the Project Certificate. The Proponent shall produce annual joint “Agnico Eagle Kivalliq Projects” Socio-Economic Monitoring reports throughout the life of the Projects that are to be submitted as part of the Proponent’s annual report to the NIRB.</p>	<p>TOR and Kivalliq Projects Socio-Economic Monitoring Program due March 2019</p>

<b>Term &amp; Condition (NIRB Project Certificate No. 008)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
51. The Proponent shall develop a conceptual Socio-economic Closure Plan that: <ul style="list-style-type: none"> <li>▪ Links the socio-economic closure plans for Meadowbank and Whale Tail;</li> <li>▪ Identifies regular update and multi-party review requirements;</li> <li>▪ Shows evidence of consideration of socio-economic lessons learned from other northern mine closure experiences;</li> <li>▪ Includes evidence of consultation with Kivalliq communities and governance bodies on socio-economic objectives/goals related to closure planning;</li> <li>▪ Emphasizes plans, policies, and programs to increase transferable skills of Inuit workers, including into trades and other skilled positions; and</li> <li>▪ Includes all plans, policies and programs related to socioeconomic factors in a temporary closure situation.</li> </ul>	The conceptual socio-economic closure plan will be provided to the NIRB within one (1) year of issuance of the Project Certificate, and updated as needed prior to closure with information provided in the Proponent's annual report to the NIRB.	Conceptual socio-economic closure plan due March 2019
52. The Proponent should develop and maintain an easily referenced listing of formal certificates and licences that may be acquired via on-site training or training during project employment. The listing shall indicate which of these certifications and licences would be transferable to a similar job site within Nunavut.	The initial listing should be provided to the NIRB within six (6) months of the Project Certificate being issued. Updates to the list should be included in the Proponent's annual reports submitted to the NIRB and shared with the wider Kivalliq Socio-Economic Monitoring Committee throughout the life of the Project.	<b>NOT IN COMPLIANCE.</b> No initial listing provided.
<b>Population Demographics</b>		
53. Provided the collection and sharing of such information is consistent with and not limited by any Inuit Impact and Benefit Agreement with the Kivalliq Inuit Association and that employees are willing to voluntarily provide this information, the Proponent should collect and provide project-specific data concerning employee community of residence and number of employees that relocated from the year prior (where available, to and from, for Arviat, Baker Lake, Chesterfield Inlet, Coral Harbour, Naujaat, Rankin Inlet and Whale Cove). The details of this process will be captured in the terms of reference for the project specific Whale Tail Pit Socio-Economic Monitoring Committee.	Summaries of this information should be included in the annual Whale Tail Pit socio-economic monitoring reports submitted to the NIRB and shared with the wider Kivalliq Socio-Economic Monitoring Committee throughout the life of the Project.	Summaries to be provided in the next monitoring period.
<b>Traditional Activity and Knowledge</b>		
54. The Proponent should ensure that the development of all project monitoring plans and associated reporting and updates are undertaken with active engagement of Kivalliq communities, land users, and harvesters. The Proponent should work with the Kivalliq Inuit Association, the local Hunters and Trappers Organizations and the Kivalliq Socio-Economic Monitoring Committee to report on the collection and integration of Inuit Qaujimaningit through its monitoring programs for the Project.	To the extent that the sharing of such information is consistent with, and not limited by, any confidentiality or other agreements, summaries addressing the Proponent's fulfillment of this term and condition should be included in the Proponent's annual report to the NIRB.	Fulfillment information of this term and condition to be provided in the monitoring period.
<b>Heritage Resources</b>		
55. The Proponent shall conduct archaeological surveys prior to land disturbance related to the Project and report survey results to applicable parties, including the Government of Nunavut – Department of Culture and Heritage.	Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the NIRB.	Fulfillment information of this term and condition to be provided in the monitoring period.
56. The Proponent shall report any archaeological site discovered during the construction, operation, and closure phases to the Government of Nunavut – Department of Culture and Heritage and the Kivalliq Inuit Association. Upon discovering an archeological site, the Proponent shall:	Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the NIRB.	Fulfillment information of this term and condition to be provided in the monitoring period.

<b>Term &amp; Condition (NIRB Project Certificate No. 008)</b>	<b>Reporting Requirements</b>	<b>Compliance Achievement</b>
a) Take all reasonable precautions necessary to protect the site until further direction is received from the Government of Nunavut – Department of Culture and Heritage; and b) If it becomes necessary to disturb an archaeological site, the Proponent shall consult with the Government of Nunavut – Department of Culture and Heritage, the Kivalliq Inuit Association, and potential impacted communities to establish a site specific mitigation plan, and obtain all necessary authorizations and comply with all applicable laws.		
<b>Individual and Community Wellness</b>		
57. The Proponent shall update its Occupational Health and Safety Plan to include sexual health and well-being information in its employee orientation programming. In addition, the Proponent shall undertake an education program to inform workers of the range of health services available onsite.	The updated plan shall be provided to the NIRB, once completed within six (6) months of issuance of the Project Certificate. Summaries of the education programs undertaken and any future updates or modifications to the Occupational Health and Safety Plan and the education program shall be included in the Proponent’s annual report to the NIRB.	<b>NOT IN COMPLIANCE</b> Update plan has not been provided.
58. The Proponent is encouraged to form a subcommittee which includes Government of Nunavut representatives to reach consensus decisions on health related issues that the Proponent or the Government of Nunavut bring forward (e.g. programs and services to address sexually transmitted infections, a process for the treatment and transport of workers that may require medical services beyond that which the mine provides, monitoring and reporting on the impacts of the Project on health services within the potentially impacted communities and particularly, Baker Lake. etc.)	Information regarding the Proponent’s fulfillment of this term and condition shall be included in the Proponent’s annual report to the NIRB.	Fulfillment information of this term and condition to be provided in the monitoring period.
59. The Proponent is encouraged to work with the Kivalliq Inuit Association to establish cross-cultural training initiatives, which promote respect and consideration for the importance of Inuit Qaujimagatuqangit to the Inuit identity and to make this training available to Project employees and on-site sub-contractors. The Proponent should actively monitor the implementation of these initiatives, including the following items: <ul style="list-style-type: none"> <li>▪ Descriptions of the goals of each program offered;</li> <li>▪ Language of instruction;</li> <li>▪ Schedules and location(s) of when each program was offered;</li> <li>▪ Uptake by employees and/or family members where relevant, noting Inuit and non-Inuit participation rates; and</li> <li>▪ Completion rates for enrolled participants, noting Inuit and non-Inuit participation rates.</li> </ul>	Summaries of the cross-cultural training initiatives implemented by the Proponent in fulfilment of this term and condition should be submitted as part of the Proponent’s annual reporting to the NIRB.	Summaries to be provided in the next monitoring period.
<b>Community Infrastructure and Public Services</b>		
60. The Proponent shall engage with the Government of Nunavut to develop a process to ensure that any conditions first treated at the mine site and requiring ongoing care is appropriately accommodated in a timely manner at community health centres as required.	Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent’s annual reporting to the NIRB.	Fulfillment information of this term and condition to be provided in the monitoring period.
61. The Proponent, in collaboration with the Government of Nunavut and the Nunavut Housing Corporation, is encouraged to investigate measures and programs designed to assist Project employees with pursuing home ownership or accessing affordable housing options in the Kivalliq region. The Proponent should provide access to financial literacy, financial planning, and personal budgeting as part of the regular Life Skills Training and/or Career Path Program.	Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent’s annual reporting to the NIRB.	Fulfillment information of this term and condition to be provided in the monitoring period.

<b><u>Term &amp; Condition</u></b> <b><u>(NIRB Project Certificate No. 008)</u></b>	<b><u>Reporting Requirements</u></b>	<b><u>Compliance Achievement</u></b>
62. The Proponent should work with the Government of Nunavut to develop an effects monitoring program that identifies Project-related pressures to community infrastructure such as airport and transportation infrastructure, policing, health and social services, in Baker Lake and all the point-of-hire communities of the Kivalliq Region.	Evidence of meeting the requirements of this term and condition should be submitted as part of the Proponent's annual reporting to the NIRB.	Fulfillment information of this term and condition to be provided in the monitoring period.
<b>Human Health and Ecological Risk Assessment</b>		
63. The Proponent shall conduct additional studies as part of its freshwater aquatic effects analyses to ensure that methylmercury concentrations anticipated to increase during operations in the aquatic environment (including in fish tissue) do not exceed regulatory requirements. In addition, the Proponent shall consider assessing potential risks from consumption of fish containing methylmercury by using Health Canada's hazard quotients as a descriptive tool.	A summary of the results of these additional studies, including the assessment of the potential risk to people from consumption of fish, shall be included in the Proponent's annual report to the NIRB.	Summaries to be provided in the monitoring period.
<b>Cumulative Effects</b>		
64. Within its annual reporting, the Proponent is encouraged to include detailed updates on the status of ongoing exploration programs associated with the Project and associated implications for future phase developments of the Amaruq property.	Status updates in fulfillment of this Term and Condition shall be included in the Proponent's annual report to the NIRB.	Fulfillment information of this term and condition to be provided in the monitoring period.